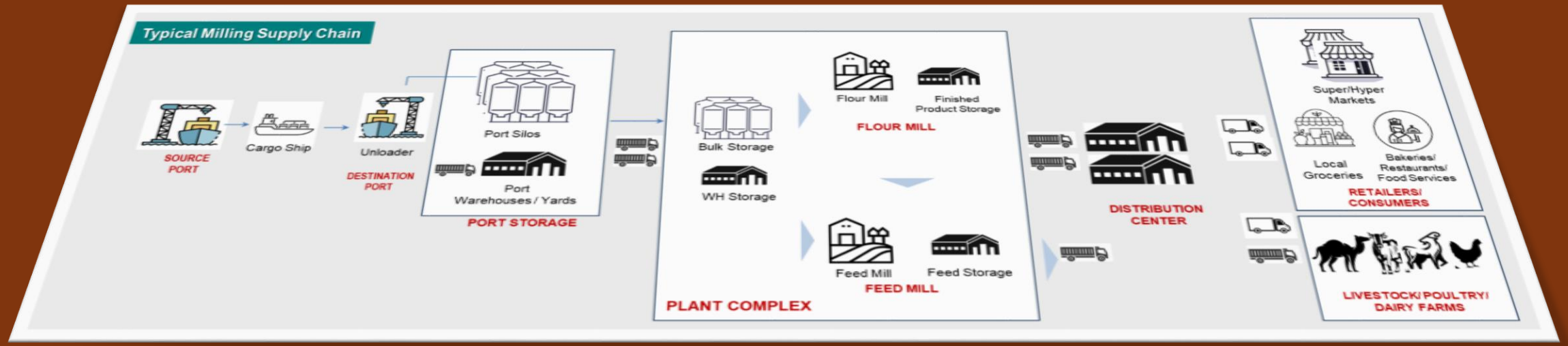

Road Map for Milling Supply Chain Excellence

Data Labs India Solutions Pvt Ltd
Hyderabad, India

Assess your Milling supply chain with 10 step approach

Assess supply chain operations, identify gaps, and establish a roadmap for sustainable improvement. Focus on aligning supply chain strategy with organizational objectives, optimizing material flow and planning processes, and enhancing financial, structural, and skills-based efficiencies.

Shaik Abdul Khadar
Expert in Organizational Transformation (Strategy – Planning - Supply Chain – Manufacturing – Projects) | +91 7799798333, sak@datalabsindia.com | www.fruisce.com | www.datalabsindia.com

OUT LINE

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Shaik Abdul Khadar

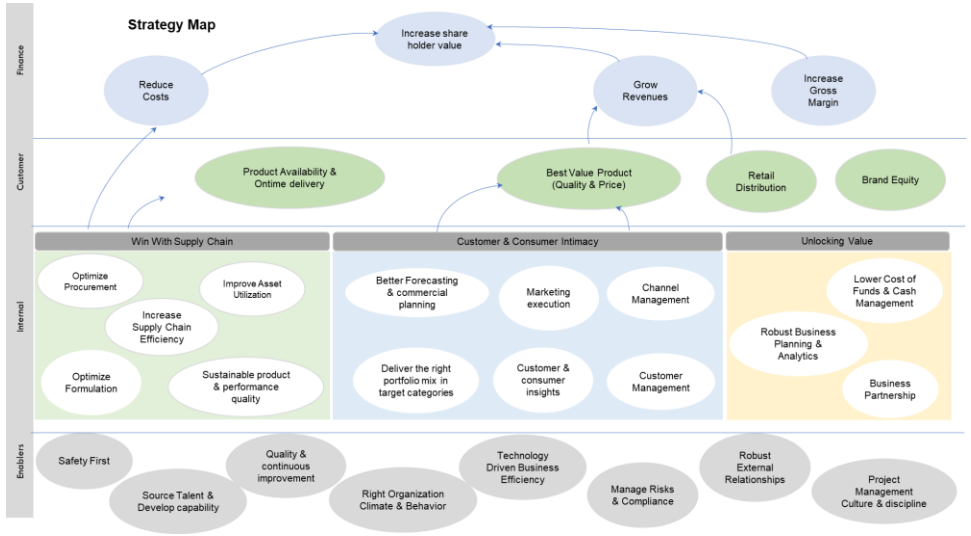
www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 1:

Aligning Supply Chain with Business Strategy

- Understand the business strategy and how the supply chain enable sustainable food security in the region.
- This step ensures that every component of the milling plant and supply chain contributes to the strategic goals of the organization.
- The detailed process also includes best practices that reinforce alignment and promote supply chain excellence.

Shaik Abdul Khadar
www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333



Step 1: Aligning Production & Supply Chain with Business Strategy

Objective: Ensure that the supply chain structure, processes, and performance metrics align with the overarching business strategy.

Activities:

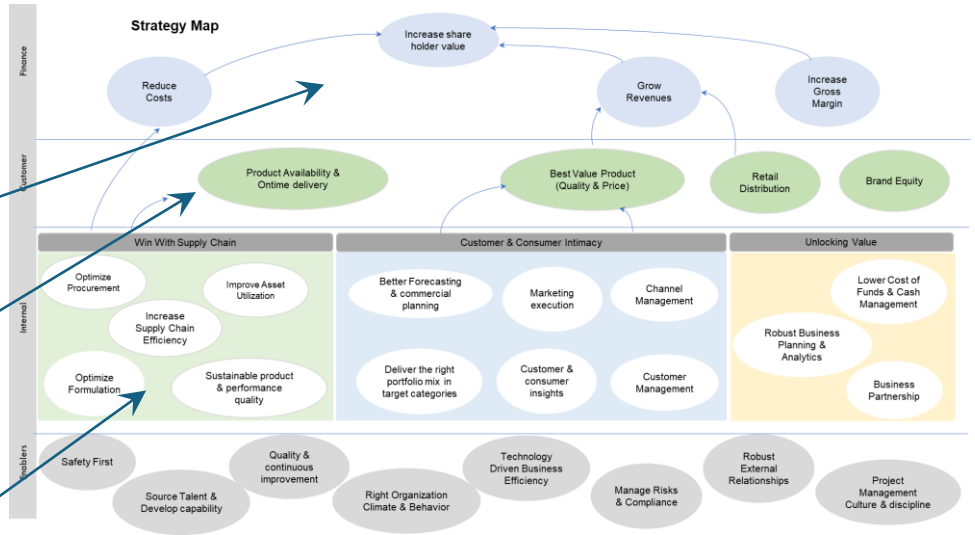
- **Review Strategic Objectives**: Identify the company's key goals, such as cost leadership, food security, sustainability, and growth. Confirm that supply chain strategies directly support these business goals.
- **Evaluate Supply Chain measures (KPIs)**: Analyze existing KPIs and metrics to ensure they support strategic objectives, including quality, lead time reductions, delivery on time, cost efficiency, or best value.
- **Prioritize Key Initiatives**: Rank strategic initiatives within the supply chain, such as new product innovations, alternative raw materials, procurement optimization, better formulation, reduce waste, depending on the business strategy.
- **Map Dependencies**: Identify cross-functional dependencies (e.g., between supply chain, finance, and sales) that are essential for achieving these objectives.
- **Document Misalignments**: Note any areas where supply chain activities or performance indicators do not support strategic priorities, such as overstocking to meet demand variability without considering inventory costs.
- **Develop Recommendations for Realignment**: Propose adjustments to the supply chain approach, such as modifying inventory policies, improving customer service levels, or reconfiguring planning processes to better support strategy.

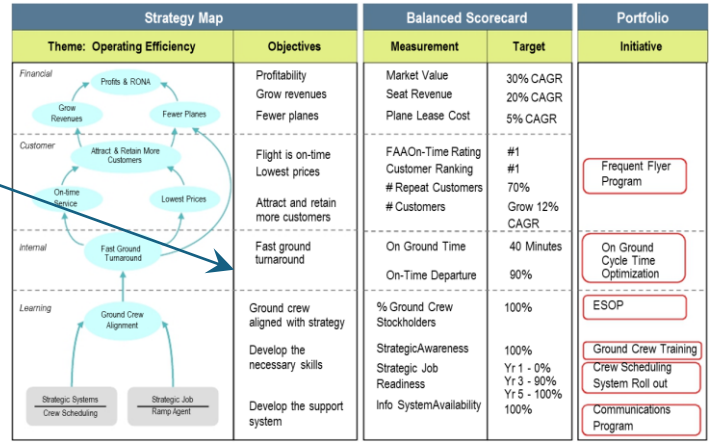
Shaik Abdul Khadar
www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 1: Aligning Production & Supply Chain with Business Strategy

1. Review and Understand the Business Strategy

- **Understand Strategic Objectives**: Understand the business strategy, including growth targets, market positioning, financial objectives, customer objectives, and value proposition.
- **Evaluate Core Focus Areas**: Determine whether the business strategy emphasizes sustainable food security, cost leadership, customer service, agility, innovation, or any other unique strategic focus. This is important to understand and the set the expectations of supply chain.
- **Break Down Goals into Supply Chain Requirements**: Translate high-level goals/objectives into specific requirements for the supply chain, such as reducing lead times, increasing flexibility, reducing costs, increase quality, or improving service levels etc.,





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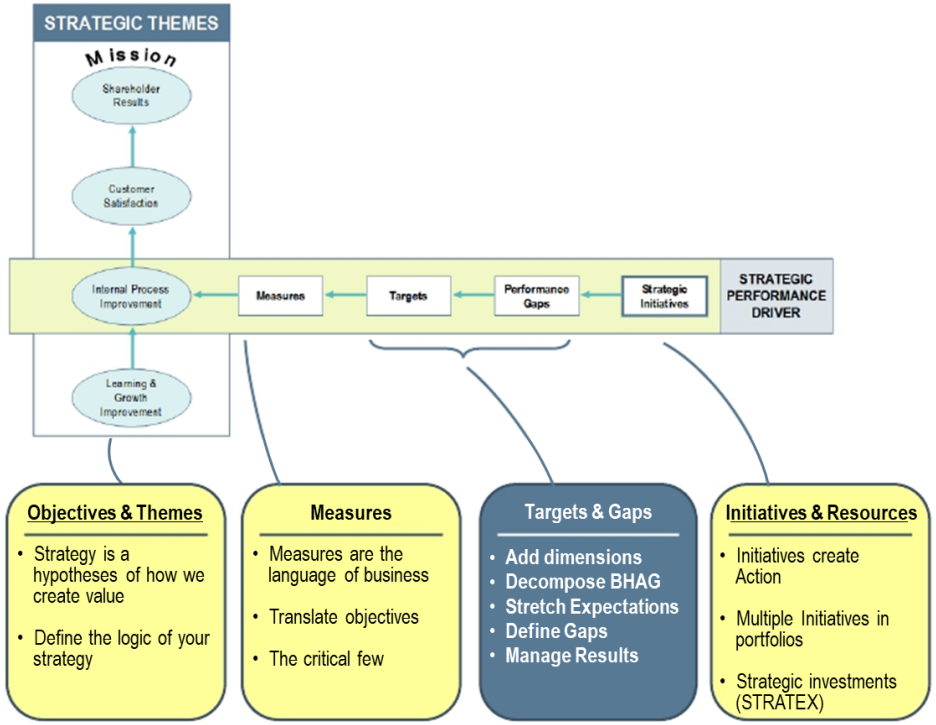
www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 1: Aligning Supply Chain with Business Strategy

2. Define Supply Chain Objectives and Metrics

- **Set Key Supply Chain Objectives**: Based on the business strategy, define specific objectives for the supply chain, such as improved efficiency, required flexibility, optimized inventory, reduced costs, better working capital flows, close skills gap, right organization structure, sustainability, and enhanced customer satisfaction.
- **Establish Measures/Key Performance Indicators (KPIs)**: Choose Measure/KPIs that align with business objectives and can measure success in areas such as feed conversion ration, extraction rates, on-time delivery, lead time reduction, inventory turnover, cash to cash cycle, production efficiency, capacity utilization, cost per ton etc.
- **Benchmark Against Industry Standards or any Reference**: Use best practices and industry benchmarks to set realistic and competitive targets for each KPI. This gives you reference to validate performance.



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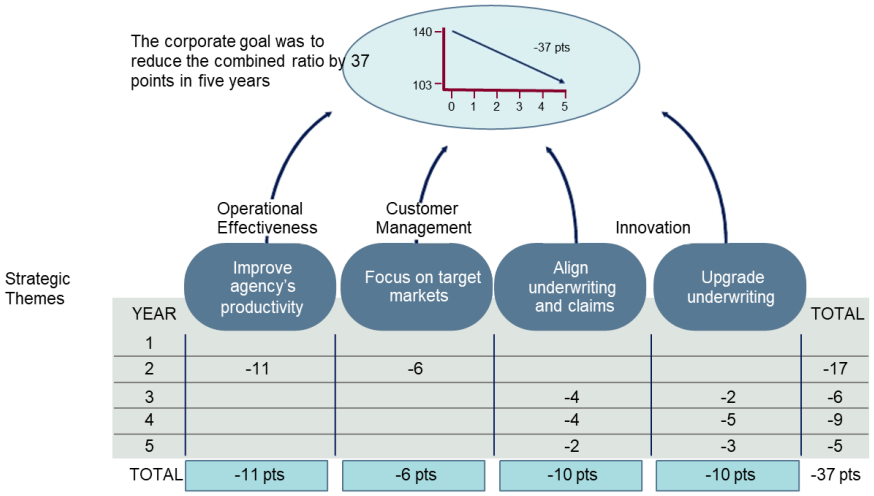
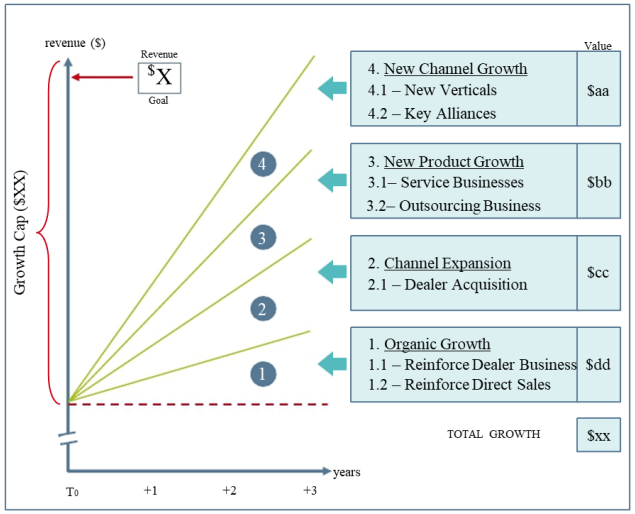
www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 1: Aligning Supply Chain with Business Strategy

3. Conduct a Gap Analysis of Current Supply Chain Capabilities

- **Assess Current State**: Map out the current supply chain processes, capabilities, and resources to understand where they stand relative to strategic goals.
- **Identify Capability Gaps**: Look for gaps where current capabilities fall short of strategic requirements, such as a lack of flexibility, high lead times, or high inventory holding costs.
- **Prioritize Gaps for Action**: Rank the identified gaps based on their impact on strategic goals, making it easier to prioritize improvement initiatives.





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www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 1: Aligning Supply Chain with Business Strategy

4. Define the Strategic Role of Each Supply Chain Function

- **Map Functions to Strategic Priorities**: Assign specific strategic priorities to each function within the supply chain, such as procurement, logistics, port silos and storage, flour milling, feed milling, distribution center, transportation, and customer service.
- **Establish Cross-Functional Linkages**: Identify how functions interact and depend on one another to achieve the broader strategic goals, such as procurement supporting cost reduction or customer service enhancing satisfaction.
- **Integrate with Sales & Operations Planning (S&OP)**: Ensure S&OP processes align with strategic goals to drive collaboration across functions and support the strategy.

SAMPLE

Strategic Priority	Port Unloading	Port Silos & Warehouses	Plant Silos & Warehouses	Flour Mill	Feed Mill	Customer Service
Cost Efficiency	Cost per Ton Unloaded, Efficiency of Equipment Usage	Storage Cost per Ton, Inventory Holding Costs	Storage Cost per Ton, Inventory Holding Costs	Production Cost per Ton, Energy Efficiency	Production Cost per Ton, Feed Formulation Efficiency	Order Processing Cost, Cost of Customer Returns
Customer Service Excellence	Turnaround Time for Ships	Availability of Grain Inventory	Availability of Grain Inventory	Production Lead Time, Product Consistency	Production Lead Time, Product Quality	Order Fulfillment Rate, Customer Satisfaction Score
Agility and Flexibility	Unloading Speed and Flexibility	Stock Rotation Frequency	Stock Rotation Frequency	Production Flexibility Index, Batch Changeover Time	Production Flexibility Index, Batch Changeover Time	Response Time to Customer Requests, Order Accuracy
Innovation	Equipment Modernization Rate	Storage Technology Utilization	Storage Technology Utilization	Yield Improvement Rate, Energy Reduction Rate	Nutritional Formula Innovation Rate	New Service Introduction Time, Customer Feedback Loop
Sustainability	Carbon Emissions per Ton Unloaded	Energy Consumption, Waste Reduction Rate	Energy Consumption, Waste Reduction Rate	Emissions per Ton, Waste Reduction Rate	Emissions per Ton, Waste Reduction Rate	Customer Support on Eco-Friendly Initiatives

Shaik Abdul Khadar

www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 1: Aligning Supply Chain with Business Strategy

5. Align Supply Chain Policies with Strategic Objectives

- **Review and Adjust Inventory Policies**: Determine if planning parameters, supply chain and inventory policies (e.g., safety stock, reorder points, triggers, etc.,) are consistent with the business strategy—whether that's lean operations, high availability, or demand flexibility.
- **Optimize Sourcing and Supplier Relationships**: Adjust sourcing strategies to support business goals, such as reducing costs or ensuring rapid delivery through closer supplier partnerships.
- **Reassess Distribution and Fulfillment Strategies**: Align distribution practices with strategic priorities, focusing on factors like speed, cost, and regional coverage.

Shaik Abdul Khadar

www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 1: Aligning Supply Chain with Business Strategy

5. Align Supply Chain Policies with Strategic Objectives

SAMPLE

Strategic Priority	Procurement Policies	Inventory Policies	Manufacturing Policies	Distribution & Fulfillment Policies
Cost Efficiency	Implement commodity risk management practices to hedge against price fluctuations in international markets; negotiate bulk purchasing agreements across key stock exchanges to secure cost-effective rates	Optimize stock rotation and minimize waste during extended storage periods to preserve grain quality; leverage silo monitoring systems to manage inventory conditions	Use weekly production scheduling to balance supply with demand and optimize raw material utilization; streamline setup and changeover processes to maximize weekly output efficiency	Consolidate distribution routes to minimize logistics costs; explore partnerships with regional distributors to reduce transportation expenses and maintain cost efficiency
Customer Service Excellence	Build relationships with reliable international suppliers to ensure consistent quality and timely delivery despite long lead times; incorporate robust vetting procedures to reduce supply chain risks	Maintain buffer stock levels to meet fluctuations in demand without compromising service; utilize FIFO (First-In, First-Out) systems to ensure fresh stock for customers	Focus on quality control at every production stage to meet high standards in flour and feed products; align production targets with customer demand to minimize delays and stockouts	Ensure timely, accurate deliveries to distribution centers and customers; establish responsive customer service channels and feedback loops to improve service quality
Agility and Flexibility	Diversify sourcing options across multiple suppliers and stock exchanges to adapt to global market shifts and commodity price changes; develop emergency sourcing plans	Use digital inventory management systems to track real-time inventory levels and respond swiftly to demand shifts; maintain high-turnover inventory to minimize excess holding times	Adapt production schedules weekly based on demand forecasts and inventory levels; maintain flexibility in production capacity to handle sudden demand changes	Implement flexible delivery scheduling for customers to respond to demand surges; leverage scalable distribution networks to adapt quickly to varying demand patterns
Innovation	Collaborate with financial and technology partners to enhance commodity risk management using advanced analytics; explore blockchain for supplier transparency and quality tracking	Implement IoT-based monitoring systems in silos and warehouses to preserve raw material quality and minimize spoilage over long storage periods	Invest in automation and AI-driven systems for predictive maintenance and quality checks; leverage digital tools to optimize weekly production planning and reduce waste	Incorporate real-time tracking and visibility for deliveries; explore digital platforms to streamline customer interaction and feedback mechanisms
Food Security	Prioritize long-term contracts with reputable international suppliers to ensure a stable supply; develop strategies for rapid procurement in case of global shortages	Maintain strategic reserves of key raw materials; employ advanced storage solutions (temperature/humidity control) to ensure optimal storage conditions and reduce loss of value over time	Implement stringent quality control in storage and production processes to ensure food safety; develop protocols for rapid production scaling if food supply disruptions occur	Establish robust distribution planning to prevent delays in high-demand periods; engage with national initiatives focused on food security and supply chain resilience
Sustainability	Partner with international suppliers committed to sustainable practices; focus on sourcing from environmentally responsible producers to reduce overall carbon footprint	Use energy-efficient storage solutions and reduce waste through optimized stock management practices; explore recycling and waste reduction programs	Invest in eco-friendly machinery to lower emissions; adopt water and energy conservation measures in milling processes to reduce environmental impact	Use fuel-efficient vehicles and sustainable packaging; prioritize distribution partners with strong sustainability practices to align with corporate ESG goals

Shaik Abdul Khadar

www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 1: Aligning Supply Chain with Business Strategy

6. Enhance Agility and Flexibility in Supply Chain Operations

- **Identify Areas Requiring Flexibility**: Recognize parts of the supply chain where flexibility is essential, such as variable demand periods, seasonal fluctuations, or high-value customer segments.
- **Develop Contingency Plans**: Create scenarios and contingency plans to maintain operations during disruptions, aligning resilience plans with strategic goals.
- **Enable Cross-Functional Collaboration**: Encourage real-time data sharing and decision-making across departments to improve responsiveness.

Shaik Abdul Khadar
www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 1: Aligning Supply Chain with Business Strategy

7. Align Technology and Data Systems with Strategic Requirements

- **Assess Current Technology Stack**: Review the technology stack, such as ERP, WMS, TMS, MES, formulation programs, control systems, optimization tools, and analytics platforms, to ensure they support strategic data needs.
- **Prioritize Real-Time Data and Analytics**: Enable real-time data access and insights for decision-makers, focusing on areas that drive competitive advantage, like demand forecasting or supply chain visibility.
- **Explore Automation Opportunities**: Look for areas where automation can support strategic goals, such as in order processing, inventory tracking, or predictive maintenance.

Function	Immediate (0-6 months)	Short-Term (6-12 months)	Medium-Term (1-3 years)	Long-Term (3+ years)
Planning & Forecasting	- Implement demand forecasting tool	- Enhance forecasting with AI	- Integrate predictive analytics for demand planning	- Optimize planning with ML-driven demand forecasting
	- Integrate S&OP system	- Implement real-time S&OP dashboard		
Procurement	- Deploy supplier management software	- Automate RFP processes	- Integrate with supplier data exchange platforms	- AI-driven procurement recommendations
		- Supplier risk monitoring		
Inventory Management	- Implement WMS in key locations	- Enable real-time inventory tracking	- Introduce inventory optimization algorithms	- Autonomous inventory management
Manufacturing & Production	#NAME?	- MES implementation	- Integrate quality control with predictive maintenance	- Fully automated production lines
Logistics & Transportation	- Implement TMS	- Route optimization	- Autonomous fleet trials	- Fully autonomous and optimized logistics
		- GPS tracking integration		
Customer Service	- CRM integration with supply chain data	- Order management system	- Real-time order tracking for customers	- AI-driven customer service and personalization
		- Customer self-service portal		
Data & Analytics	- Establish data lake for centralized access	- Develop analytics platform	- Predictive analytics for demand, lead time, and costs	- End-to-end supply chain digital twin

Shaik Abdul Khadar

www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 1: Aligning Supply Chain with Business Strategy

8. Reinforce a Culture of Continuous Improvement

- **Implement Continuous Improvement Initiatives**: Encourage a culture of improvement with processes like Lean, Six Sigma, or Kaizen to foster strategic alignment.
- **Conduct Regular Strategy and Performance Reviews**: Schedule regular reviews to assess supply chain performance against strategic objectives & measures (KPIs) and adjust as needed.
- **Promote Cross-Functional Learning and Development**: Invest in training that enhances strategic alignment, such as skills in data analysis, S&OP, and risk management.

Continuous Improvement Initiatives

Strategy & Operational Reviews & Actions

Cross-Functional Learning & Development

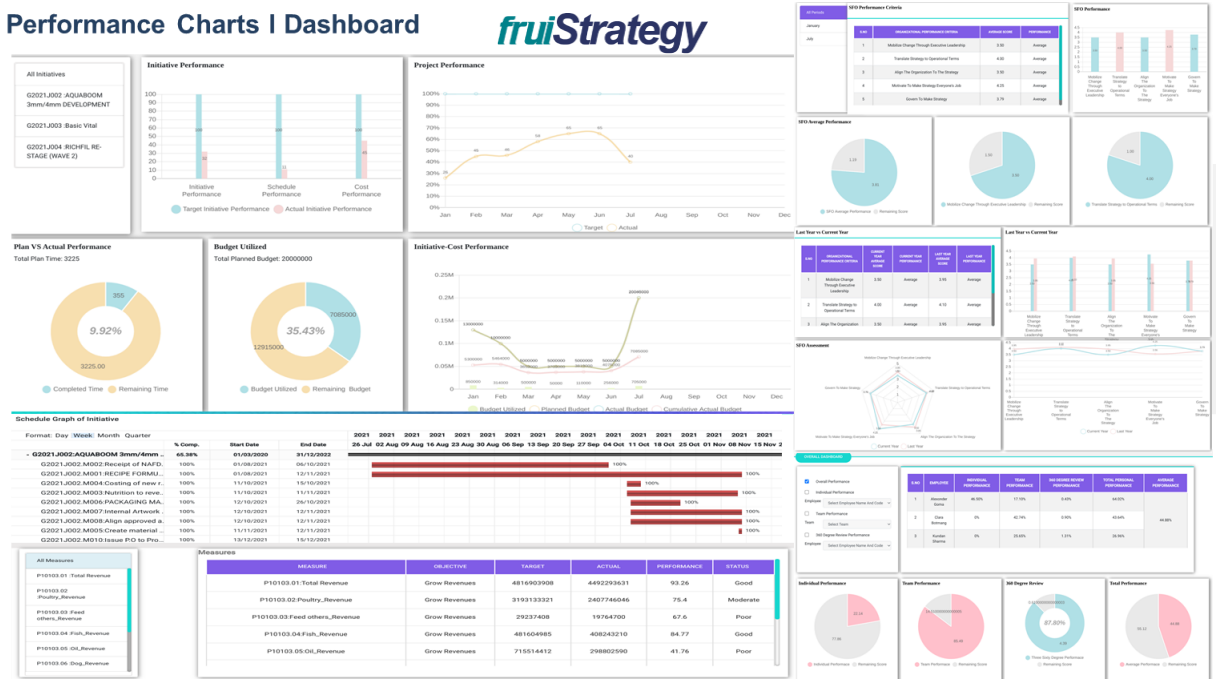
Shaik Abdul Khadar

www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 1: Aligning Supply Chain with Business Strategy

9. Communicate Strategy and Goals Across the Supply Chain

- **Align Team Goals with Strategy**: Ensure that each team within the supply chain has goals directly connected to the broader strategy.
- **Promote Transparency and Accountability**: Establish clear expectations and accountability for meeting strategic supply chain targets.
- **Use Dashboards for Real-Time Strategy Tracking**: Implement dashboards to give all stakeholders a view of performance against strategic KPIs.



Shaik Abdul Khadar
www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 2:

Plotting the Supply Chain and Material Flow

- The goal of this step is to map the supply chain structure to visualize the physical flow of materials across various points, which include ship unloader, port storage, flour mills, feed mills, distribution warehouses, transportation, and customers
- By creating a detailed view of how materials move, this process helps identify potential inefficiencies, bottlenecks, and areas for optimization.
- Understanding material flow is critical for improving lead times, reducing costs, and enhancing overall performance
- Plotting the Supply Chain and Material Flow, you will gain a holistic view of the entire supply chain, including manufacturing plants and last-mile delivery.

Shaik Abdul Khadar

www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 2:

Plotting the Supply Chain and Material Flow

Objective: Map the entire supply chain structure to understand the physical flow of materials and identify potential points of inefficiency.

Activities:

- **Map Components and Flows**: Document the full material flow across the supply chain, including items, customers, lead times, storage points, transport routes, and others.
- **Identify Flow Bottlenecks**: Highlight any areas that may slow down the flow, such as silos, warehouses, yards, flour mill routing, feed mill routing, transit times, or any other checkpoints.
- **Create Visual Flow Diagrams**: Use network diagrams to illustrate the flow of materials from suppliers to manufacturing, warehousing, and ultimately to customers, including critical transit points and lead times.
- **Document Key Constraints**: Note issues such as stockouts, overstocking, delayed shipments, or complex hand-offs that may disrupt the smooth material flow.

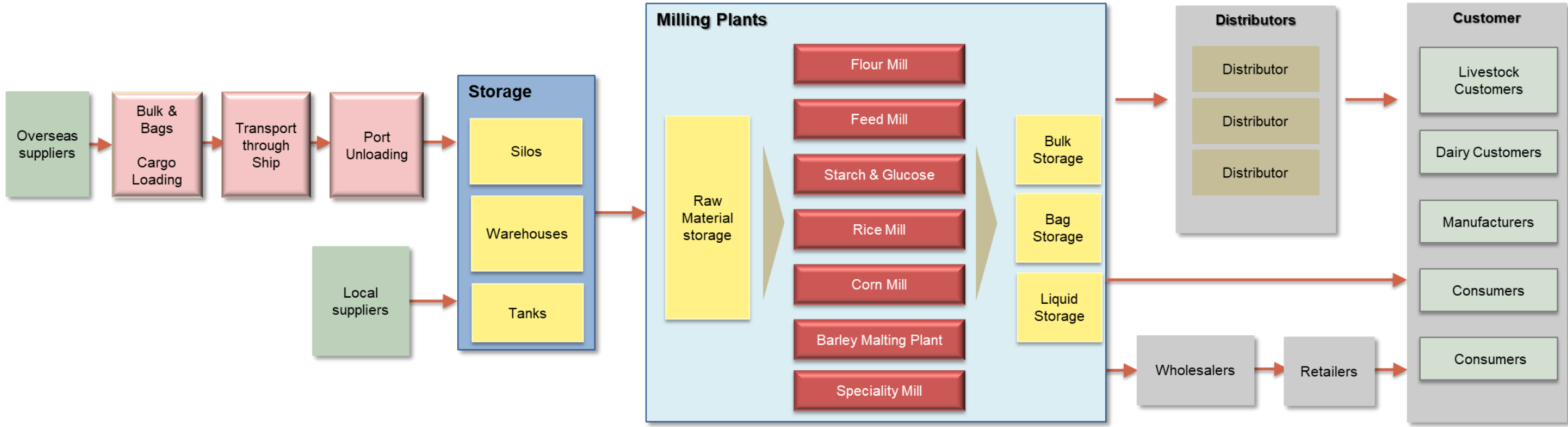
Shaik Abdul Khadar

www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 2:

Plotting the Supply Chain and Material Flow

Milling Supply Chain



Shaik Abdul Khadar
www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 2: Plotting the Supply Chain and Material Flow

1. Map Components and Flows

- **Document Material Flow**:
  - Create a detailed map of the supply chain, covering **raw materials**, **semi-finished goods**, and **finished goods**.
  - Include the full range of entities such as **suppliers**, **manufacturing plants**, **warehouses**, **distribution centers**, and **customers**.
  - Identify **lead times** for each stage, from raw material sourcing to manufacturing, warehousing, and distribution.
  - Capture the **stocking points** at various stages, including raw material storage, work-in-progress (WIP) at manufacturing plants, finished goods storage, and **last-mile delivery hubs**.
- **Include All Relevant Entities**:
  - **Suppliers**: Map out local and global suppliers, noting lead times, reliability, and geographic location.
  - **Manufacturing Plants**: Detail each manufacturing site, capturing data on **production lead times**, **capacity**, **shift schedules**, and **WIP inventory levels**.
  - **Warehousing and Distribution Centers**: Identify where goods are stored and processed before reaching the customer, including both **centralized warehouses** and **regional distribution centers**.
  - **Last-Mile Delivery**: Include the **final delivery stage**, detailing transit times, delivery routes, and partnerships with logistics providers (e.g., local couriers, 3PL providers).
- **Capture Transportation Details**:
  - Document **transport routes** connecting suppliers to manufacturing plants, plants to warehouses, and warehouses to customers, noting transit times and transportation modes (road, rail, sea, air).
  - Identify critical factors in last-mile delivery, such as geographic coverage, delivery time windows, and the impact of **traffic congestion** on urban deliveries.
- **Output**: A comprehensive map of all entities involved in the supply chain, including suppliers, manufacturing plants, warehouses, last-mile delivery hubs, and customers, with detailed information on lead times, transportation modes, and inventory levels.

Shaik Abdul Khadar

www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 2: Plotting the Supply Chain and Material Flow

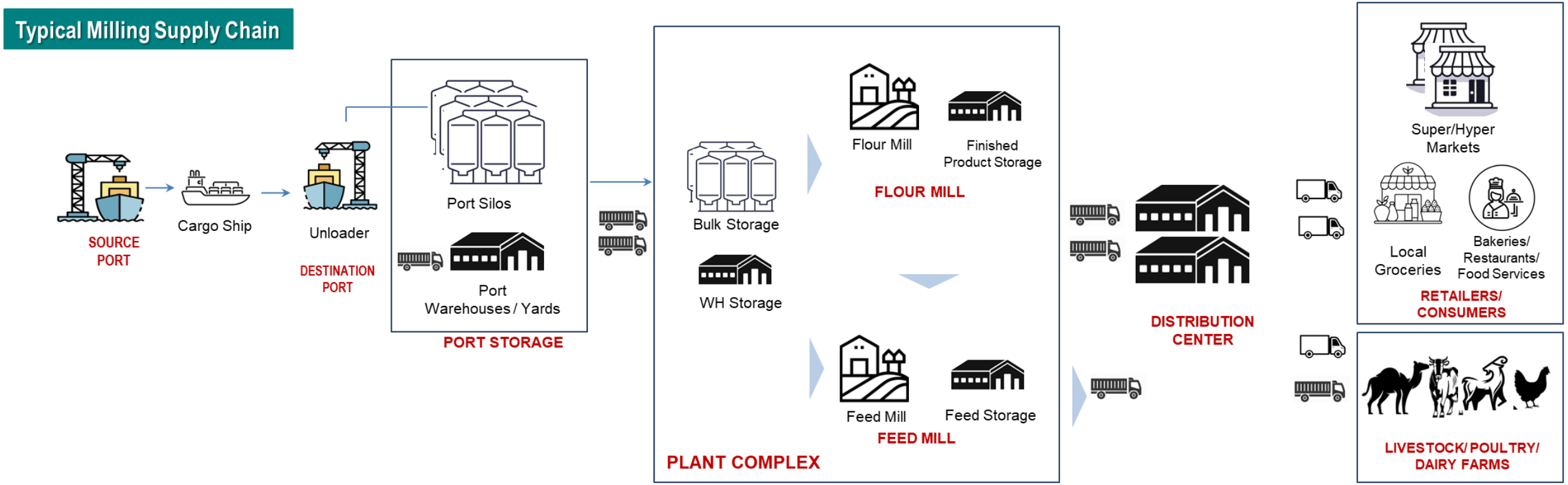
1. Map Components and Flows

Data Category	Details to Collect	Data Inputs	Source of Data
Supplier Information	Supplier name, location, lead times, reliability	- Supplier Name	Procurement
		- Location	Supplier database
		- Lead Time (days)	
		- Reliability Score (1-10)	
		- Backup Suppliers	
Raw Material Data	Types of raw materials, average costs, and availability	- Raw Material Type	Procurement
		- Supplier	Inventory Management
		- Avg. Cost	
		- Lead Time	
		- Safety Stock Levels	
Manufacturing Data	Manufacturing locations, production cycle time, capacity	- Manufacturing Plant Name	Production Team
		- Capacity (units/day)	Plant Managers
		- Avg. Cycle Time (hours)	
		- Shift Schedules	
		- Work-in-Progress (WIP) Inventory	
Inventory Information	Stock levels at warehouses, lead times for replenishment	- Warehouse Name	Inventory Management
		- Location	WMS
		- Stock Levels (SKUs)	
		- Reorder Point	
		- Lead Time (days)	
		- Safety Stock	
Transportation Data	Transit times, modes of transport, and carriers used	- Route Name	Logistics Team
		- Mode (Road, Rail, Air)	Carriers
		- Carrier	
		- Avg. Transit Time (days)	
		- Delays %	
Last-Mile Delivery	Delivery routes, time windows, delivery performance	- Delivery Region	Last-Mile Delivery Partners
		- Carrier	
		- Avg. Delivery Time	
		- On-Time Delivery %	
		- Traffic/Congestion Data	
Customer Information	Customer locations, demand variability, service levels	- Customer Name	Sales
		- Location	Customer Service
		- Demand Variability (Units)	
		- Service Level Agreement (SLA)	
		- Returns Rate %	
Warehouse Data	Capacity, stock levels, inventory turnover	- Warehouse Name	Warehouse Managers
		- Location	WMS
		- Capacity Utilization %	
		- Inventory Turnover Ratio	
		- Stock-out Incidents	
Lead Time Information	Supplier to warehouse, plant to warehouse, warehouse to customer	- Stage (Supplier to Plant, Plant to Warehouse, etc.)	Procurement
		- Avg. Lead Time (days)	Logistics
		- Delays %	Warehouse
Technology Utilization	System usage (WMS, ERP, TMS, etc.), real-time tracking availability	- Technology in Use (ERP, WMS, TMS)	IT
		- System Capabilities	Operations Team
		- Real-time Tracking (Y/N)	
Performance Metrics	KPIs like on-time delivery, inventory accuracy, cost per unit	- KPI Type (On-Time Delivery %, Inventory Accuracy %, etc.)	Operations
		- Current Performance	Logistics
		- Target	Customer Service

SAMPLE TEMPLATE

Step 2: Plotting the Supply Chain and Material Flow

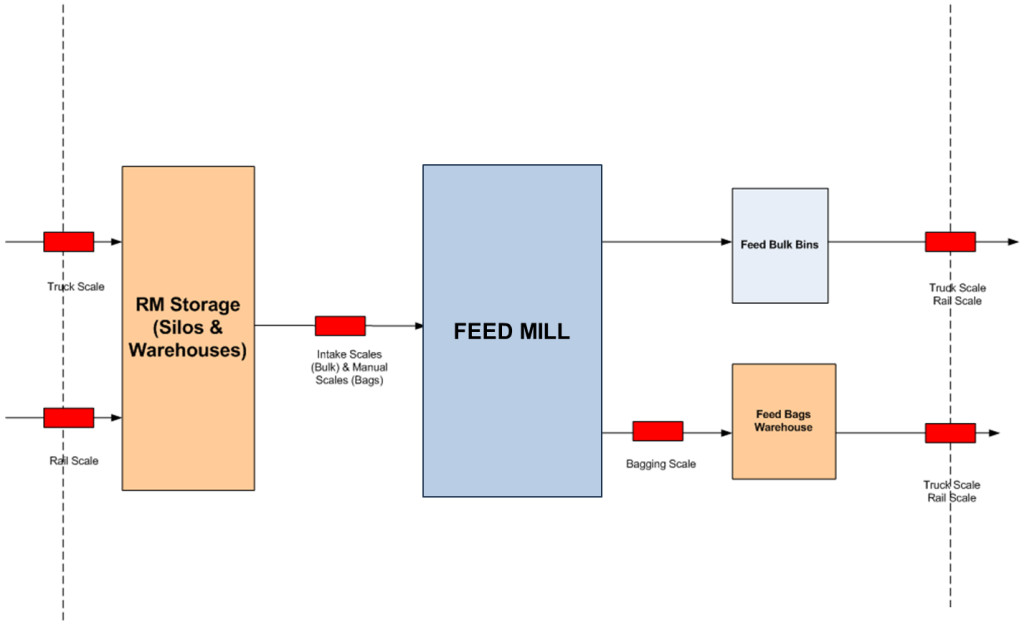
1. Map Components and Flows



Step 2: Plotting the Supply Chain and Material Flow

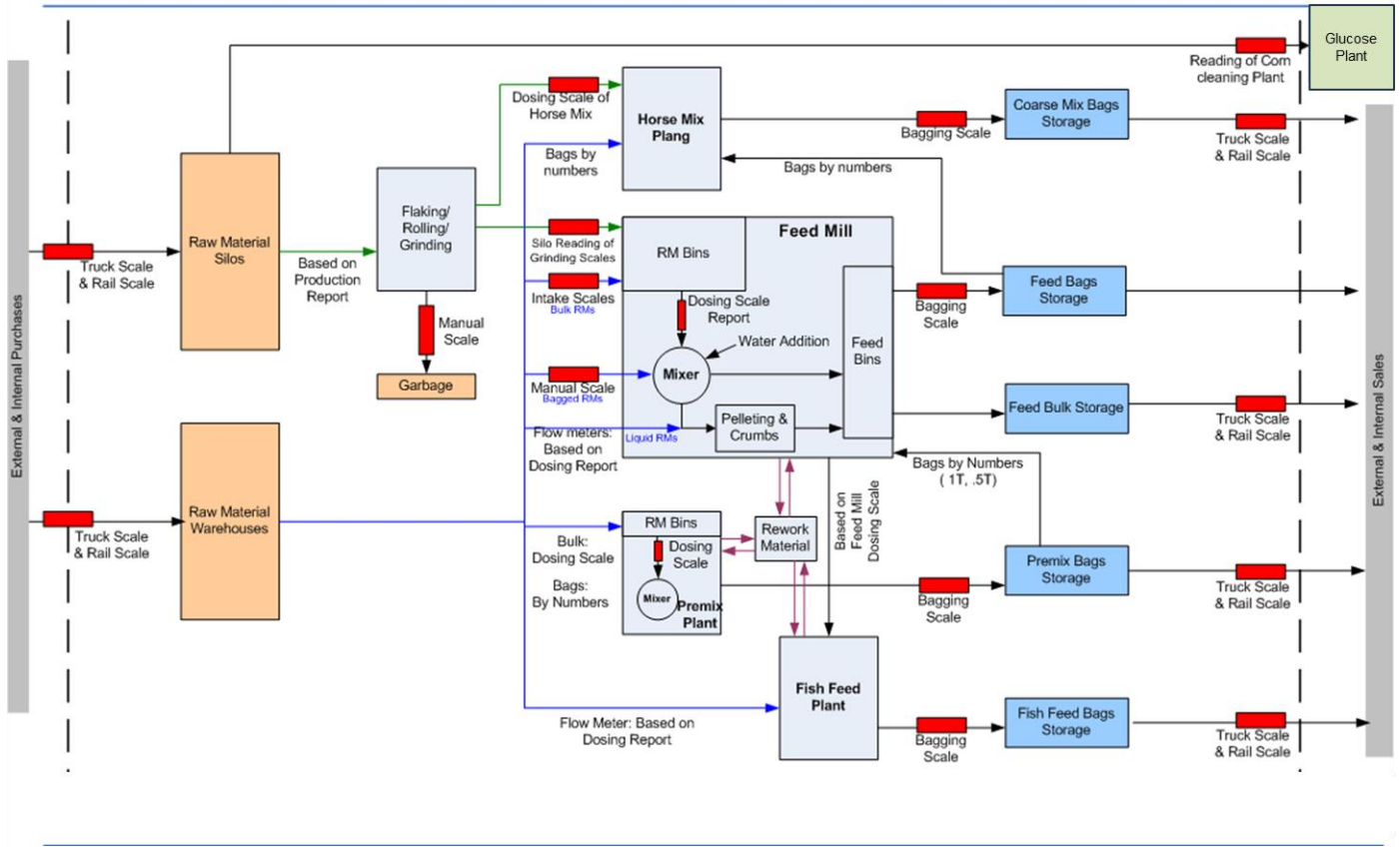
1. Map Components and Flows

TYPICAL FEED MILL SETTLEMENT OF INVENTORY



SAMPLE FOR ILLUSTRATION

Feed Mill: Settlement Inventory Diagram



Step 2: Plotting the Supply Chain and Material Flow

2. Identify Flow Bottlenecks

- **Pinpoint Areas of Delay**:
  - **Manufacturing Delays**: Review production processes to identify bottlenecks such as **machine breakdowns**, **capacity constraints**, **labor shortages**, or **long changeover times** that disrupt the flow of WIP through the plant.
  - **Inventory Holding Locations**: Analyze stock levels at key points in the chain, such as port silos, port warehouses, plant silos, plant warehouses and distribution centers, to determine if excess inventory is causing delays or if stockouts are slowing down fulfillment.
  - **Last-Mile Delivery Delays**: Assess delays in the final stage of delivery, particularly in **urban areas** where traffic congestion or poor route optimization can impact delivery lead times.
- **Capacity and Resource Constraints**:
  - Assess storage capacity at manufacturing plants, warehouses, and distribution centers, ensuring there's adequate space to handle current and future demand without creating bottlenecks.
  - Evaluate **supplier capacity**, especially for critical raw materials, to see if delays in sourcing are affecting production schedules.
  - Analyze last-mile delivery constraints, such as insufficient delivery vehicle fleets or limitations in regional coverage.
- **Output**: A detailed report listing bottlenecks in manufacturing, warehousing, transportation, and last-mile delivery, along with factors contributing to these delays, such as capacity constraints or inefficient processes.

Shaik Abdul Khadar

www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 2: Plotting the Supply Chain and Material Flow

2. Identify Flow Bottlenecks

SAMPLE TEMPLATE

Flow Bottleneck Identification Template for a Milling Organization

Process Stage	Potential Bottlenecks	Indicators to Monitor	Causes of Bottleneck	Possible Solutions
1. Port Unloading	Delays in unloading raw materials from ships	Queue time for unloading, berth occupancy rate, time taken per vessel	Lack of berth space, slow customs clearance, inefficient unloading equipment	Increase unloading equipment capacity, streamline customs processes, coordinate with port authorities
2. Port Silos & Warehouses	Storage congestion, degradation of raw material due to improper conditions	Silo occupancy rate, spoilage rate, temperature/humidity levels	Inadequate storage capacity, poor temperature/humidity control	Expand storage capacity, implement advanced monitoring systems for storage conditions
3. Transportation to Plant	Delays in transporting raw materials from port to plant	Lead time from port to plant, vehicle availability, on-time delivery rate	Limited fleet availability, road congestion, lack of transport scheduling	Increase fleet capacity, optimize scheduling, explore alternative routes
4. Plant Silos and Warehouses	Insufficient storage space or suboptimal material handling at the plant	Silo occupancy rate, inventory turnover, rate of material spoilage	Limited storage, outdated handling equipment	Expand plant storage, upgrade material handling equipment
5. Flour Mill	Production delays, equipment breakdowns, inefficient milling processes	Production rate, equipment downtime, quality deviation rate	Equipment malfunction, lack of preventive maintenance, inefficient workflow	Implement predictive maintenance, streamline production scheduling, train operators
6. Feed Mill	Feed production backlogs, inconsistency in product quality	Output rate, equipment utilization, quality control reports	Poor quality of raw material, frequent equipment breakdowns	Ensure quality control in raw material, conduct preventive maintenance
7. Packaging	Delays in packaging and labeling, inadequate packaging material availability	Packaging line throughput, stock levels of packaging materials, rate of packaging defects	Lack of packaging supplies, inefficient packing process	Maintain buffer stock of packaging materials, optimize packaging workflow
8. Customer Service	Delays in order processing, issues in order accuracy	Customer complaint rate, order processing time, order accuracy	Poor coordination with dispatch team, lack of digital tracking system	Implement digital tracking, streamline order processing, improve communication between teams
9. Distribution	Delivery delays to customers, high logistics costs	On-time delivery rate, transportation costs, customer feedback on delivery	Inefficient route planning, lack of distribution network coordination	Use route optimization software, establish partnerships with logistics providers

Shaik Abdul Khadar

www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 2: Plotting the Supply Chain and Material Flow

3. Create Visual Flow Diagrams

- **Network Diagrams**:
  - Create a flowchart or network diagram that visually maps the entire supply chain, showing the flow of materials from suppliers to manufacturing plants, through to distribution centers, and finally to customers.
  - Highlight key hand-off points between stages, such as the transition from **manufacturing to warehousing**, and **warehousing to last-mile delivery**.
- **Mapping Manufacturing Plants Flour Mills, Feed Mills, and others**
  - Include each manufacturing plant in the flow diagram, capturing the movement of **raw materials**, **WIP inventory**, and **finished goods** through the production line.
  - Note lead times and cycle times at each production step, identifying any **in-process inventory buildup** or production slowdowns.
- **Mapping Last-Mile Delivery**:
  - Show the **final leg of the supply chain**, where goods are transported from regional distribution centers to customers via delivery routes.
  - Highlight **last-mile logistics** challenges, such as **traffic congestion**, **urban delivery windows**, and the complexity of delivering to **high-density areas**.
  - Include transit times and the role of logistics providers or **third-party delivery services** (e.g., FedEx, UPS, local couriers).
- **Lead Time Overlays**:
  - Use color coding to differentiate between normal flow (green), potential delays (yellow), and bottlenecks (red). Include lead times for each stage of the flow.
- **Output**: A detailed visual representation (network diagram or flowchart) of the end-to-end supply chain, showing material flow from suppliers through manufacturing, warehousing, distribution, and last-mile delivery.

Shaik Abdul Khadar

www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 2: Plotting the Supply Chain and Material Flow

4. Document Key Constraints

- **Stockouts and Overstocking**:
  - Document any **stockouts** (where inventory runs out) or **overstocking** (where excess inventory ties up capital) that occur at manufacturing plants, warehouses, or during final delivery to customers.
  - Analyze the causes of these constraints, such as **poor demand forecasting**, **slow replenishment** from suppliers, or **inefficient inventory management**.
- **Production Delays**:
  - Record any delays in manufacturing caused by equipment failures, **capacity issues**, or **labor shortages**.
  - Highlight situations where **lead times between production stages** (e.g., raw material to WIP, WIP to finished goods) are excessively long, causing disruptions in the downstream supply chain.
- **Last-Mile Delivery Constraints**:
  - Identify challenges in the last-mile delivery stage, such as **inefficient route planning**, lack of **delivery fleet capacity**, or **logistical challenges** in serving rural or urban areas.
  - Note any **customer dissatisfaction** due to delayed deliveries or poor communication regarding delivery status.
- **Transportation Delays**:
  - Assess transportation issues, such as **delayed shipments from suppliers**, **transit time variability** between manufacturing plants and distribution centers, or congestion during last-mile delivery.
- **Output**: A detailed list of key constraints affecting material flow through manufacturing plants, warehouses, and last-mile delivery, with identified causes and areas for improvement.

Shaik Abdul Khadar

www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 2: Plotting the Supply Chain and Material Flow

Key Constraints Documentation Template for Milling Industry

Process Stage	Constraint Description	Impact on Operations	Root Cause Analysis	Proposed Solution
1. Port Unloading	Delays in unloading due to limited berth space and slow customs clearance	Increased lead times and higher demurrage costs due to vessel delays	Limited berth availability, inefficient customs process	Expand berth capacity, streamline customs with pre-clearance for known suppliers
2. Port Silos & Warehouses	Storage congestion and material degradation due to inadequate storage capacity and poor environmental control	Increased storage costs, higher risk of spoilage, and loss in raw material quality	Insufficient silo capacity, lack of temperature/humidity controls	Increase storage capacity, implement automated temperature and humidity control systems
3. Transportation to Plant	Delays in transporting raw materials from port to plant due to fleet limitations and road congestion	Production delays and inconsistent material supply to plant	Limited transportation fleet, frequent road traffic congestion	Expand fleet, improve route planning and scheduling, explore alternative routes
4. Plant Silos and Warehouses	Limited plant storage capacity causing inventory pile-up at port and supply chain disruptions	Potential production halts and increased material handling costs	Inadequate silo and warehouse capacity at the plant	Increase storage capacity at plant, streamline transfer processes between port and plant
5. Flour Mill	Frequent equipment breakdowns and inconsistent milling process efficiencies	Production slowdowns, increased maintenance costs, and quality variation	Lack of preventive maintenance, aging equipment, inefficient milling processes	Implement regular preventive maintenance, upgrade machinery, optimize milling workflows
6. Feed Mill	Production backlogs due to frequent machine breakdowns and variability in raw material quality	Reduced output, lower product quality, and potential delivery delays	Quality issues in raw materials, lack of regular machine maintenance	Strengthen raw material quality checks, implement predictive maintenance
7. Packaging	Shortage of packaging materials and delays in packaging line due to inefficient processes	Packaging delays leading to late shipments and increased operational costs	Poor inventory management of packaging materials, outdated packaging processes	Maintain a buffer stock of packaging materials, upgrade packaging line equipment
8. Customer Service	Delays in order processing and issues with order accuracy	Customer dissatisfaction, increased complaints, and potential loss of business	Lack of real-time tracking system, inefficient coordination with distribution team	Implement order tracking system, improve communication and coordination between departments
9. Distribution	Delivery delays and high logistics costs due to inefficient routing and limited distribution network coverage	Higher distribution costs, delayed deliveries, and potential customer dissatisfaction	Inefficient route planning, limited distribution network partnerships	Use route optimization software, establish partnerships with regional logistics providers

SAMPLE

- At this step, main focus is on plotting the supply chain for material flows.
- While plotting material flows, some of the solutions may be identified. Try to put them into this table.
- After planning process mapping, you will be in a position to identify the gaps both in planning and material flows.

Shaik Abdul Khadar

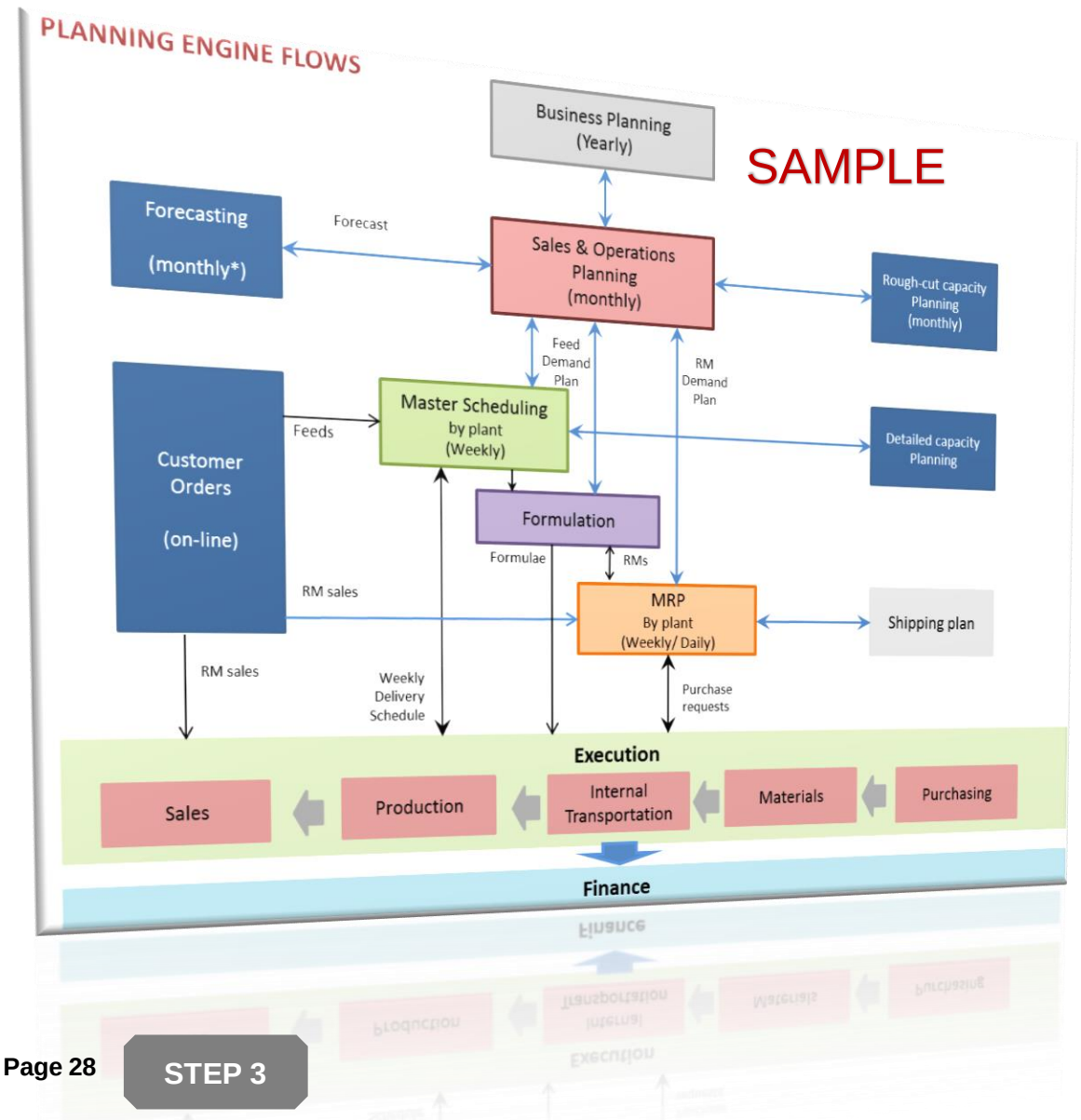
www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 3:

Mapping Organizational Planning Processes

To assess and map all key planning processes within the manufacturing and supply chain, ensuring they are aligned with the business strategy and identifying inefficiencies or missing processes that could hinder performance.

Shaik Abdul Khadar
www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333



Step 3: Mapping Organizational Planning Processes

Objective: Review and document all supply chain planning processes to identify gaps and ensure integration with strategic goals.

Activities:

- **Identify Core Planning Processes:** List and map out each planning function, including Sales & Operations Planning (S&OP), Master Production Scheduling (MPS), Material Requirements Planning (MRP), inventory planning, replenishment planning, and transportation planning.
- **Analyze Planning Process Efficiency**: Evaluate each process for efficiency and effectiveness, documenting timeframes, data flow, hand-offs, and decision points.
- **Identify Disconnects and Overlaps**: Look for gaps or redundant tasks that may cause delays, misalignment, or inefficiencies.
- **Create Visual Process Maps**: Use process diagrams to illustrate each planning process and its integration points with other departments or functions.
- **Document Key Gaps**: Identify areas for improvement, such as delays in data flow, misalignment of planning cycles, or lack of standardized metrics across functions.

Shaik Abdul Khadar
www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 3: Mapping Organizational Planning Processes

1. Identify Core Planning Processes

Purpose: The aim of this step is to ensure that all critical planning processes are identified and assessed. If any process (e.g., S&OP, MPS, MRP, transportation planning) is missing, it should be documented to create a more comprehensive and integrated planning system.

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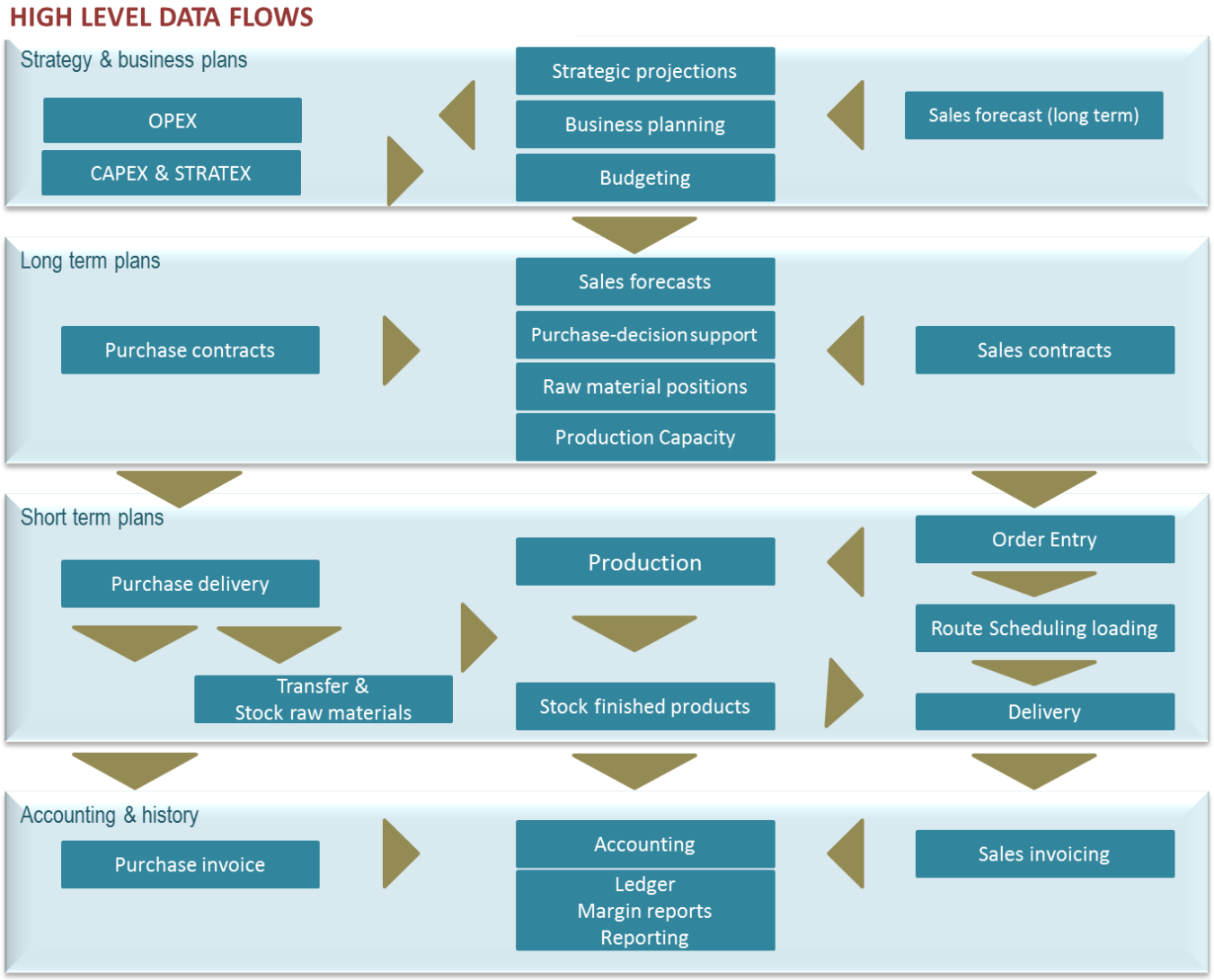


Shaik Abdul Khadar
www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 3: Mapping Organizational Planning Processes

1. Identify Core Planning Processes

Business Planning & Budgeting:

- Evaluate how well the **capital expenditure (CAPEX) initiatives** align with the overall corporate and supply chain strategy. Ensure that investments in manufacturing, logistics, procurement, inventory, and related areas are driven by strategic objectives. Key considerations include:
- How supply chain and manufacturing decisions, such as expanding capacity or improving warehouse management, are incorporated into the budgeting process.
- Whether these decisions contribute to achieving long-term goals, such as cost reduction, improving service levels, or enabling business growth.
- Make sure the **Operational expenditure (OPEX)** budget is aligned to the strategy. Usually this is the gap in the organizations. They take the last year numbers and project proportionately to make it easy. But this step is important to do to align with the strategy.
- If any **Strategic Expenditures (Stratex)** is identified to enable strategy execution, they have to identify at the budgeting. Stratex could be part of Opex or Capex from accounting point of view.
- If we don't put the proper budget provisions for supply chain, later it will be difficult to obtain the budget even if you have valid reasons.

Sales & Operations Planning (S&OP):

- Assess the presence and effectiveness of a formal **S&OP process**. If this process is absent, document the gap, as it is critical for aligning demand with supply and enabling strategic decision-making. Key points include:
- How demand forecasting, supply planning, and production scheduling are synchronized.
- The integration of **Sales & Operations Execution (S&OE)**, if applicable, to ensure that daily operations reflect the outcomes of the S&OP process.
- Many organizations don't practice formal S&OP process there by end up with disconnect to business planning to operations. Some organizations don't do S&OP properly making it only either Sales or Operations focus and forget about the balancing act.

Master Production Scheduling (MPS):

Analyze how **sales forecasts**, **order fulfillment requirements**, and **production capacity** are balanced. Assess the effectiveness of the **master schedule** in aligning production with demand. Identify any gaps, such as:

- Mismatches between production capacity and forecasted demand.
- Bottlenecks in fulfilling orders due to poor scheduling or capacity constraints.

Shaik Abdul Khadar

www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

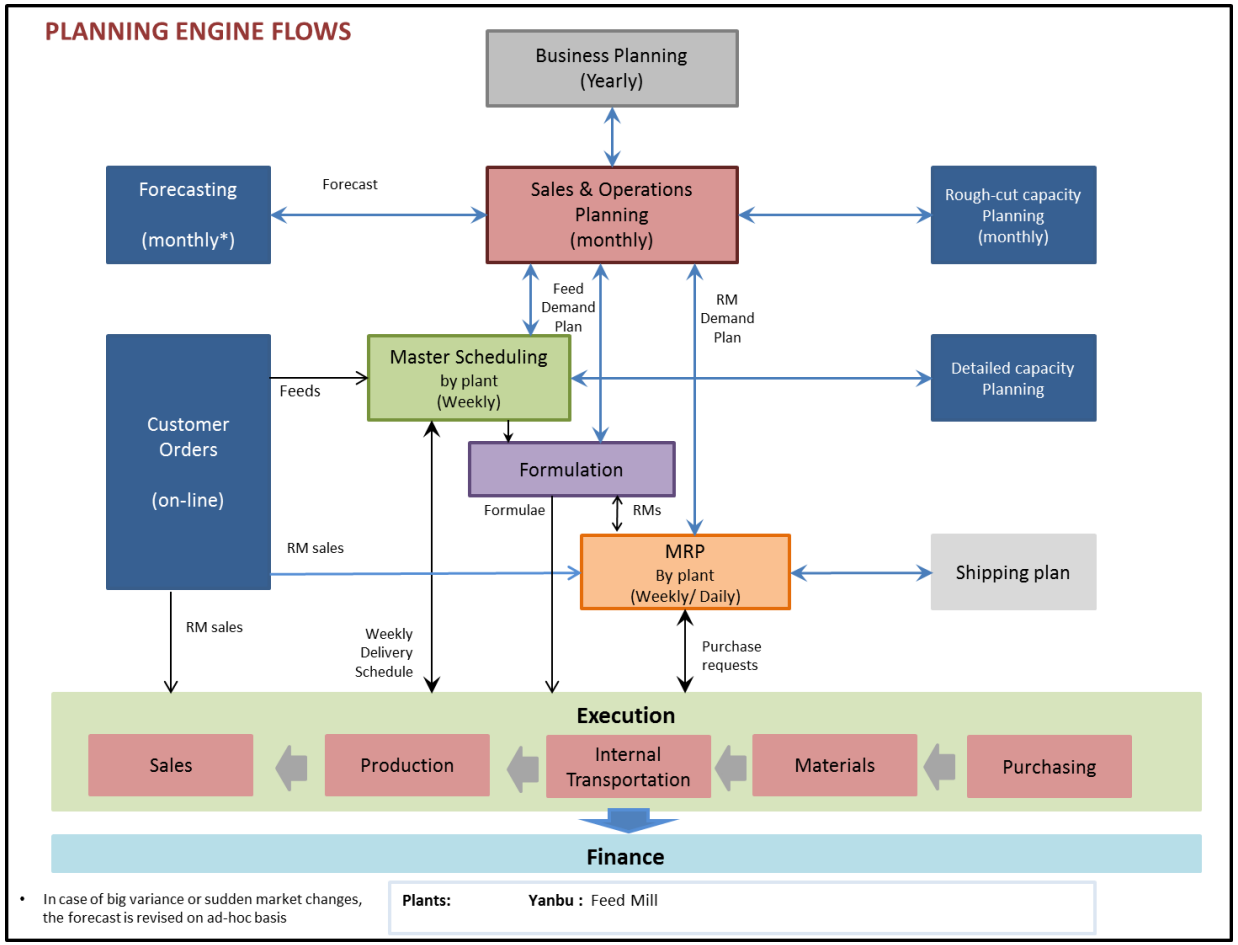
Step 3: Mapping Organizational Planning Processes

1. Identify Core Planning Processes

Detailed Scheduling and Planning:

Dive deeper into specific planning areas, including:

- **Material Requirements Planning (MRP)**: Ensures materials are available for production without overstocking.
- **Capacity Planning**: Verifies that equipment, labor, and facilities are used efficiently to meet demand.
- **Transportation Planning**: Coordinates inbound and outbound logistics to minimize costs and delays.
- **Inventory Planning**: Balances stock levels to meet demand without excessive holding costs.
- Ensure that all these plans are integrated and aligned with strategic priorities, and document any missing planning processes.
- Every organization have some unique planning process required for their business. You need to see what works for you. The whole idea is to have integrated planning.



Shaik Abdul Khadar
www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 3: Mapping Organizational Planning Processes

2. Analyze Planning Process Efficiency

Timeframes: Review the duration of each planning cycle and identify areas where delays may exist. For example, does S&OP take too long, delaying decision-making in production or procurement?

Data Flow: Examine how information moves between teams (sales, manufacturing, logistics). Are there delays or inaccuracies in data that hinder planning efficiency?

Decision Points: Assess whether decision-making is timely and supported by accurate, actionable data. Identify any bottlenecks in obtaining necessary approvals or aligning cross-functional decisions.

Planning Process Efficiency Analysis Template (Sample Data)

Planning Process	Timeframes	Data Flow	Decision Points	Bottlenecks	Improvement Opportunities
Business Planning & Budgeting	Annual, revised quarterly	- Data from finance, procurement, logistics, and manufacturing - Budget proposals reviewed manually	- CFO & department heads approve budget allocations	- Misalignment between capital expenditure for supply chain and strategic goals - Slow approval process	- Automate data submission and approval process - Improve alignment between CapEx initiatives and strategy
Sales & Operations Planning (S&OP)	Monthly cycle, takes 3 weeks to finalize	- Data from sales forecasts, production, and logistics - Manual data entry, outdated ERP system causes delays	- Decision approval from Sales, Manufacturing, and Finance teams	- Delayed data collection from sales and manufacturing - Misalignment between demand forecasts and production capacity	- Implement real-time data tools (e.g., cloud-based ERP) - Synchronize demand and production planning cycles
Master Production Scheduling (MPS)	Weekly, covers 4-6 weeks of production	- Sales forecasts, inventory levels, production capacity fed into MPS system	- Plant managers and production planners approve schedules	- Frequent changes to sales forecasts cause rework in scheduling - Communication gaps with production team	- Improve integration between sales forecasting and production planning - Implement predictive forecasting tools
Material Requirements Planning (MRP)	Weekly review, daily updates	- Inventory levels, supplier lead times, and demand forecasts - Data updated in ERP but manual review	- Procurement managers approve material orders	- Long lead times for critical materials - Stockouts due to inaccurate demand forecasts	- Collaborate with suppliers to reduce lead times - Automate replenishment planning based on demand forecasts
Inventory Planning	Monthly cycle, bi-weekly adjustments	- Inventory levels from warehouses, safety stock policies - Data flows between ERP and WMS systems	- Inventory managers decide on reordering, safety stock levels	- Overstocking due to conservative safety stock policies - Inconsistent data between ERP and WMS	- Adjust safety stock levels based on real-time demand - Integrate WMS and ERP for consistent data
Transportation Planning	Weekly planning, adjusted daily	- Transport routes, lead times, carrier availability - Manual data input from logistics teams	- Logistics managers approve routes and carriers	- Carrier delays and availability issues - Long lead times and poor route optimization	- Optimize routes using AI-driven software - Build partnerships with reliable carriers to reduce delays

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Shaik Abdul Khadar

www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 3: Mapping Organizational Planning Processes

3. Identify Disconnects and Overlaps

1. **Communication Gaps Between Departments**
   Review how different teams (sales, production, procurement, etc.) share data and communicate decisions. Ensure timely and accurate information flow to avoid delays and misaligned actions.
2. **Redundancies in Planning Activities**
   Look for instances where multiple departments perform the same tasks (e.g., inventory checks or forecasting) independently. Eliminate duplicate efforts by consolidating activities or automating processes.
3. **Misaligned Planning Cycles**
   Compare the planning cycles of each function (e.g., finance, production, inventory) to ensure synchronization. Align schedules to prevent bottlenecks or resource conflicts caused by out-of-sync cycles.
4. **Conflicting Priorities Between Functions**
   Identify competing objectives between departments (e.g., procurement focusing on cost reduction vs. production aiming to meet service levels). Align department KPIs with the broader supply chain strategy to ensure cohesive goals.
5. **Technology Integration Issues**
   Evaluate how well planning systems (ERP, MRP, WMS) are integrated. Disconnected systems lead to manual workarounds and slow decision-making. Improve data exchange by integrating software platforms.
6. **Misalignment of Long-Term and Short-Term Plans**
   Ensure that short-term operational goals (e.g., weekly schedules) support long-term strategic objectives (e.g., cost reduction). Implement rolling forecasts and regular reviews to align decision-making.
7. **Demand Forecasting Disconnects**
   Ensure that demand forecasts are shared across all relevant departments. Real-time access to accurate demand data can prevent overproduction, stockouts, or delays in procurement and production planning.

Common Disconnects and Overlaps:

Siloed Systems: When different departments use separate, unintegrated systems, it can lead to data discrepancies and misalignment of decisions.

Redundant Tasks: Multiple teams may be conducting the same forecasting or inventory analysis, leading to wasted effort and potential conflicting data.

Misaligned Timelines: Different teams operating on different planning cycles can cause inefficiencies and slowdowns in responding to demand or changes in strategy.

Competing Priorities: One department's goal to reduce costs may conflict with another's focus on reducing stockouts, leading to inefficiencies in the supply chain.

Shaik Abdul Khadar
www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

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Shaik Abdul Khadar
www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 3: Mapping Organizational Planning Processes

4 Document Key Gaps in Planning Processes

- After analyzing each process, clearly document inefficiencies and misalignments. Key areas to focus on include:
- **Delays in information flow** that disrupt planning cycles.
- **Misalignment between planning and execution** (e.g., the S&OP plan doesn't reflect daily operations).
- **Lack of standardized metrics** to measure planning effectiveness.
- **Absence of key planning processes** such as S&OP, MRP, or transportation planning, if they are missing.

Note: The proposed solution here is only preliminary understanding for next step 4 & 5

Template: Document Key Gaps

Category	Description of Gap	Impact	Root Cause	Proposed Solution	Priority Level (High/Med/ Low)	Responsible Team	Timeline for Resolution
Planning Process	e.g., Inconsistent S&OP Process	Unreliable production forecasts, leading to stockouts and overproduction	Lack of formal S&OP framework and communication between sales & production teams	Implement formal S&OP process with regular cross-functional meetings	High	Sales, Operations, Supply Chain	3 months
Technology Integration	e.g., ERP not integrated with WMS	Manual data entry leading to delays and errors in inventory management	Disconnected systems due to outdated technology	Upgrade or integrate ERP and WMS for seamless data flow	High	IT, Operations	6 months
Demand Forecasting	e.g., Forecasts not shared with procurement	Stockouts of critical raw materials	Lack of real-time data sharing between demand planning and procurement teams	Automate data sharing through integrated software	Medium	Procurement, Planning	2 months
Capacity Planning	e.g., MRP does not account for machine downtimes	Inefficient resource utilization, delays in production schedules	Machine downtime not considered in planning tools	Enhance MRP system to include real-time capacity adjustments	High	Production, IT	4 months
Supplier Performance	e.g., Long lead times from key suppliers	Delays in meeting customer orders, increased inventory costs	Limited pool of suppliers, reliance on single vendor	Diversify supplier base, renegotiate lead times	Medium	Procurement, Supplier Management	5 months
Skills Gap	e.g., Lack of advanced planning skills in key roles	Inaccurate planning and forecasting	Limited training on advanced planning tools (MRP, S&OP)	Invest in training and development for supply chain planners	Medium	HR, Supply Chain	3 months

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Shaik Abdul Khadar

www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 4:

Identifying Disconnects in Planning Processes

Step 5:

Identifying Gaps in Material Flow

- Step 4 and Step 5 have to be done together after doing Step 1 to Step 3.
- Now it is the time where you identify the disconnects of planning processes and material flows.
- Usually, the disconnects in material flow and planning flows are interlinked and hence they have to be done together.
- Once we eliminate the gaps in this, the whole supply chain processes work smoothly.
- Pinpoint inefficiencies within the material flow that lead to delays, increased costs, or service-level failures, ensuring smoother movement of goods throughout the supply chain.

Shaik Abdul Khadar
www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 4: Identifying Disconnects in Planning Processes

Objective: Identify inefficiencies within planning processes that affect the overall supply chain performance and responsiveness.

Activities:

- **Review Integration of Planning Processes**: Examine the degree of alignment between each planning function, such as S&OP, MRP, and production scheduling.
- **Identify Key Disconnects**: Look for gaps, such as misaligned schedules, inconsistent demand forecasting, or insufficient communication between planning and operations teams.
- **Evaluate Data Flow and Process Accuracy**: Check for manual interventions, delays, or data discrepancies that hinder accurate and timely planning.
- **Document Process Gaps**: Summarize disconnects in planning processes, such as lack of standardized formats, delays in forecast updates, or mismatched inventory planning.
- **Provide Recommendations**: Suggest solutions, such as integrated planning tools, automation, or enhanced cross-functional communication, to streamline planning activities.

Shaik Abdul Khadar

www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 4: Identifying Disconnects in Planning Processes

1. Identify Missing Planning Processes:

- Begin by reviewing mapped planning processes, including Business Planning, S&OP, Master Production Scheduling, Material Requirements Planning, and others (Capacity Planning, Inventory Planning, Procurement Planning, etc.).
- Check if any core processes, such as Sales & Operations Execution (S&OE), Transportation Planning, or Inventory Replenishment, are **absent or insufficiently developed.**
- Ensure all relevant planning processes are in place and aligned with the supply chain strategy.

2. Review Intersections of Planning Processes:

- **Intersection 1: Business Planning & S&OP** – Check how the long-term budgeting and business planning aligns with the monthly or weekly S&OP process. Are there disconnects between financial plans and operational targets?
- **Intersection 2: S&OP & Master Production Scheduling** – Review the transition from high-level demand forecasts to detailed production schedules. Are there any gaps where demand planning does not translate effectively into production plans?
- **Intersection 3: MPS & Detailed Scheduling** – Evaluate the link between master scheduling and specific planning processes like MRP, capacity, and inventory. Is there a smooth handover of data?
- **Intersection 4: Planning & Execution** – Assess the execution of plans, ensuring there are no delays, miscommunications, or deviations between plans and actual execution, such as missed production or logistics deadlines.

3. Identify Gaps at Each Intersection:

- **Communication Gaps**: Are there any breakdowns in communication between departments (e.g., sales, procurement, and manufacturing) that lead to inefficiencies or delays?
- **Data Disconnects**: Is data from one planning stage flowing accurately and in real time to the next? For example, inaccurate demand forecasts flowing into production plans can cause excess inventory or stockouts.
- **Manual Interventions**: Are there any manual, non-standardized processes that create delays or introduce errors between planning stages?
- **Mismatched Timelines**: Is the planning horizon for different processes inconsistent (e.g., long-term production plans vs. short-term sales forecasts)?

4. Evaluate Data Flow & Process Accuracy:

- Examine how data flows between systems or teams (e.g., demand forecasting tools, ERP systems, supply chain management software). Are there delays or discrepancies in transferring data?
- Review accuracy and timeliness in the updates of data (e.g., outdated forecasts, misaligned production schedules, delayed order updates).

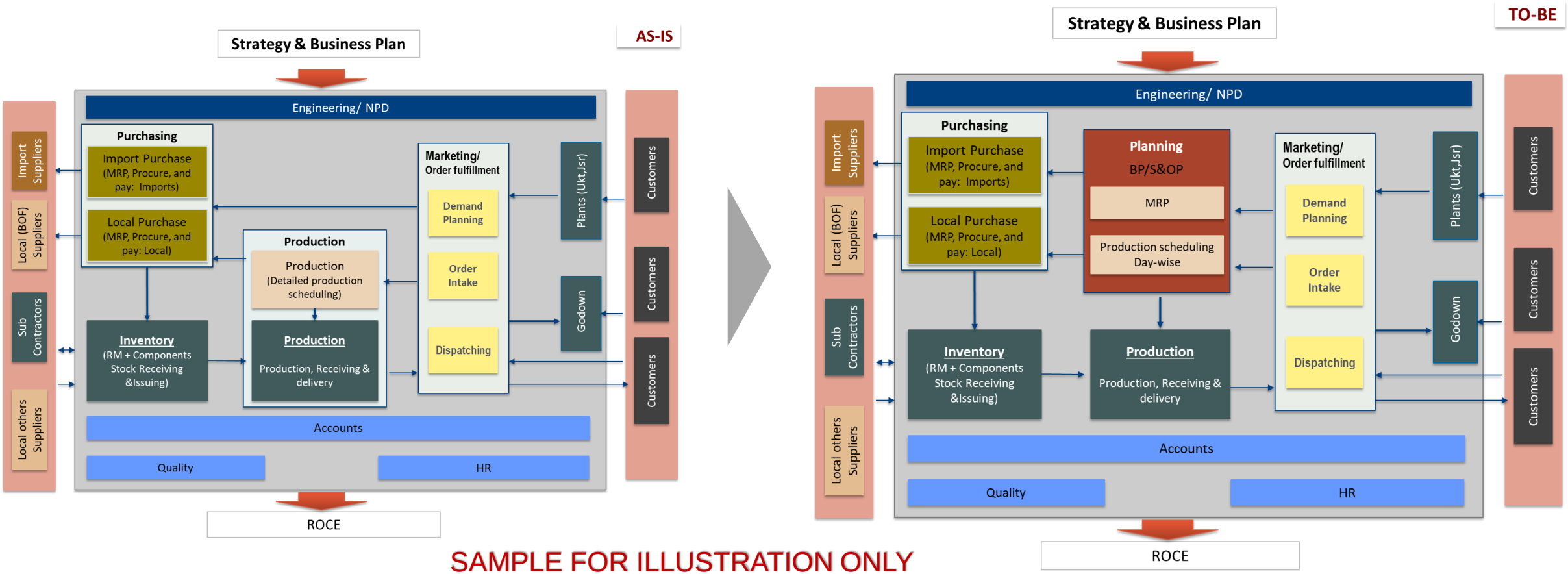
5. Document Key Disconnects:

- **Example**: Demand planning is done monthly, but production schedules are adjusted weekly, leading to mismatches between forecasted and actual production volumes.
- **Example**: Lack of a formalized S&OE process causes gaps between what is planned in S&OP and the actual execution of production and distribution

Shaik Abdul Khadar

www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 4: Identifying Disconnects in Planning Processes



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Shaik Abdul Khadar

www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 5: Identifying Gaps in Material Flow

Objective: Pinpoint obstacles or inefficiencies within the material flow that contribute to delays, increased costs, or service issues.

Activities:

- **Analyze Material Flow Dynamics**: Review flow constraints that may cause bottlenecks, such as insufficient Silos or warehousing capacity, manufacturing capacity, transportation delays, or stockouts.
- **Evaluate Inventory Policies**: Check if inventory levels, safety stock, and reorder points are optimized for demand variability and lead times.
- **Conduct Bottleneck Analysis**: Identify critical points where material flow is delayed or becomes inefficient, focusing on factors such as supplier reliability, transportation, and warehouse handling.
- **Document Observations**: Note specific issues impacting material flow, including high lead times, frequent backorders, or excess handling time.
- **Provide Recommendations for Flow Improvement**: Suggest improvements, such as increasing warehouse capacity, improving supplier lead times, or adjusting inventory policies for faster response times.

Shaik Abdul Khadar

www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 5: Identifying Gaps in Material Flow

Pinpoint inefficiencies within the material flow that lead to delays, increased costs, or service-level failures, ensuring smoother movement of goods throughout the supply chain.

1. Observe Each Intersection in Material Flow:

- At every key handoff point (e.g., supplier to warehouse, warehouse to production, production to distribution), observe the activities, timings, and materials involved.
- By focusing on what happens at each intersection, you can identify specific gaps, such as delayed transfers, quality issues, or quantity mismatches. This detailed observation helps to uncover issues that may not be apparent in high-level analysis.

2. Analyze Material Flow Dynamics:

Begin by reviewing mapping of physical movement of goods from suppliers through to the end customer. Review constraints at each stage of the supply chain, such as:

- Warehousing capacity (e.g., insufficient space leading to delays).
- Transportation inefficiencies (e.g., delays in delivery or long transit times).
- Stockouts and overstocking situations.
- Physical flow disruptions caused by regulatory or customs procedures.
- Manufacturing lead times and capacity constraints.

3. Evaluate Inventory Policies:

Review current inventory management practices:

- Are inventory levels optimized for actual demand variability?
- Are safety stock levels properly aligned with lead times and consumption rates?
- Are reorder points set correctly to avoid shortages or excessive overstocking?

4. Conduct Bottleneck Analysis:

Identify areas within the supply chain where material flow slows down, such as:

- Supplier reliability issues, where lead times are longer than expected or deliveries are inconsistent.
- Transportation delays, whether due to poor scheduling, lack of coordination, or external disruptions (e.g., road conditions or shipping delays).
- Warehouse handling inefficiencies (e.g., slow picking/packing processes or inadequate handling equipment).
- Manufacturing bottlenecks, where production capacity doesn't meet demand.

Shaik Abdul Khadar

www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 5: Identifying Gaps in Material Flow

Pinpoint inefficiencies within the material flow that lead to delays, increased costs, or service-level failures, ensuring smoother movement of goods throughout the supply chain.

5. Document Observations:
Record all observations made during the analysis:

- Identify stages of high lead times.
- Highlight frequent backorder situations.
- Note excess handling times or rework due to improper material handling.
- Capture any constraints from suppliers or transport partners that affect timely delivery.

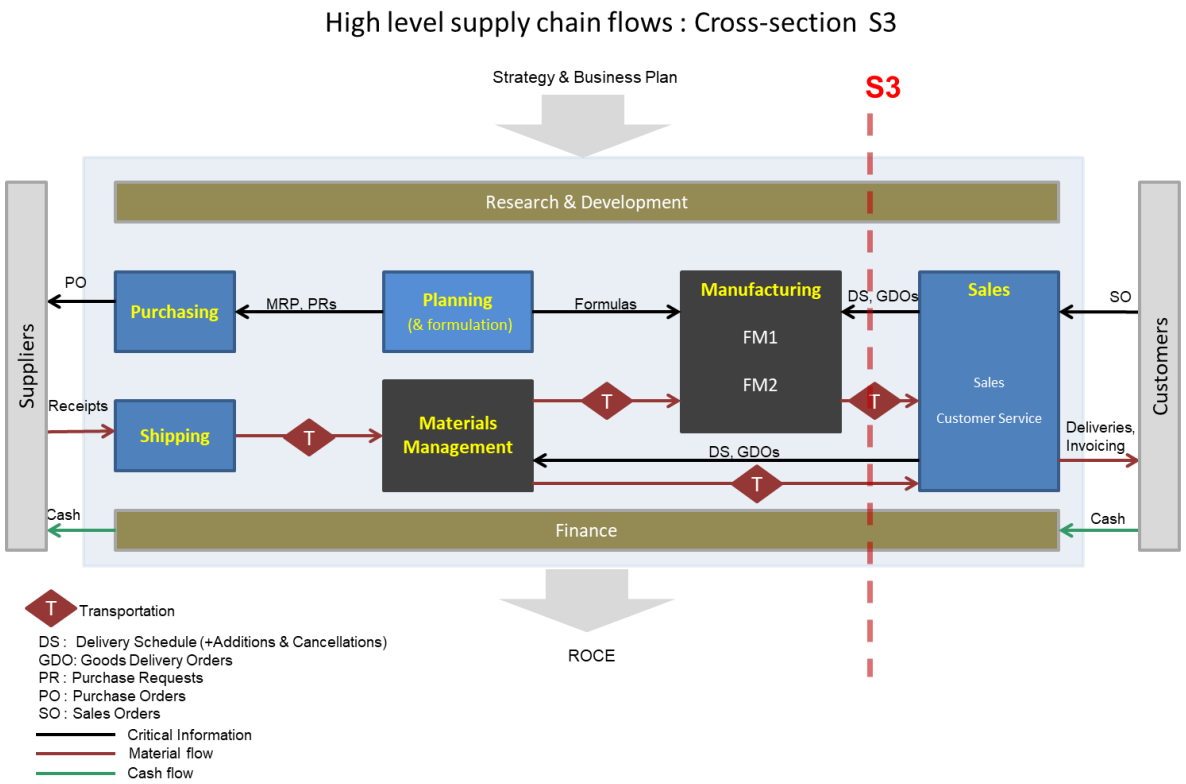
6. Provide Recommendations for Flow Improvement:

Based on your observations, suggest actionable improvements, such as:

- Increasing warehousing capacity or introducing more efficient layouts to reduce handling time.
- Improving supplier agreements to shorten lead times or increase reliability.
- Adjusting transportation scheduling or modes of transport to better meet delivery windows.
- Revising inventory policies to optimize stock levels for faster response to demand spikes or supply chain disruptions.
- Introducing or upgrading technology (e.g., automated warehouse systems or real-time tracking tools) to streamline material flow and enhance visibility.

Shaik Abdul Khadar
www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 5: Identifying Gaps in Material Flow



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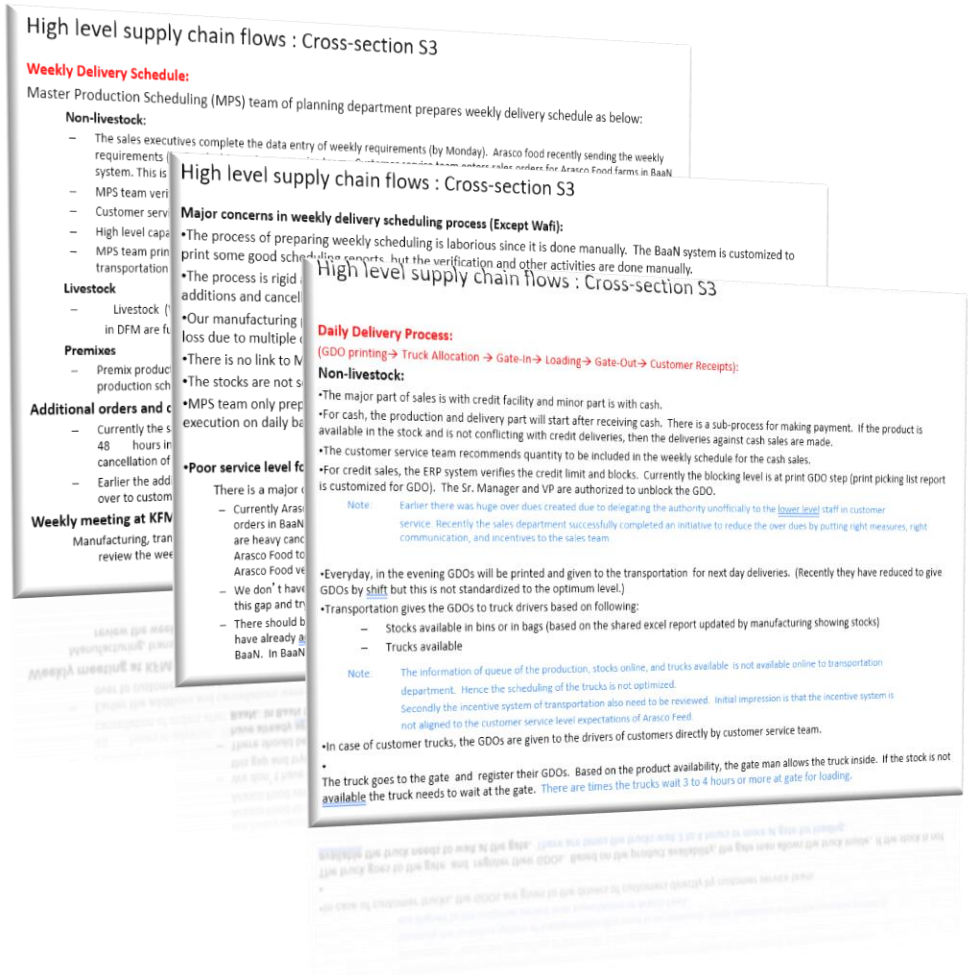

Shaik Abdul Khadar
www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 5: Identifying Gaps in Material Flow

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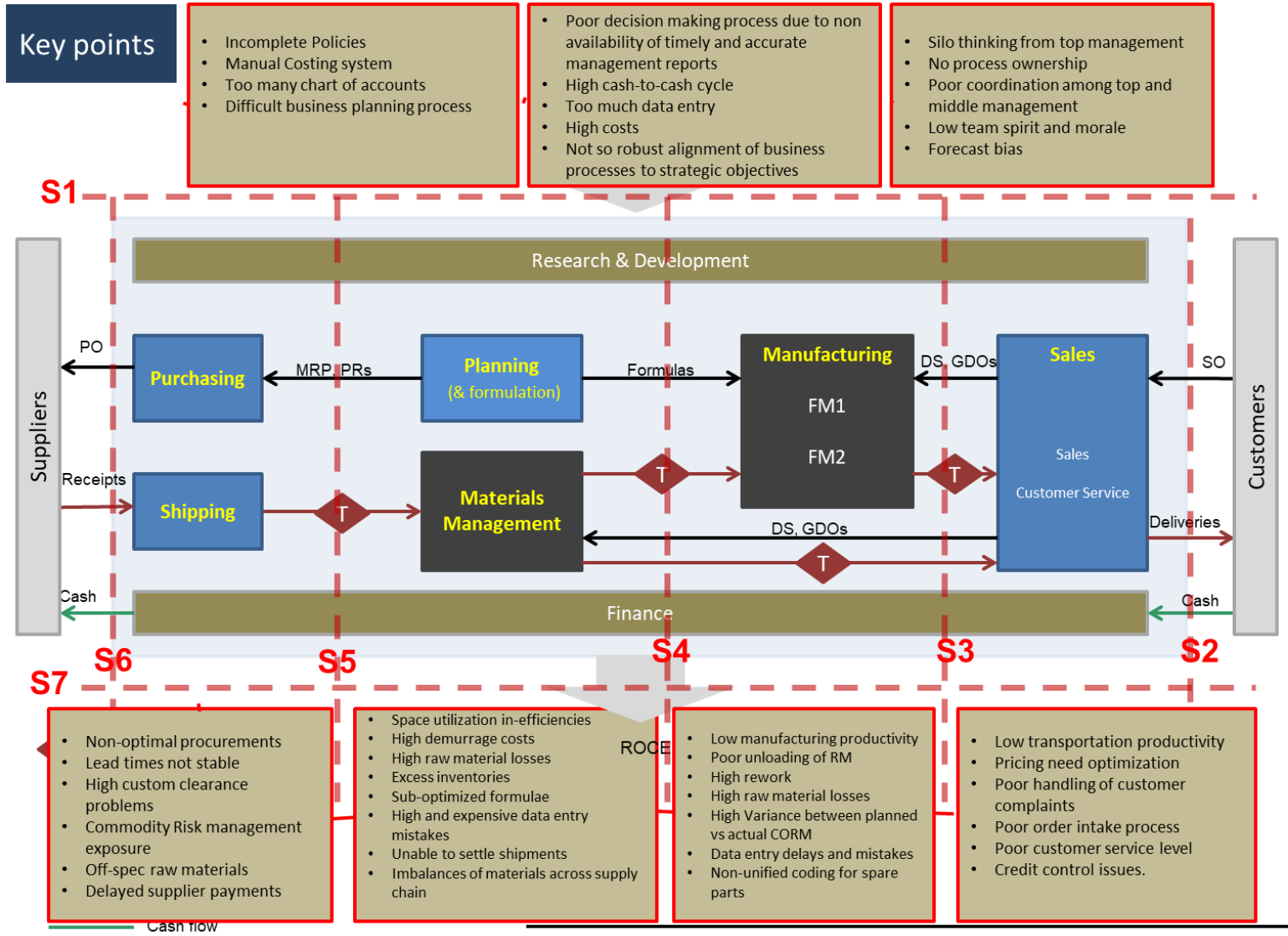


Shaik Abdul Khadar
www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Gaps for Planning & Material Flow

Template for Reporting Gaps in Planning and Material Flows

Section 1:
Executive Summary Objective: Summarize the purpose of the gap analysis, outlining key issues found in both planning processes and material flow.
Key Findings: Briefly list the major gaps identified in both planning and material flows, along with high-level recommendations for improvement.

Section 2: Gaps in Planning Processes

Planning Process Intersection	Current State	Identified Gap	Impact of the Gap	Root Cause	Recommended Solution	Priority Level
Example: S&OP ↔ Master Production Scheduling	S&OP forecasts not aligned with production capacity	Mismatch in production plans vs demand forecast	Production delays, excess inventory	Lack of cross-functional alignment	Implement regular joint review meetings between sales and production	High

Section 3: Gaps in Material Flow

Material Flow Intersection	Current State	Identified Gap	Impact of the Gap	Root Cause	Recommended Solution	Priority Level
Example: Supplier → Warehouse	Lead time from supplier is 10 days, but production needs material within 7 days	Supplier lead time longer than required	Production downtime, stockouts	Supplier reliability issues	Negotiate shorter lead times or add alternate suppliers	High

SAMPLE TEMPLATE

Shaik Abdul Khadar
www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 6:

Identifying Gaps in Manufacturing Processes

To uncover inefficiencies and bottlenecks in the manufacturing process, ensuring alignment with overall supply chain goals and strategic objectives.

Shaik Abdul Khadar
www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 6: Identifying Gaps in Manufacturing Processes

Objective: Ensure manufacturing processes support overall supply chain efficiency and align with strategic objectives.

Activities:

- **Evaluate Manufacturing Capabilities**: Review the ability of manufacturing processes to meet demand, focusing on lead times, production scheduling, and quality control.
- **Identify Process Bottlenecks**: Look for inefficiencies that disrupt the flow, such as equipment downtime, skill gaps, or inadequate capacity planning.
- **Assess Capacity and Batch Sizes**: Determine if current production batch sizes and scheduling align with supply chain demand and customer requirements.
- **Document Gaps**: Highlight issues such as long changeover times, capacity constraints, or inconsistent quality standards.

Recommend Improvements: Propose changes, such as lean manufacturing practices, capacity upgrades, or adjustments in batch sizes, to ensure manufacturing aligns with supply chain needs.

Shaik Abdul Khadar

fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 6: Identifying Gaps in Manufacturing Processes

1. Evaluate Manufacturing Capability:

- **Formula/Bill of Materials**: Review whether the BoM is accurate, up-to-date, and optimized for production. Misalignments in BoM can lead to production delays or material waste.
- **Routing**: Make sure that the routing is properly defined which include Receiving and cleaning, conditioning, grinding/milling, blending and enrichment, packaging and storage, and other steps.
- **Production Scheduling**: Analyze if the scheduling aligns with customer demand and available production capacity. Identify any gaps between forecasted and actual production.
- **Lead Time**: Evaluate if the time taken to produce items meets customer expectations. Long or unpredictable lead times can indicate process inefficiencies or bottlenecks.

2. Identify Bottlenecks:

- **Capacity Constraints**: Review the production capacity of equipment, machinery, and labor. Determine if there are choke points in the production flow where capacity is insufficient to meet demand.
- **Machine Downtime and Maintenance**: Identify bottlenecks caused by machine downtime, breakdowns, or slow maintenance response times.
- **Workforce Skills**: Evaluate if operators are skilled and trained enough to handle equipment efficiently. Identify gaps in training that could slow down production.
- **Automation Gaps**: Identify areas where manual processes can be automated to reduce bottlenecks, improve speed, and ensure consistency.

Shaik Abdul Khadar

fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 6: Identifying Gaps in Manufacturing Processes

3. Assess Capacity Planning and Material Balancing:

- **Capacity Planning**: Ensure that capacity planning is accurately forecasting future demands, including for seasonal changes or new product introductions.
- **Material Balancing**: Examine how materials flow in and out of production. Check for imbalances, such as excessive work-in-progress (WIP) inventory or raw materials, which can strain storage and disrupt flow.

4. Operational Time Stamps and Lead Time Reduction:

- Assess the time spent in each operational step (or "stamping") of the production process, from receiving raw materials to finished goods. Look for steps where too much time is spent, leading to excessive lead times or delays. The PCS generates all the data and this data can be used to find the inefficiencies.

5. Quality Control:

- **Quality Management**: Review the effectiveness of current quality control processes. Identify any gaps leading to inconsistent production quality, rework, or product returns.
- **Waste Reduction**: Identify processes or steps that generate excess scrap or waste. Evaluate how these affect production efficiency and overall cost.

6. Data Flow and Systems Integration:

- Review the integration between shop-floor systems, ERP, and MES. Misaligned systems or manual data entries can slow down processes and create errors in planning and execution.
- Ensure real-time data flow from production to inventory and supply chain planning systems. Delays in data exchange can lead to inaccuracies in decision-making.

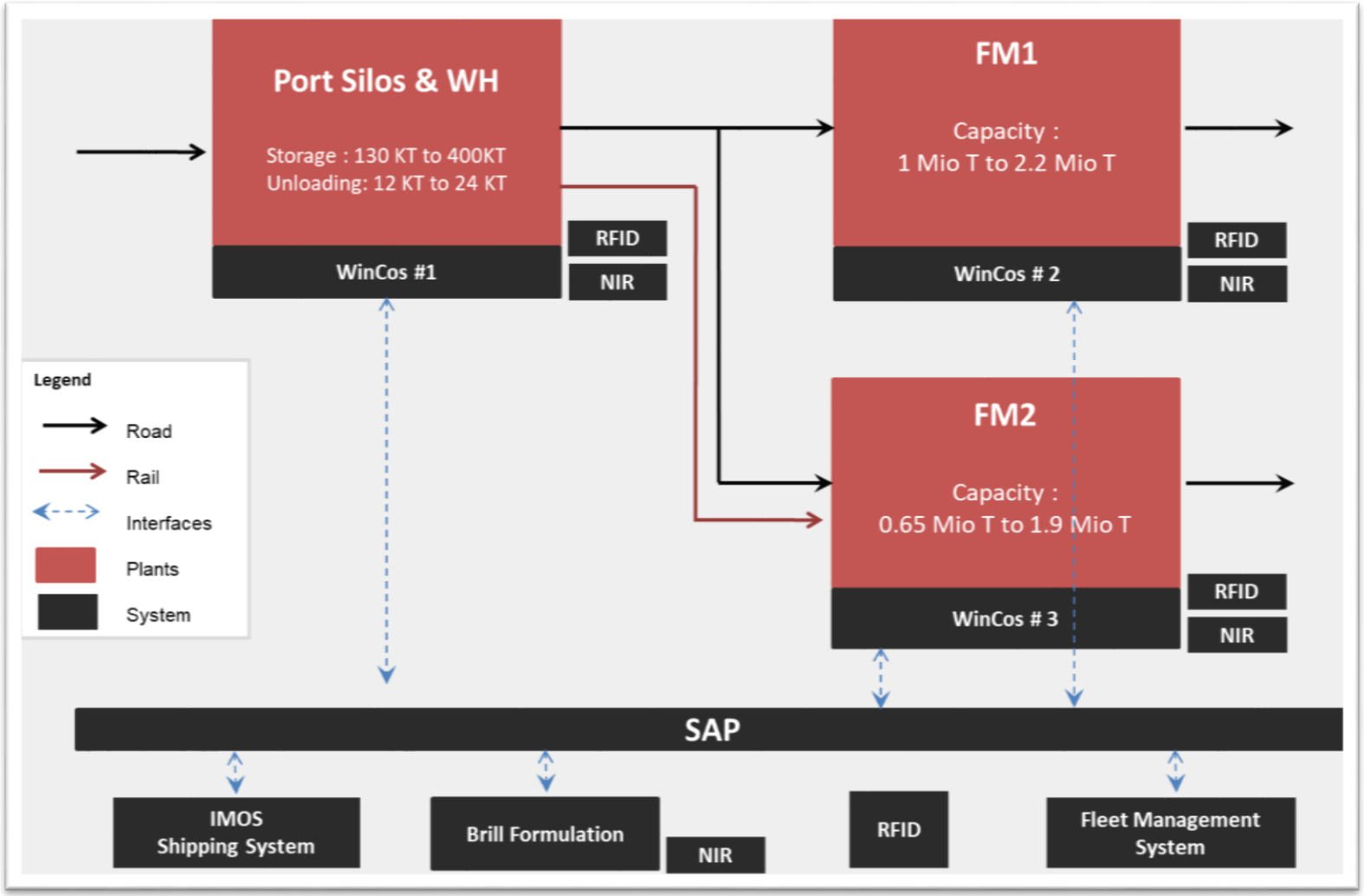
7. Compliance and Safety Standards:

- Ensure that the manufacturing process adheres to all industry-specific compliance and safety standards. Failure to comply can lead to interruptions, penalties, or even shutdowns.

Shaik Abdul Khadar

fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 6: Identifying Gaps in Manufacturing Processes



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Shaik Abdul Khadar
fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 6: Identifying Gaps in Manufacturing Processes

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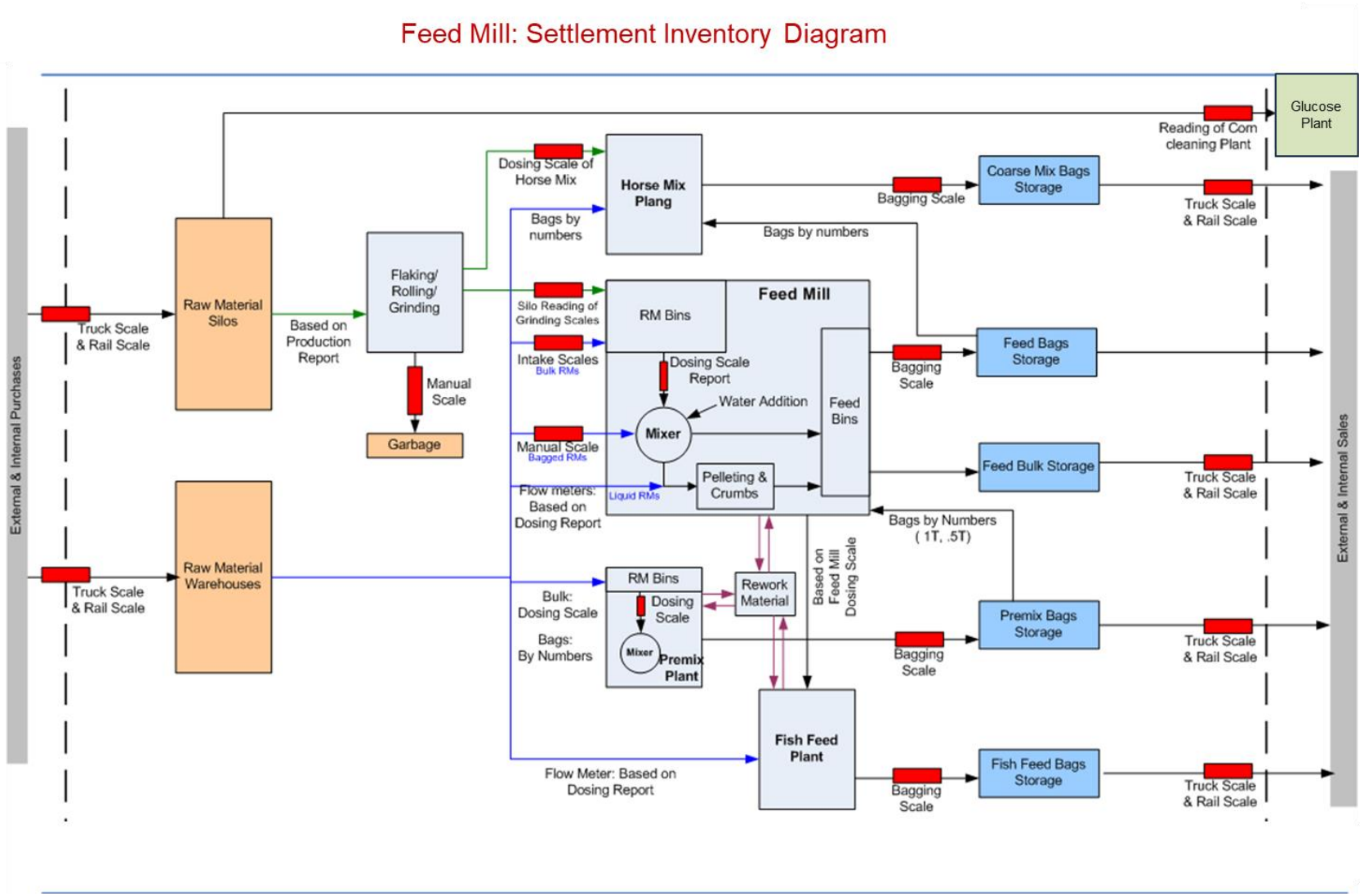

Shaik Abdul Khadar
fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 6: Identifying Gaps in Manufacturing Processes

Manufacturing Gaps Template for Milling Industry (Flour & Feed Milling)

Area	Current State	Gaps Identified	Impact	Recommendation
Manufacturing Capability	Advanced milling equipment with high output but limited flexibility for varying product types	Inflexibility in switching between product grades or formulations	Limited product variety and slower response to changing customer demands	Invest in versatile milling equipment to support multiple product types
BOM/Formula	Standard BOMs for various flour and feed products are well-documented	BOMs lack flexibility to accommodate ingredient variability	High reliance on specific ingredients can cause issues if supply is disrupted	Develop adaptable BOMs with alternative ingredients for flexibility in sourcing
Routing	Defined routing process from raw material intake to packaging	Some routing stages are inefficient, causing bottlenecks (e.g., grain cleaning and grinding)	Reduced production efficiency, longer lead times	Optimize routing steps, upgrade cleaning and grinding equipment to streamline process
Production Scheduling	Weekly scheduling based on forecast demand for flour and feed products	Long lead times for raw material availability complicate scheduling accuracy	Production delays or overproduction of certain products	Implement advanced scheduling software to account for long lead times and improve forecast accuracy
Lead Times	Raw materials sourced internationally with lead times of 60-90 days	Unpredictable international shipping delays, causing frequent stockouts or surplus	Increased costs due to stockouts or high inventory holding costs	Develop buffer stocks for critical raw materials, engage in contract-based shipping for reliability
Capacity Planning	Plant capacity can meet current demand but lacks flexibility for seasonal or demand spikes	Limited ability to scale up production in peak seasons	Inability to meet demand surges, leading to potential lost sales or customer dissatisfaction	Enhance flexibility through additional shifts or modular equipment that can be scaled up
Quality Control	Quality checks performed at various stages (input, in-process, finished)	Manual quality checks lead to inconsistencies and variability in final product quality	Potential customer complaints due to inconsistent product quality	Introduce automated quality control systems for consistent testing across stages
Material Balancing	Inventory levels tracked manually, with stockouts occurring occasionally	Manual tracking leads to inaccurate inventory levels and poor material balancing	Production delays and increased waste due to imbalanced material flow	Implement digital inventory management for real-time material balancing
Operational Time Stamps	Process steps are time-stamped manually, creating a record of operational history	Manual time-stamping is prone to errors and leads to unreliable data	Inaccurate performance tracking and inefficiencies in analyzing process improvements	Automate time-stamping with digital tracking for accurate real-time data
Other (Maintenance)	Preventive maintenance scheduled monthly for critical equipment	Reactive maintenance due to lack of predictive monitoring	Increased equipment downtime, reduced production efficiency	Implement predictive maintenance using IoT sensors for critical equipment

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Shaik Abdul Khadar

fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 7:

Financial Flows & Cost Assessment

Identify inefficiencies within financial processes linked to the supply chain, assess cash flow dynamics, and evaluate costing practices to optimize overall financial performance.

Shaik Abdul Khadar
www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 7: Financial Flow and Cost Assessment

Objective: Map financial flows across the supply chain to uncover areas for cost savings and efficiency improvements.

Activities:

- **Document Financial Processes**: Outline financial flows related to supply chain activities, including supplier payments, inventory holding costs, and revenue cycles.
- **Identify Financial Inefficiencies**: Look for areas that may add unnecessary cost, such as high holding costs, delayed payments, or inefficient payment terms with suppliers.
- **Conduct Cash Flow Analysis**: Analyze the timing of cash outflows and inflows within the supply chain, noting any misalignments that impact liquidity or cost.
- **Document Observations**: Summarize key financial gaps, such as inconsistent payment schedules or cash tied up in inventory.
- **Suggest Financial Improvements**: Recommend adjustments, such as renegotiating supplier payment terms or reducing inventory levels, to improve financial flow.

Shaik Abdul Khadar

www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 7: Financial Flow and Cost Assessment

1. Document Financial Processes

- **Objective:** Map out the key financial flows within the supply chain. This includes processes related to:
  - **Supplier Payments:** Frequency, payment terms (e.g., Net 30, Net 60), and methods (automated, manual).
  - **Inventory Holding Costs:** Costs associated with storing goods, including warehousing, insurance, and depreciation.
  - **Revenue Cycles:** Timing and process of receiving payments from customers and cash inflows from sales.

Steps:

- Review supplier contracts to understand payment terms and deadlines.
- Analyze the process of payment disbursement to suppliers, identifying any delays or manual interventions.
- Evaluate inventory holding cost metrics, breaking down storage, depreciation, and handling costs.
- Examine customer payment cycles and any issues in the invoicing process that impact timely cash inflows.

Outcome:

A detailed map of financial processes in the supply chain, highlighting any issues in timing, manual interventions, or cost accumulation.

2. Identify Financial Inefficiencies

- **Objective:** Uncover inefficiencies within the financial flow that add cost or reduce liquidity, including:
  - **High Inventory Holding Costs:** Excess stock leading to increased warehousing costs and capital tied up in inventory.
  - **Delayed Supplier Payments or Revenue Collection:** Late payments to suppliers leading to penalties, or delayed payments from customers affecting cash flow.
  - **Inefficient Payment Terms:** Unfavorable supplier payment terms that negatively impact cash flow, e.g., upfront payments or short payment deadlines.

Steps:

- Review payment schedules to suppliers and assess for delays or misalignments with inventory management.
- Analyze holding costs by breaking down the specific storage durations and associated costs for different materials or finished goods.
- Cross-check supplier terms with industry standards to evaluate competitiveness.

Outcome:

A list of specific financial inefficiencies, including areas where delays, misaligned terms, or excess costs exist.

Shaik Abdul Khadar

www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 7: Financial Flow and Cost Assessment

3. Conduct Cash Flow Analysis

- **Objective:** Review the timing of cash outflows and inflows and assess whether there are misalignments that create liquidity constraints or cost inefficiencies.

Steps:

- Analyze the timing of major cash outflows (e.g., supplier payments, inventory procurement) and inflows (customer payments).
- Assess mismatches between supplier payments and customer payment cycles, particularly where cash outflows occur before sufficient cash inflows, leading to liquidity stress.
- Review bank financing arrangements (such as lines of credit) used to address cash flow gaps and assess their cost-effectiveness.

Outcome:

A clear picture of cash flow timing mismatches and their impact on the business, highlighting areas where changes in payment terms or process alignment could improve liquidity.

4. Document Observations

- **Objective:** Summarize all identified financial gaps and inefficiencies.

Steps:

- Note specific issues such as:
  - Payment delays with suppliers causing penalties or friction.
  - High holding costs due to overstocking or inefficient inventory management.
  - Mismatched cash flow timing that leads to short-term liquidity issues or costly short-term borrowing.
- Highlight areas where supplier contracts or revenue collection processes can be optimized.

Outcome:

A comprehensive list of key financial gaps, with a focus on cash flow misalignments, unnecessary costs, and inefficiencies in financial transactions.

Shaik Abdul Khadar

www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 7: Financial Flow and Cost Assessment

5. Suggest Financial Improvements

- **Objective:** Recommend changes to improve financial processes and reduce costs, enhancing overall supply chain efficiency.

Steps:

- Propose improvements such as:
  - **Renegotiating Supplier Payment Terms:** Extend payment terms where possible, reduce upfront payments, or move to more favorable terms.
  - **Inventory Reduction:** Adjust inventory policies (e.g., reducing safety stock levels) to decrease holding costs while maintaining service levels.
  - **Accelerating Customer Payments:** Improve invoicing practices to speed up cash inflows (e.g., offering early payment discounts, automated invoicing).
  - **Cash Flow Optimization:** Align supplier payment schedules with customer payment cycles to reduce cash flow gaps and reduce reliance on expensive financing options.

Outcome: A set of actionable recommendations designed to optimize financial processes, improve liquidity, and reduce unnecessary costs within the supply chain.

6. Review Costing Practices

- **Objective:** Assess current costing practices to ensure accurate cost allocation, efficient resource usage, and pricing accuracy across the supply chain.

Steps:

- **Activity-Based Costing (ABC):** Consider implementing ABC to assign costs more accurately to products, customers, or activities based on resource consumption.
- **Cost Optimization:** Analyze costs associated with production, procurement, and logistics, identifying opportunities to optimize by re-evaluating suppliers, transportation modes, or production methods.
- **Overhead Analysis:** Review overhead costs and allocate them more precisely to specific departments or products to avoid over- or under-costing.

Outcome: An accurate breakdown of the cost structure, identifying areas for reduction, reallocation, or refinement, resulting in better decision-making and pricing strategies.

Shaik Abdul Khadar

www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 7: Financial Flow and Cost Assessment

1. Financial Process Mapping Template

Process	Description	Frequency	Cost Impact	Current Status
Supplier Payments	Description of supplier payment process	Monthly	High/Medium/Low	On-time/Delayed
Inventory Holding	Costs associated with holding inventory	Continuous	High/Medium/Low	Optimized/Excessive
Revenue Collection	Process for collecting payments	Weekly/Monthly	High/Medium/Low	Timely/Delayed

2. Identifying Financial Inefficiencies Template

Area of Financial Flow	Identified Inefficiency	Details	Impact	
Supplier Payments	Delayed payments to suppliers	Payments often delayed beyond due date	Increased penalties	
Inventory Holding Costs	Excessive inventory holding costs	High storage costs due to overstocking	High holding cost	
Payment Terms	Unfavorable payment terms with suppliers	Short payment terms that strain cash flow	Reduced liquidity	

3. Cash Flow Analysis Template

Cash Flow Component	Outflow (Frequency)	Inflow (Frequency)	Observations	Impact on Cash Flow
Supplier Payments	Monthly	N/A	Misalignment with revenue inflows	Strains cash flow
Customer Payments	N/A	Monthly	Late customer payments affecting cash availability	Delayed cash inflow
Inventory Purchases	Quarterly	N/A	Bulk purchases result in large outflows	Cash tied up in inventory

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Shaik Abdul Khadar

www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 7: Financial Flow and Cost Assessment

4. Documenting Observations Template

Financial Gap	Observation	Impact on Cost or Liquidity	Notes	
High Inventory Holding Costs	Excess inventory leading to storage costs	High holding costs	Stock level adjustments needed	
Misaligned Supplier Payment Terms	Short payment terms with suppliers	Reduces cash availability	Renegotiate for extended terms	
Delayed Revenue Collection	Late payments from key customers	Creates cash flow shortfalls	Potential improvement with early pay incentives	

5. Financial Improvement Recommendations Template

Area	Recommendation	Expected Outcome	Priority	Timeline
Supplier Payments	Renegotiate supplier terms to Net 60	Improved cash flow	High	1-2 months
Inventory Management	Reduce safety stock levels	Decrease in holding costs	Medium	3-6 months
Customer Payments	Implement early payment discounts	Faster cash inflow	High	1-2 months
Payment Processing	Automate invoice processing	Reduction in manual errors and faster payments	Medium	2-3 months

6. Costing Analysis Template

Cost Element	Cost Type	Current Cost	Cost Driver	Recommendation for Optimization	Potential Savings
Inventory Holding Cost	Warehouse storage and handling	$50,000/month	High safety stock	Reduce stock level	$10,000/month
Supplier Payment Cost	Early payment penalties	$15,000/month	Delayed payments	Extend payment terms	$5,000/month
Financing Cost	Short-term borrowing	$8,000/month	Cash flow misalignment	Align supplier payments with inflows	$3,000/month

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Shaik Abdul Khadar

www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 8:

Organizational Structure Gaps in Supply Chain

Evaluate the current structure of the supply chain team to identify any misalignments, skill gaps, or process inefficiencies that may impact responsiveness, decision-making, and alignment with strategic goals.

Shaik Abdul Khadar
www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 8: Organizational Structure Gaps in Supply Chain

Objective: Evaluate the supply chain organization structure for efficiency, clear role delineation, and alignment with objectives.

Activities:

- **Assess Roles and Responsibilities**: Review the organizational setup, focusing on role clarity, responsibility allocation, and accountability.
- **Identify Structural Gaps**: Look for areas with insufficient staffing, role overlaps, or isolated teams that hinder collaboration.
- **Document Findings**: Highlight specific structural issues impacting supply chain performance, such as siloed functions or overlapping responsibilities.
- **Provide Structural Recommendations**: Suggest improvements, such as realigning roles, creating cross-functional teams, or introducing new roles to close identified gaps.

Shaik Abdul Khadar

www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 8: Organizational Structure Gaps in Supply Chain

- **Role Clarity & Alignment**: Ensure roles and responsibilities are clearly defined and aligned with the supply chain strategy.
- **Decision-Making Authority**: Assess if the team has the necessary autonomy to make timely, effective decisions.
- **Cross-Functional Collaboration**: Evaluate coordination with other departments like sales, finance, and production.
- **Staffing & Workload Balance**: Determine if staffing levels are adequate to handle workload and achieve strategic goals..

Shaik Abdul Khadar

www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 8: Organizational Structure Gaps in Supply Chain

1. Role Clarity & Alignment

Role/Position	Current Responsibilities	Gaps Identified	Impact	Recommendations
Supply Chain Manager	Oversees operations but limited strategic role	Strategic alignment lacking	Misalignment with goals	Redefine role with strategic focus
Demand Planner	Forecasting and demand planning	Overlapping with Sales Planning	Duplicated efforts, inconsistency	Clarify scope with Sales Planning team

2. Decision-Making Authority

Process/Decision Area	Current Level of Authority	Gaps Identified	Impact	Recommendations
Inventory Adjustments	Requires multiple approvals	Slows response time	Delays in meeting demand	Delegate authority to Inventory Manager
Supplier Contract Negotiations	Handled by procurement only	Limited input from supply chain team	Misalignment with supply chain needs	Include SC team in negotiation process

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Shaik Abdul Khadar

www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 8: Organizational Structure Gaps in Supply Chain

3. Cross-Functional Collaboration

Department	Current Level of Collaboration	Gaps Identified	Impact	Recommendations
Finance	Budgeting not aligned with operational needs	Lack of communication on spending priorities	Budget constraints	Monthly cross-functional planning meetings
Production	S&OP coordination inconsistent	Different metrics and priorities	Planning misalignment	Standardize planning metrics

4. Staffing Levels & Workload Balance

Team/Function	Current Staffing	Identified Gaps	Impact	Recommendations
Inventory Management	3 full-time staff	High turnover, overtime frequently used	Risk of burnout, errors	Add 1-2 staff, balance workload
Demand Planning	2 full-time staff	Seasonal demand spikes require extra support	Inconsistent forecasts	Hire temporary support during peak times

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Shaik Abdul Khadar

www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 9:

Skills and Training Needs Assessment

Identify current and future skill requirements within the supply chain team to ensure team members are equipped with the competencies needed for operational efficiency and strategic growth.

Shaik Abdul Khadar
www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

SCM Skills

Step 9: Skills and Training Needs Assessment

Objective: Identify skills gaps within the supply chain workforce and outline necessary training or development to enhance performance.

Activities:

- **Evaluate Core Skills**: Assess key skill areas like data analytics, process optimization, and technical expertise relevant to planning and operations.
- **Identify Gaps and Training Needs**: Highlight gaps where training or upskilling could improve performance, such as in demand forecasting or technology use.
- **Document Skills Gaps**: Summarize required skill upgrades, including technical and soft skills critical for efficient supply chain management.
- **Recommend Training Programs**: Propose tailored training or development programs to build competencies in key areas.

Shaik Abdul Khadar

fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 9: Skills and Training Needs Assessment

- **Skill Assessment**: Evaluate existing skill levels in critical areas (e.g., data analytics, demand forecasting, digital tools).
- **Future Skill Needs**: Identify skills required to meet long-term strategic objectives and evolving supply chain demands.
- **Training & Development Plan**: Develop a targeted training roadmap to bridge identified skill gaps.

Shaik Abdul Khadar
fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 9: Skills and Training Needs Assessment

1. Skill Assessment

Role/Position	Required Skills	Current Skill Level	Skill Gap	Impact	Recommendations
Supply Chain Analyst	Data analytics, demand forecasting	Basic proficiency	Advanced analytical skills missing	Limited data-driven decision-making	Advanced training in data analytics
Inventory Manager	Inventory optimization, WMS knowledge	Intermediate	Expertise in WMS configuration	Inefficiencies in inventory management	WMS configuration training

2. Future Skill Needs

Skill Category	Description	Importance	Roles Impacted	Recommendations for Development	
Digital Supply Chain Tools	Proficiency in digital SC tools and ERP	High	All SC team roles	Provide cross-functional digital tool training	
Advanced Forecasting	Predictive and prescriptive analytics	High	Demand planners, analysts	Specialized forecasting and analytics training	

3. Training & Development Plan

Skill	Target Group	Training Method	Timeline	Expected Outcome	
Advanced Data Analytics	Analysts, Demand Planners	In-house workshops, online courses	Q1 - Q2	Improved demand forecasting accuracy	
Supply Chain Risk Management	Supply Chain Managers	External certifications	Q2	Better preparedness for disruptions	

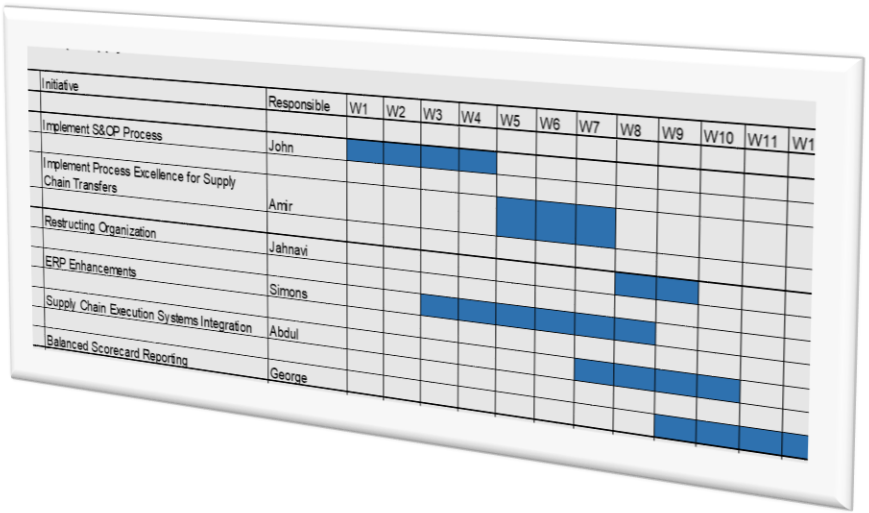
Shaik Abdul Khadar
fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 10:

Solution Development and Implementation Roadmap

Develop actionable solutions for each identified gap and create a phased implementation plan that considers organizational readiness, required investments, potential success, complexity, and change management.

Shaik Abdul Khadar
Expert in Organizational Transformation (Strategy – Planning - Supply Chain – Manufacturing – Projects) | +91 7799798333, sak@datalabsindia.com | www.fruisce.com | www.datalabsindia.com



Step 10: Solution Development and Implementation Roadmap

Objective: Provide targeted solutions for each identified gap and develop a phased roadmap for implementation.

Activities:

- **Formulate Solutions for Each Gap**: Develop specific, actionable solutions for each identified gap, ensuring they align with strategic goals.
- **Prioritize Initiatives by Impact**: Rank solutions based on their potential impact, feasibility, and resource requirements.
- **Create an Implementation Timeline**: Define phases, milestones, and KPIs to track progress, ensuring a manageable, phased approach to addressing gaps.
- **Define Success Metrics**: Set measurable goals for each initiative to ensure alignment with strategic objectives and demonstrate value.

Shaik Abdul Khadar

www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 10: Solution Development and Implementation Roadmap

Once you have done all the components of assessments ready, you need to prepare the list of gaps to be closed in below areas.

1. Supply Chain Strategy
2. Planning
3. Material Flows
4. Financial Flows
5. Informational Flows
6. Technology
7. Skills
8. Organizational Structure

Key Areas and Sample Initiatives:

- **Supply Chain Strategy**: Align strategic objectives, develop measures (KPIs), implement performance tracking.
- **Planning**: Optimize S&OP, improve demand forecasting, enhance inventory planning.
- **Material Flows**: Reduce lead times, optimize warehousing, improve supplier reliability.
- **Financial Flows**: Renegotiate supplier terms, streamline payment processes, implement cash flow forecasting.
- **Informational Flows**: Integrate ERP/WMS, establish data dashboards, improve data accuracy.
- **Technology**: Modernize systems, implement analytics tools, automate reporting.
- **Skills**: Cross-train employees, provide digital tool training, enhance analytical skills.
- **Organizational Structure**: Redefine roles, enhance decision-making autonomy, improve cross-functional collaboration.

All the listed initiatives can be assessed through scoring criteria. The following scoring criteria can be used.

Impact: The potential positive effect of the initiative on supply chain performance (1-5 scale).
Resources Required: The level of resources needed (financial, human, and technical) to implement the initiative (1-5 scale).
Risk: The likelihood of encountering challenges during implementation, such as technical issues, resistance, or delays (1-5 scale).

Formula for Priority Score:
Priority Score= Impact × Resources Required× Risk

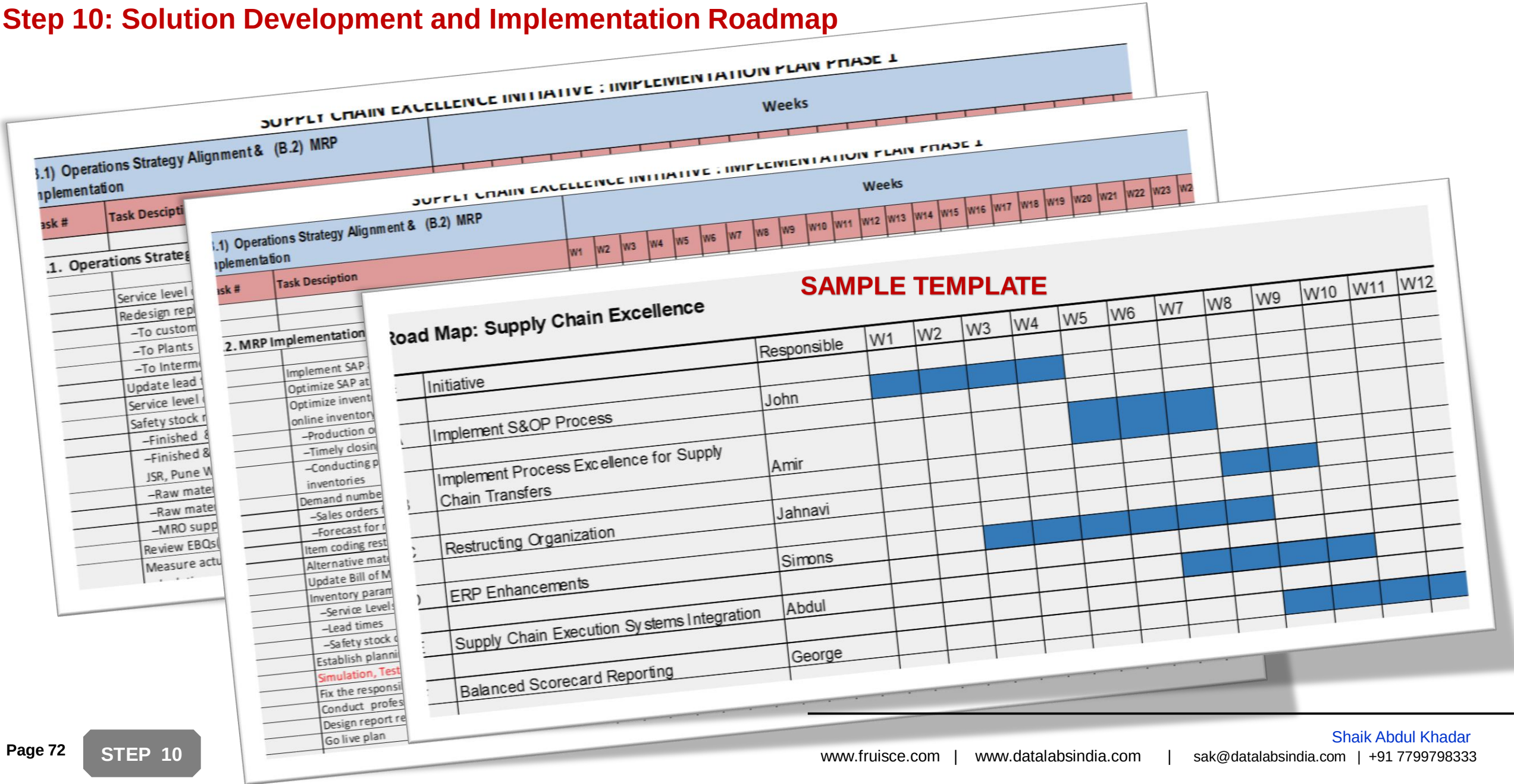
High Priority: Low score (close to 1, indicating high impact, low resources, low risk).
Low Priority: High score (closer to 125, indicating lower impact, higher resources, or high risk).

Assign Scores and Calculate Priority for Each Initiative

Key Area	Initiative	Impact (1-5)	Resources (1-5)	Risk (1-5)	Priority Score	Priority Level
Supply Chain Strategy	Develop and Implement KPIs	4	2	2	16	High
Planning	Optimize S&OP	5	3	3	45	Medium
Material Flows	Reduce Lead Times	5	4	4	80	Low

Shaik Abdul Khadar
www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 10: Solution Development and Implementation Roadmap



Shaik Abdul Khadar

www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Step 10: Solution Development and Implementation Roadmap

Final Thoughts

Align with Business Strategy: Ensure every part of the supply chain aligns with overarching business goals. This alignment ensures the health check identifies gaps that matter most to strategic growth.

Focus on End-to-End Integration: Assess the supply chain holistically, from suppliers to end customers, to identify inefficiencies and optimize the entire process. Gaps in one area can impact overall performance, so consider the flow and integration across functions.

Prioritize Data-Driven Decisions: Use accurate, real-time data to guide the assessment. Analytics-driven insights improve gap identification and provide a clearer foundation for impactful solutions.

Balance Immediate Wins with Long-Term Value: Identify quick wins to show early results but also invest in longer-term projects that support lasting improvements. This balance helps sustain momentum and ensures meaningful progress.

Invest in People and Technology: Recognize that skills and digital capabilities are critical for a resilient supply chain. Address any skill gaps and explore technology upgrades to support efficient and responsive operations.

Consider Financial Impact: Assess the cost-effectiveness of solutions and prioritize those with clear ROI. Aligning solutions with financial goals ensures the health check contributes to profitability.

Prepare for Change Management: Implementing improvements often requires a shift in mindset, workflows, or technology. Plan for change management to support adoption and mitigate resistance.

Embed Continuous Improvement: A health check is not a one-time effort; it's a foundation for ongoing improvement. Establish mechanisms for regular assessments to adapt to market changes and emerging risks.

Shaik Abdul Khadar

www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

How can we help you?

SUPPLY CHAIN HEALTH CHECK

MANUFACTURING & SUPPLY CHAIN EXCELLENCE PROGRAM DESIGN

PROGRAM / PROJECT MANAGEMENT

CONTINUOUS IMPROVEMENT

We adopt holistic approach for achieving excellence in end-to-end supply chain operations for supply chain organizations. We prefer to start with in depth assessment by walking through all the processes, conducting detailed interviews, collecting process performance data, and analyze collected information. The output of assessment is the list of identified organizational gaps in processes, people, systems, and structure. We analyze the gaps based on industry best practices, capability of implemented systems, capabilities of people, and good practices already used. We identify possible high level to-be state of processes, systems, people, and structure. We work through our customer teams to arrive at highly pragmatic road map considering all constraints and challenges for achieving to-be state.

The solution may contain the refresh of business strategy, alignment of operations strategy, designing new ERP initiative, launching ERP optimization initiative, designing business process optimization initiative, launching supply chain optimization initiative, aligning organizational structure, and development of people skills. All the supply chain components are reviewed for alignment with strategy, planning, and operations. We design initiatives, prioritize them, and promote in appropriate sequence to execute strategy successfully. While doing so, we review the key performance measures and put appropriate targets to measure the success of initiatives. We use balanced scorecard approach in executing strategies.

We adopt appropriate program and project management best practices for successful completing initiatives and closing the value gaps. Our experienced project management consultants could establish PMO and help our customers to operate them successfully.

We will be associated with our customers continuously even after expected excellence is achieved. We do periodic audits and make appropriate recommendations to sustain the improvement efforts. We also can do short term projects to identify any emerging strategies and implement any short term initiatives as per the needs of our customers.

We adopt flexible engagements with our clients to ensure ROI and value addition. Our clients can take our help in any of the phases mentioned above. This gives our customers flexibility to utilize our expertize more effectively and get high return on investment in our engagements.

Shaik Abdul Khadar
www.fruisce.com | www.datalabsindia.com | sak@datalabsindia.com | +91 7799798333

Expert Profile

Shaik Abdul Khadar
CEO & Principal Consultant
Data Labs India Solutions Pvt. Ltd
Hyderabad, INDIA
sak@datalabsindia.com
+917799798333

A business leader and expert in building and managing complex supply chain organizations with experience in designing and deployment of strategy, planning, and operations. Overall profit and loss responsibility, lead large and diversified teams, and manage transformations. Drive global programs and projects, roll-out strategic initiatives, build corporate competencies and provide strategic direction. A strategist and expert in strategy execution, supply chain excellence, digital transformations, business process re-engineering, performance management, operations strategy, and ERP implementations.

EXPERIENCE

- Strategy Formulation & Strategy Execution
- Supply Chain Strategy, Planning, & Operations
- Business Planning, Forecasting & Budgeting
- Manufacturing Excellence
- Business Process Re-Engineering/Management
- Enterprise Resource Planning & EPM
- Supply Chain Execution Systems (WMS, MES, TMS, GTM,DP,CT, SCO)
- Project Management & PMO
- AI/ML & IIoT
- Organizational Transformations

INDUSTRIES

- Agri Food
- Mining
- Automotive
- FMCG
- Manufacturing
- Logistics
- Government
- Retail

CERTIFICATIONS

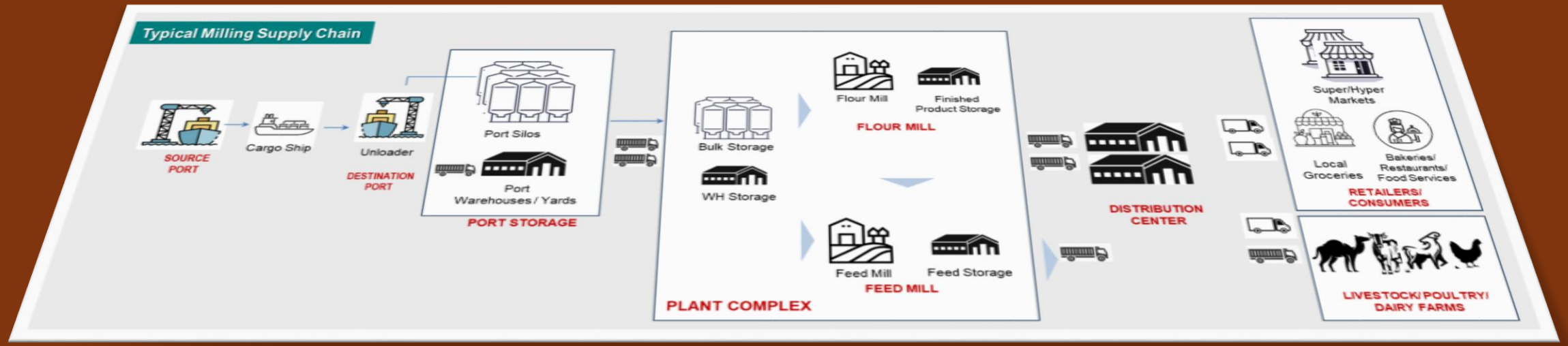
- BSC Certified Graduate
- PMP
- CPIM
- LSSBB
- EPM (IBM PA)
- ERP
- Explaining Strategy

- Middle East, Africa, India
- 30+ Years

SOLUTION ARCHITECT

fruiSCE fruiStrategy

Supply Chain Health Check



- ✓ Achieve excellence in your manufacturing and supply chain operations
- ✓ We can help you to assess your supply chains and empower you to achieve excellence
- ✓ We can support you throughout the transformation and guide you to make it truly world class
- ✓ Contact us to know more and to know about the supply chain health check assessment

THANK YOU….

Shaik Abdul Khadar
Expert in Organizational Transformation (Strategy – Planning - Supply Chain – Manufacturing – Projects) | +91 7799798333, sak@datalabsindia.com | www.fruisce.com | www.datalabsindia.com

Our Global Presence

INDIA– DUBAI – SAUDI ARABIA – USA

THANK YOU FOR YOUR BUSINESS….

Corporate Office
Data Labs India Solutions Pvt. Ltd.
28-5-154-2, APHB Colony Main Road,
Anantapur – 515001
Andhra Pradesh State
I N D I A
Phone : +91 08554248844
E-mail : info@datalabsindia.com

Development Center & Sales Division
Data Labs India Solutions Pvt. Ltd.
Office Not: 301, AU Reddy Towers,
Begumpet, Hyderabad – 500016
Telangana State
I N D I A
Phone : +91 04066441333
E-mail :
info@datalabsindia.com

UAE Office
Data Labs International FZ
LLC
FDBC0008 Service Block
Al Jazirah Al Hamra
RAKEZ Business Zone-FZ
Ras Al Khaimah,
United Arab Emirates
E-mail : info@datalabsint.com

USA Office
Data Labs America Inc.
16192, Coastal Highway
Lewes
County of Sussex
Delaware-19958
USA
sales@datalabsidia.com

Contact us for more information:

Shaik Abdul Khadar
CEO
E-mail: sak@datalabsindia.com
Phone: +91 7799798333