SAPICS SPRING SUMMIT

29 AUGUST 2024

Focus Rooms, Modderfontein, Johannesburg

12:00 – 19:00

Supply Chain Operations Reference (SCOR) for Supply Chain Efficiency

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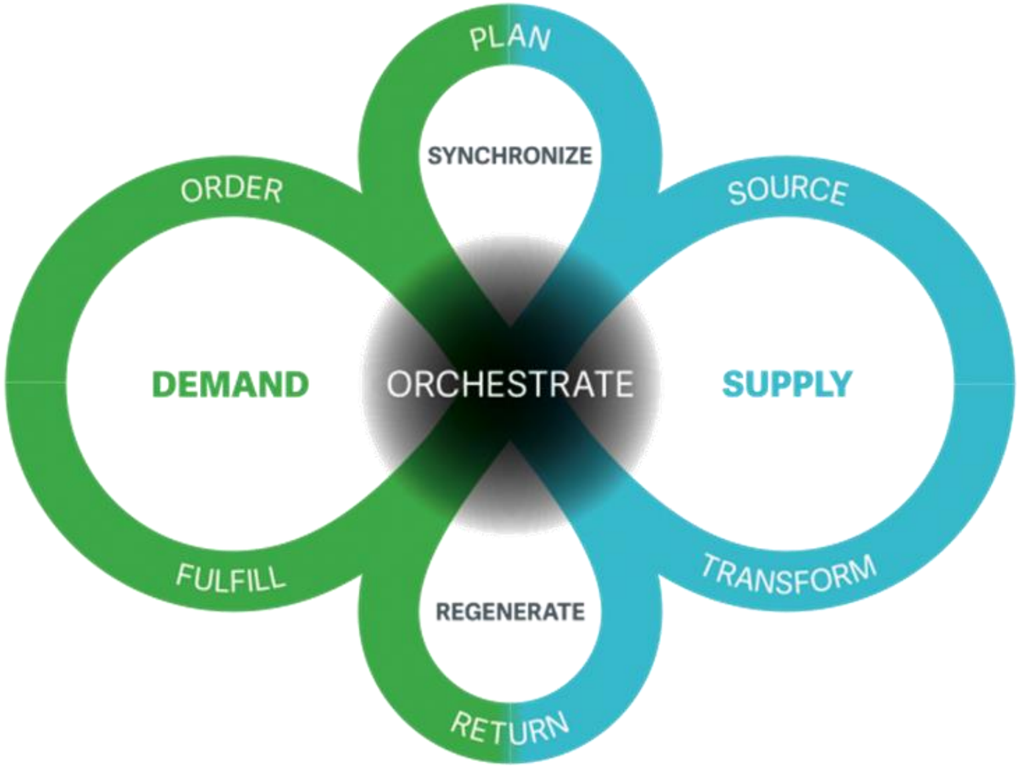
SCOR Model Overview

SCOR Model: Anatomy of SCOR Processes



SCOR Quick Reference PDF

SCOR DS Model

Orchestrate

Supply Chain Strategy	Business Rules	Performance and Continuous Improvement	Data, Information, and Technology	Human Resources	Contracts and Agreements	Network Design
Regulatory and Compliance	Risk	Environment, Social and Governance	Enterprise Business Planning	Segmentation	Circular Supply Chain Management	

Plan	Order	Source	Transform	Fulfill	Return
Plan Supply Chain	Order B2C	Strategic Source	Transform Product	Fulfill B2C	Return Product
Plan Order	Order B2B	Direct Procure	Transform Service	Fulfill B2B	Return Service
Plan Source	Order Intra-company	Indirect Procure	Transform MRO	Fulfill Intra-company	Return MRO
Plan Transform		Source Return			
Plan Fulfill					
Plan Return					

SCOR Model: Connecting 4 perspectives

Process Reference Framework

Performance (metrics)	Process	Practices	People (skills)
Performance Benchmarking	Business Process Improvement	Best Practices Analysis	Organizational Design
Quantify relative performance of similar supply chains and establish internal targets	Capture the "as-is" business activity and design the future "to-be" state	Identify practices and software solutions that result in significantly better performance	Assess skills and performance needs and align staff and staffing needs to internal targets

SCOR Model: Connecting 4 perspectives

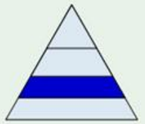
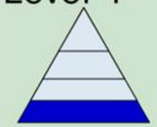
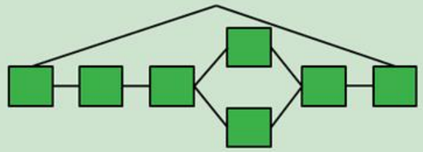
Performance (metrics)

	Attribute	Strategy
Resilience	Reliability (RL)	The ability to perform tasks as required. Reliability focuses on the predictability of the outcome of a process.
	Responsiveness (RS)	The speed at which tasks are performed. Responsiveness addresses the repeated speed of doing business.
	Agility (AG)	The ability to respond to external influences
Economic	Cost (CO)	The cost associated with managing and operating the supply chain
	Profit (PR)	The financial benefit realized when revenue generated from a business activity exceeds the expenses, costs, and taxes involved in sustaining the activity.
	Asset Management (AM)	The ability to efficiently utilize supply chain assets
Sustainable	Environmental (EV)	The ability to operate the supply chain with minimal environmental impact
	Social (SC)	The ability to operate the supply chain aligned with the organization's social values.

Level	Description	Schematic	Comments
	Performance attribute	Reliability (RL)	Reliability (RL) - Ability to perform a process as expected
1	Level 1 diagnostic metrics	RL.1.1 Perfect customer order fulfillment	RL.1.1 – Perfect customer order fulfillment - Percentage of orders meeting delivery performance to the customer
2	Level 2 diagnostic metrics	RL.2.1 RL.2.2 RL.2.3 RL.2.4	RL.2.1 - % of orders delivered in full to the customer RL.2.2 – Delivery performance to orig. cust. commit date RL.2.3 – Customer order documentation accuracy RL.2.4 – Customer order perfect condition
3	Level 3 diagnostic metrics	RL.3.1 RL.3.2 RL.3.3	RL.3.1 – Delivery item accuracy to the customer RL.3.2 – Delivery quantity accuracy to the customer RL.3.3 – Customer commit date achievement

SCOR Model: Connecting 4 perspectives

Process

	Description	Examples
Level 0 	Orchestration	Orchestrate (O)
Level 1 	Major Processes	Plan (P) · Order (O) · Source (S) · Transform (T) · Fulfill (F) · Return (R)
Level 2 	Process Categories	OE1: SC Strategy · P1: Plan SC · O1: Order B2C · S1: Strategic Source · T1: Transform Product · F1: Fulfill B2C · R1: Return Product OE5: SC HR · P2: Plan Order · O2: Order B2B · S2: Direct Procure · T2: Transform Service · F2: Fulfill B2B · R2: Return Service OE12: Segmentation · P3: Plan Source · O3: Order Intracompany · S4: Source Return · T3: Transform MRO · F3: Fulfill Intracompany · R3: Return MRO ▪▪▪
Level 3 	Process Elements	OE 1.2 Define strategic supply chain context and scope · P1.2: Aggregate supply chain requirements · O2.1: Process inquiry and quote · S1.5: Source the supply market · T2.2: Determine the scope of service order and associated SLAs · F1.10: Obtain proof of delivery or customer acceptance · R1.1: Initiate, authorize, schedule, verify product return ▪▪▪
Level 4 	Specific Tools / Activities	 Company-specific, industry-specific or technology-specific implementation of SCOR Level 3 process elements – includes unique tools, methodologies, and practices

SCOR Model: Connecting 4 perspectives

Practices

19 Categories

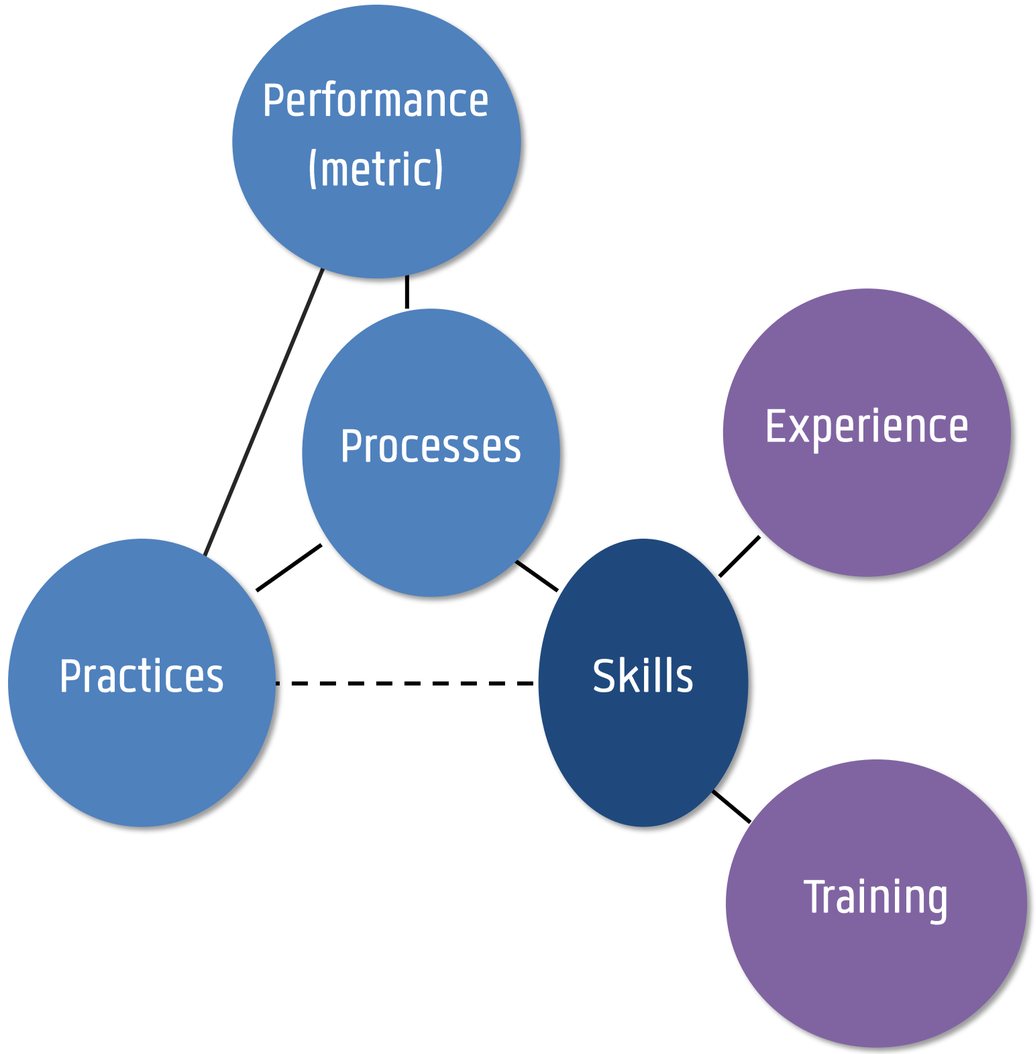
Business Process Analysis and Improvement	People Management (Including Training)
Customer Support	Planning and Forecasting
Distribution Management	Product Life Cycle Management
Information and Data Management	Purchasing and Procurement
Inventory Management	Reverse Logistics
Manufacturing and Production	Risk and Security Management
Material Handling	Sustainable Supply Chain Management
New Product Introduction	Transportation Management
Order Engineering	Warehousing
Order Management	

3 Pillars

- Analytics & Technology
- Process
- Organization

SCOR Model: Connecting 4 perspectives

People



HS.0001 3-WAY RECEIVING MATCH

Definition

Knowledge of the process of reconciling invoices with purchase orders and goods received documents to authorize payment of invoices.

Processes

S2.4 Receive product	S3.4 Receive product	S2.2 Schedule product delivery	S3.2 Schedule product delivery	S2.7 Authorize supplier payment	S3.7 Authorize supplier payment

Experiences

HE.0009 Bar Coding and Radio Frequency Identification (RFID)	HE.0011 Basic Procurement	HE.0032 Computer Literate	HE.0038 Continuous Learning	HE.0078 Electronic Data Interchange (EDI) Systems	HE.0083 Enterprise Resources Planning (ERP)
HE.0086 Enterprise Resources Planning (ERP) Software-Specific Experience	HE.0100 Financial Accounting	HE.0160 Material Requirements Planning (MRP)	HE.0165 Microsoft Office (Excel, PowerPoint, Word, Access)	HE.0245 Specific Systems Knowledge	HE.0268 Supply Chain Management
HE.0311 Written and Verbal Communication					

Trainings

HT.0002 Advanced Excel Techniques	HT.0006 APICS Certified in Planning and Inventory Management (CPIM)	HT.0008 Automation Tools	HT.0012 Basic Legal Process (Embargo, Black List)	HT.0014 Basic Supply Chain Finance	HT.0016 Business Ethics and Conduct Training

Implementation of SCOR

Implementation of SCOR: Supply Chain Transformation Racetrack

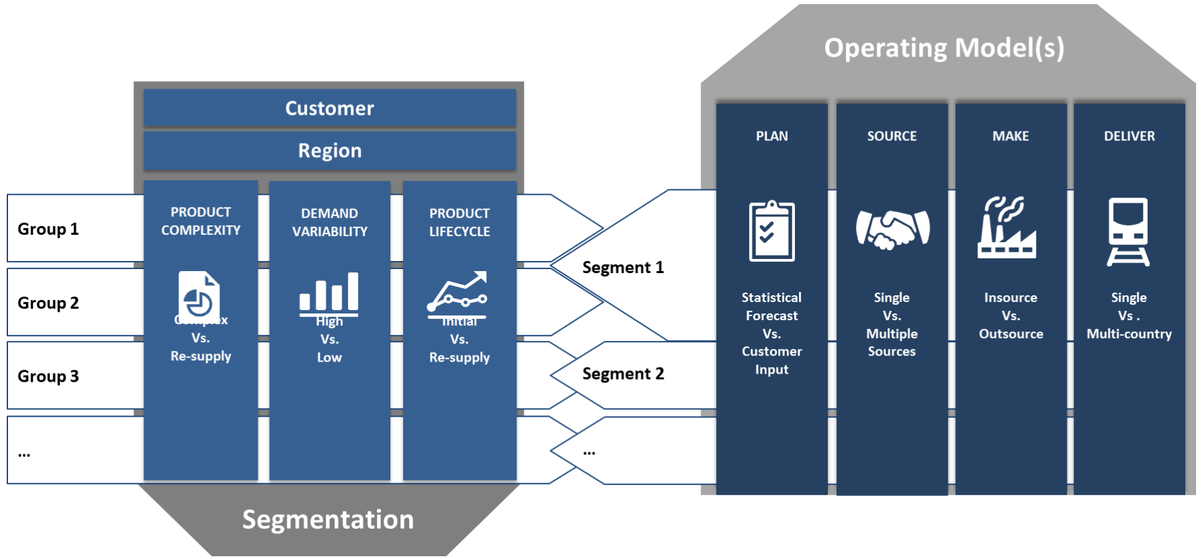
SAPICS Certifications Page – **CTSC – Certified in Transformation for Supply Chain**

1 / 2. Engage and Define

Scope

Business Unit	Plan	Order	Source	Transform	Fulfil	Return	Orchestrate
Aeronautics Systems	✓	✓	✓	✓	✓	✓	✓
Defense Systems							
Mission Systems							
Space Systems							

Segmentation



Source

S1: Strategic Source	S2: Direct Procure	S3: Indirect Procure	S4: Source Return
S1.1: Define Business Need	**S2.1:** Establish Order Signal	**S3.1:** Establish Order Signal	**S4.1:** Initiate a Source Return
S1.2: Conduct Supply Market Analysis	**S2.2:** Schedule Product Delivery	**S3.2:** Schedule Product Delivery	**S4.2:** Request Authorize Product Return
S1.3: Develop Sourcing Strategy	**S2.3:** Manage Inbound Transport	**S3.3:** Manage Inbound Transport	**S4.3:** Identify Product Condition/ Return Reason
S1.4: Pre-Procurement Market Testing	**S2.4:** Receive Product	**S3.4:** Receive Product	**S4.4:** Schedule Product Shipment
S1.5: Source the Supply Market	**S2.5:** Inspect And Verify	**S3.5:** Inspect and Verify	**S4.5:** Close or Adjust Return Order
S1.6: Prequalify Suppliers	**S2.6:** Transfer Product	**S3.6:** Transfer Product	
S1.7: Determine Level of Collaboration Arrangement	**S2.7:** Authorize Supplier Payment	**S3.7:** Authorize Supplier Payment	
S1.8: Invite to Tender/ Request for Quotation			
S1.9: Analyze Offers and Select Suppliers			
S1.10: Negotiate and Award Contract			

3. Analyze: Performance

Aggregated view: Root Cause Analysis by Metric

METRIC ➔	Customer Perfect Order Fulfillment - IN FULL	Supplier Perfect Order Fulfillment - IN FULL	Zero Stock / Near to Zero Stock	Expired / Near to Expired	Overstock	Forecast Accuracy	Inventory DoS (higher or lower)
MAJOR ROOT CAUSES ➔	*RCA RANKING BY BIGGEST IMPACT - TOP 5 per Metric [redacted] Meric Defect Analysis*						
Master Data (Incl Pack Size Mismatch, item discontinuation)	2				4	3	
Not enough Inventory in Warehouse	1					5	
Uncontrolled Demand / Stocking Up	3		5				5
SLA agreement non-adherence / mismatch ' Rigid Contracts	4			1	1	1	2
System Integration Gaps / System Visibility / data source discreprencies	5			4	3	2	4
Increased Raw material prices		1					
Product Quality Issue / FDA Recalls		2					
Supplier failure to supply (incl. Supplier Cash Flow Issue)		3	1			4	
[redacted] Customer Warehouse capacity		4					3
International Shortage		5					
Mismatch on delivery lead time / communication			2				
No clear communications / RACI at client side for demand planning at customer (tendering, S&OP, mapping issues , criticality ....)			3	5	5		
Supply planning process (authority and rapid response, rules)			4	2			
Forecast Inaccuracy				3	2		1

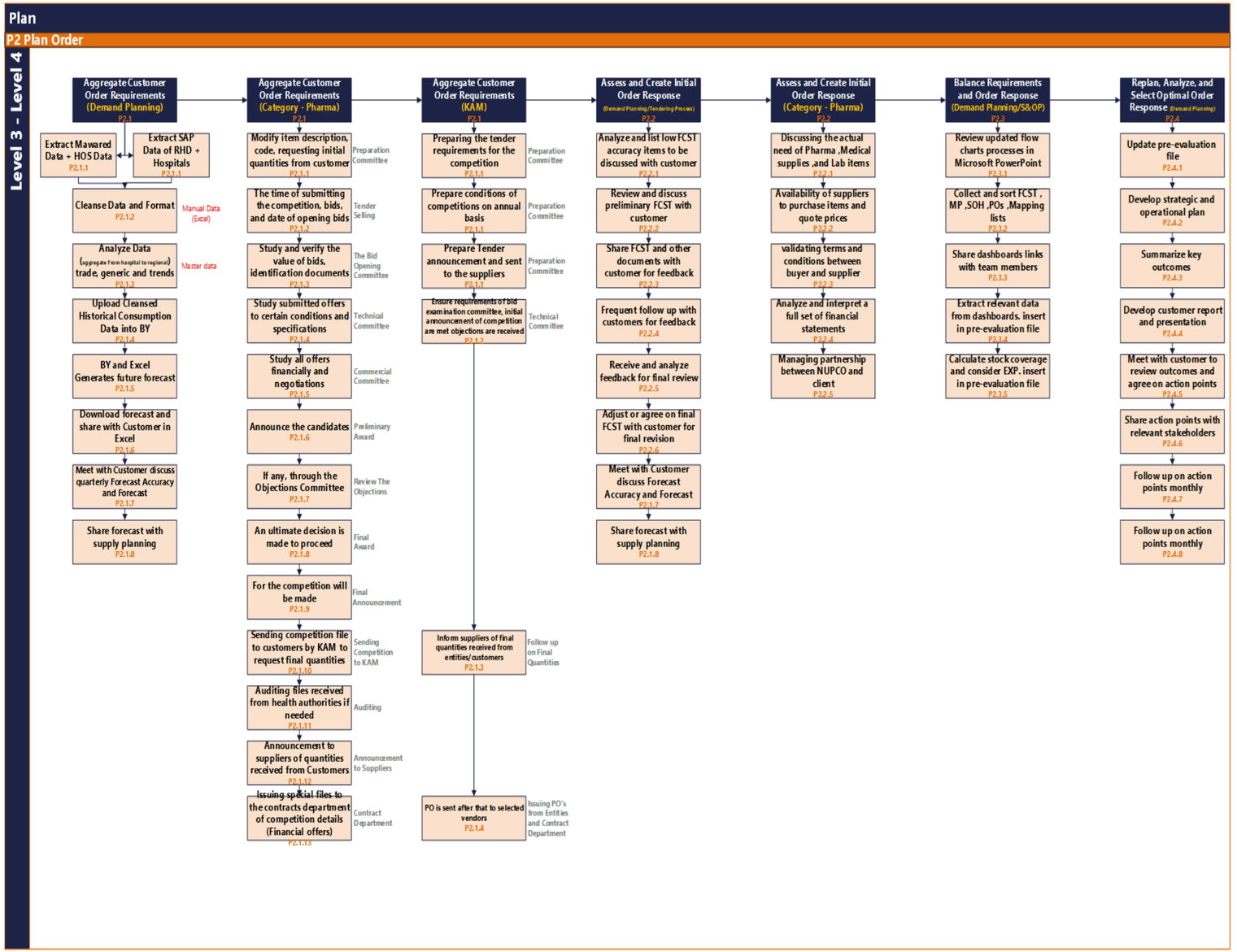
3. Analyze: Process

‘Staple Yourself to the Order’ Interview

Interviewees	Abdul Rahman Basaham / Malak Alshahrri / Loay Momin / Abdul Majid Al kahiri / Osama Aljohani						
Accountable Function	Supply Planning / Expediting / Expediting / Supply Planning / Expediting						
Primary Input(s)		**SCOR Element**		**Primary Output(s)**			
Contacting / direct purchasing / category / warehouse		S.2.2 - Schedule Deliveries		Enter the primary transactional output(s) to this process			
	Step	**Description**	**Responsible**	**Event Time**	**Description**	**Responsible**	**Event Time**
Process Steps (>4 and <11)	S.2.2.1	New Tender Letter received from contract department	Contracts	1 min	New Tender Letter received		
	S.2.2.2	Receive PO from SAP System (committed PO) (Shipments and Qty)	Supply Planning / Expediting	1 min	Receive PO from SAP System (committed PO) (Shipments and Qty)	Supply Planning / Expediting	1 min
	S.2.2.3	Based on priority (stock availability / date required) - Decide on action to take (should we **expedite** or **de-expedite**) (Given the constraints of the contract)	Supply Planning	10 min (per customer)			
	S.2.2.4	Communicate expected date to expediting when the order needs to be urgently delivered	Supply Planning	5 mins			
	S.2.2.5				Check availability and ability of supplier to satisfy our request	Expediting	5 mins
	S.2.2.6				Receive feedback from supplier on ability to supply request or any obstacles for delivery window (phone call or email)	Expediting	24 < 48 hours for feedback
	S.2.2.7	Receive ETA and qty for shipment from expediting	Supply Planning	5 min			
	S.2.2.8	Acceptance or rejection of ETA and find alternate source of item (internal transfer)	Supply Planning	1 week			
	S.2.2.9	Communicate to demand planning to update the forecast	Supply Planning	5 mins			
	S.2.2.10	Inform customer of action that we will take	Supply Planning	5 mins per request			
		Total Event Time for Process Steps		0			
Technology Used	Dashboard (shows all on one page *Regions / customer / items) SAP / HOS / Email / Excel / BY Planning						
Business Rules	If supplier doesn't respond we send to SRM						

Disconnect Description, Initials, Relative Weight, and Project Number	**Disconnect Description**	**Initials**	**Relative Weight**	**Project Number**
	Expediting doesn't have formal visibility to the warehouse space availability		5%	
	Supplier stated reciept not aligned to actual reciepted to direct delivery ID code in system - 1100		5%	
	Agreement in terms of contract schedule (including all other contractual elements) Lack of flexibility on delivery schedules (cant plan for highest need)		45%	
	Master data inaccuracies (UOM / Pack size) + Code mapping		10%	
	Delays during the stock count (can't send stock into warehouse during this time) - Lack of cycle counting - long stock count times (up to 4 months)		10%	
	No clear internal SLA between expediting and other departments		4%	
	Lack of visibility of "dependent" items to go with a shipment not shown on the purchase order (not linked by category)		2%	
	Time frame for finding alternate suppliers		15%	
	Alignment of warehouse location (Same warehouse but different locations in the warehouse) - Separate invoices and bookings for ASNs - Documentation		1%	
	Slow updates to the system (ASN)		3%	
			100%	

Level 4 Process Map



3. Plan and Launch

Project Placemat

Project Name: Demand Planning

Subheading: Aim to implement best practices for forecasting and demand management, including more emphasis on incorporating known and anticipated demand changes into the plan – Focused primarily on optimizing the demand link between NUPCO and the MOH
In addition - Increasing the power of the demand planning function to make decisions, and full system utilization for BY.

Project Sponsor: Abdulaziz Ibn Alshaikh

Project Lead: Yazeed AlHabib

Priority Level:
H= High
M = Moderate
L = Low

H

The changed anticipated within the future state process

- Updated Future state processes and SOP creation for governance purposes (including training on new process)
- We have more reliable data (accurate consumption).
- Minimalizing zero stocks & overstocking.
- Clear roadmap on system for demand planning - better information flow by enhancing the system to replicate the process steps.
- Better management on the sessional items.
- Streamline the communications with the customers.
- Utilizing the BY system.
- Effective process to measure and do root cause analysis on forecast accuracy.

Related existing initiatives.

- Resolving the overdue shipments. NEED FORMAL PROJECT DETAILS
- Creating & Implementing the S&OP for (MOH & MODA). NEED FORMAL PROJECT DETAILS

The proposed timing

Apr 2024 – Feb 2025

Phase 1: Process and SLA / SOP update and agreement (Apr 2024 – Jun 2024)

Phase 2: System and data accuracy – Customer Process (Jun 2024 – July 2024)

Phase 3: RCCA (Root Cause Corrective Action Process (July 2024 – Aug 2024)

Phase: Rollout and run updated process (Jul 2024 – Feb 2025)

The expected costs

System Implementation (TBC)

Ascend Consulting (TBC)

The problem we're trying to solve.

- Item Unit of measurement differences between NUPCO and clients.
- Inaccuracy of the forecast (Due to data mismatches and process inefficiencies)
- No efficient performance measuring of the forecast accuracy
- Links back to the contract inflexibility
- Stock difference between WMS and SAP systems – Master data
- Very manual work – Using excel, ad hoc means to capture information – lack of system data feeding.
- Frequency of customer connection meetings: too infrequent
- Lack of demand validation.
- Too many sources of data (consumption and Inventory).
- Lack of governance the business model (agreement, SLA, response times, levels of authority) with customers.
- Lack of visibility of the real demand.
- Lack of supply chain segmentation and taking into account seasonality impacts within the forecast
- Demand Planning lacks authorization to make own decisions.

The benefit

- Valid base Data to have strong outcomes.
- More reliable data
- Improved Forecast Accuracy
- Clear SLA and SOP ***internally*** – Less Rework and more clear roles and responsibilities
- Clear SLA and SOP ***externally*** – Less Rework and more clear roles and responsibilities – Better inputs from external stakeholders.
- Improved cross-functional collaboration within NUPCO.

Key KPIs:

- Customer OTIF
- Supplier OTIF
- Forecast Accuracy
- Inventory DoS – Supply Chain Wide

How external stakeholders will respond.

- They will be pleased with the demand outcomes, might need to change some steps.
- Client resistance to having SLA vs current state where the data flow is looser.

The resources needed.

- Contracts / Tendering (NAME NEEDED)
- Supply Planning (NAME NEEDED)
- Demand Planners x 2 (NAMES NEEDED)
- KAM (NAME NEEDED)
- IT resource (NAME NEEDED)
- MMCU (NAME NEEDED)

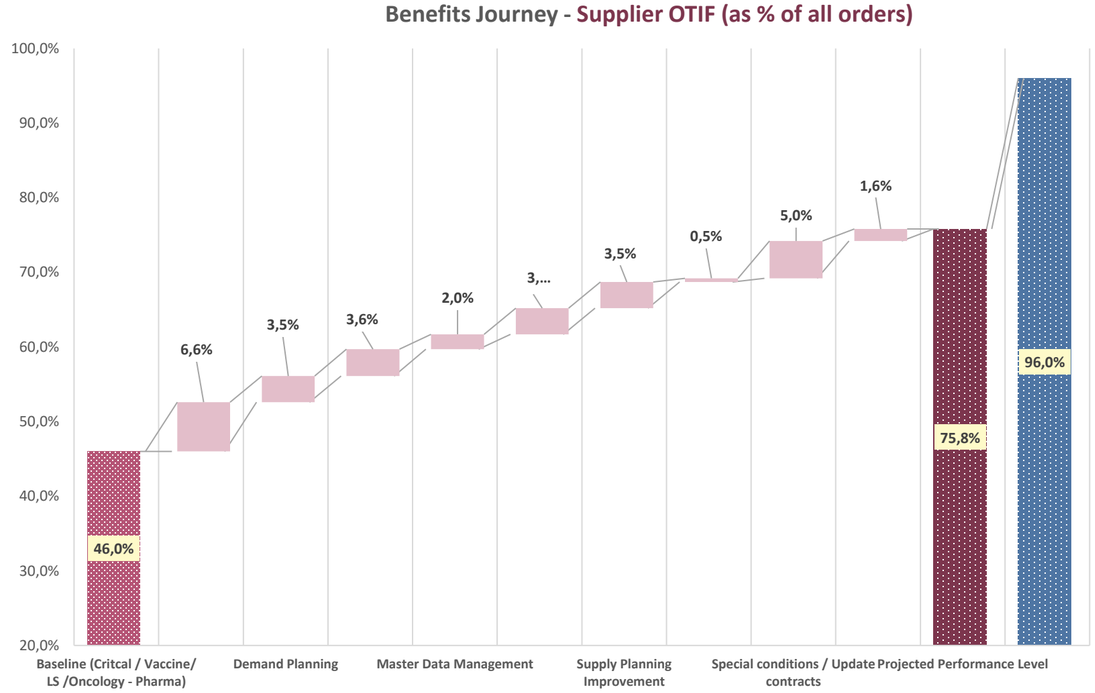
The critical risks.

- Resistance from the external stakeholder.
- Resistance from the internal stakeholders
- Customer order behaviour.
- Customer engagement.
- Lack of ownership for project deliverables.
- Length of time to take to collect and utilize data for purpose of calculations.
- Difficulties in adapting the system to new process.

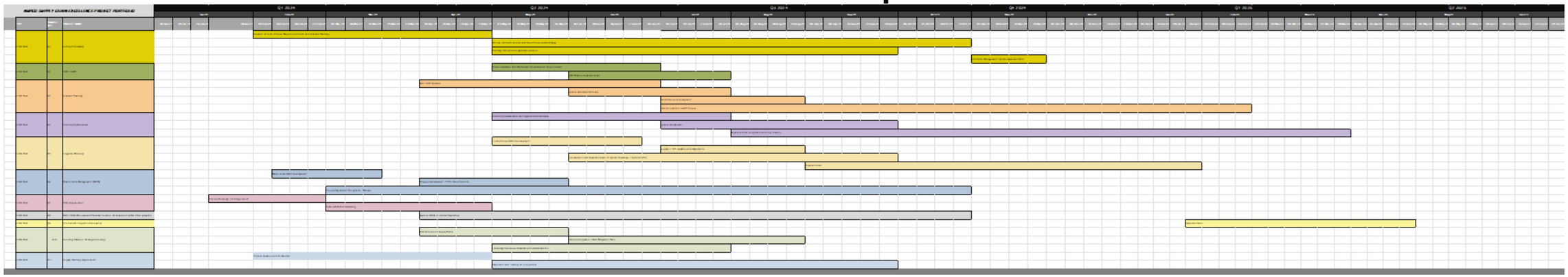
How internal stakeholders will respond.

- Demand Planning overwhelmed – Will resist changes as they see it as a separate initiative, not part of core work.

Benefits Statements



Roadmap



Supply Chain Maturity

Supply Chain Maturity Defined

Reactive Supply Chain

Level 1

- Key processes and industry standard performance metrics may not be defined and utilized
- Minimal use of SCOR best practices.
- Skills associated with key processes may not be well-defined.
- Supply chain is not well orchestrated, and there is little to no integration with customers and suppliers.
- Internal activities tend to be undertaken ad hoc rather than by plan.
- ERP at basic levels, not covering end to end supply chain.

Reactive Efficient Supply Chain

Level 2

- Key processes may be defined but may not be effectively monitored using industry standard performance metrics
- Some use of SCOR best practices
- Skills associated with key processes may be defined but may not be effectively managed / developed
- Organization is beginning to internally orchestrate supply chain, however linkages to other parts of the business may be missing or ad-hoc
- Little integration with customers and suppliers.
- ERP may not be fully utilized, and supply chain data and metrics may not be effectively managed

Integrated Enterprise Supply Chain

Level 3

- Key processes are defined and monitored with some level of governance
- Industry standard performance metrics are utilized and effectively monitored
- SCOR best practices are widely utilized
- Supply chain skills associated with key processes are defined and actively managed / developed
- Organization effectively orchestrates the supply chain internally and has begun to formalize linkages with other parts of the business
- Informal / Ad-hoc level of integration with customers and suppliers
- ERP tends to cover end to end supply chain, and there is a single source of truth for supply chain data and metrics.

Extended Enterprise Supply Chain

Level 4

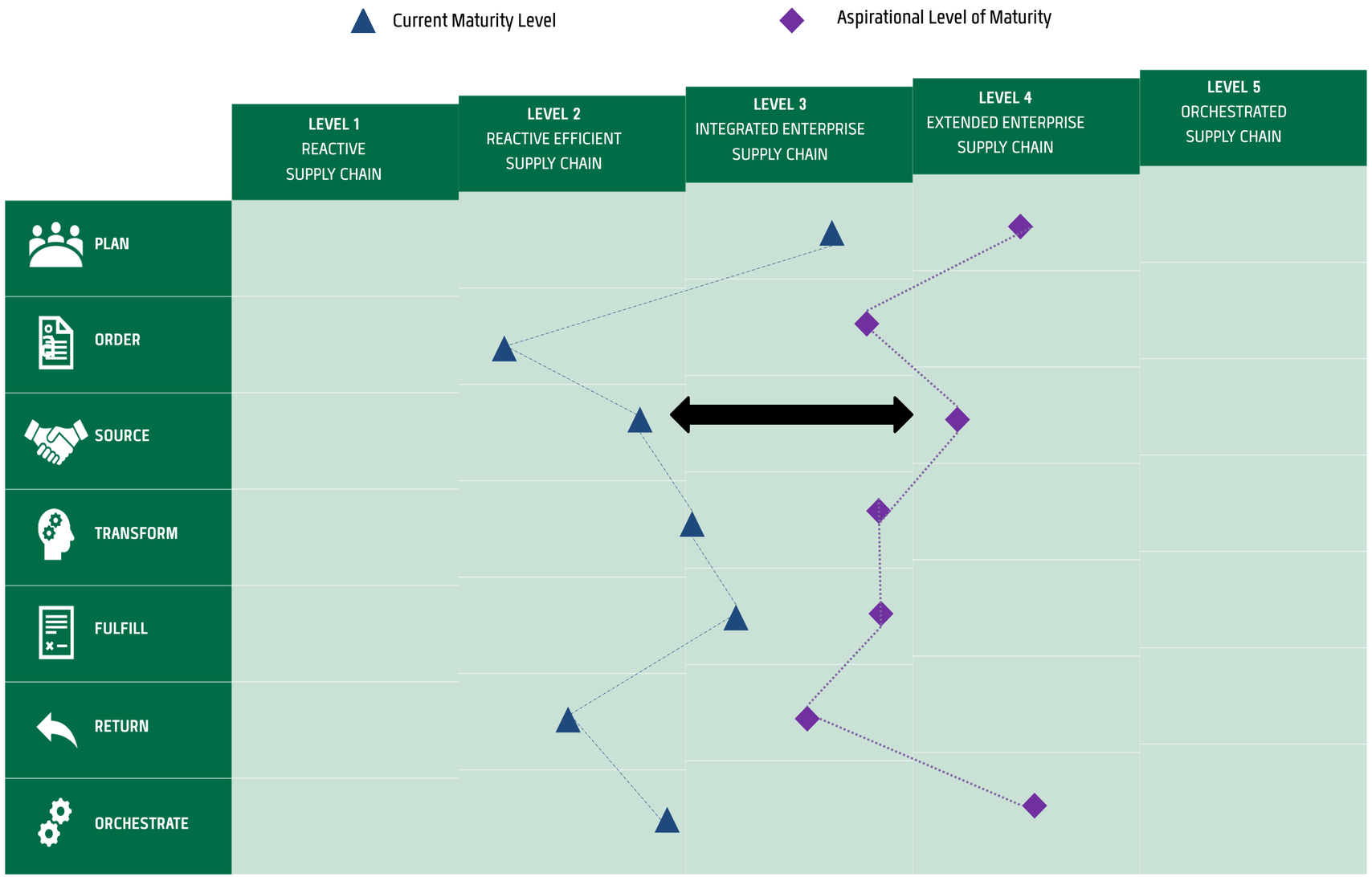
- Key processes are fully governed
- Industry standard performance metrics are utilized and effectively monitored
- Performance metrics are starting to become more predictive in nature
- SCOR best practices are widely utilized
- Some continuous improvement efforts are underway
- Supply chain skills associated with key processes are defined and actively managed / developed
- Organization effectively orchestrates the supply chain internally and is well-integrated with other parts of the business.
- Organization is formally integrating its internal network with the internal networks of selected supply chain partners resulting in improved efficiency and / or quality.
- Proactive approach to GRC (governance, risk, and compliance)

Orchestrated Supply Chain

Level 5

- Key processes are fully governed, mapped to industry standard language and continuously improved
- Industry standard performance metrics are monitored and benchmarked, with effective root cause / corrective action for metric defects.
- Prescriptive analytics widely utilized throughout the supply chain
- SCOR best practices are widely utilized, and continuous improvement is embedded in the organization's culture
- Supply chain skills associated with key processes are defined and actively managed / developed
- Organization effectively orchestrates the supply chain internally and is well integrated with other parts of the business
- High levels of integration exist with customers and suppliers
- GRC efforts are proactive, informed by, and integrated with customers / suppliers.
- Technologies fully support supply chain processes and demonstrate a high level of digital readiness across the Digital Capability Model (DCM) capability areas – Smart Operations, Intelligent Supply, Connected Customer, Synchronized Planning, Product Development and Dynamic Fulfillment.

Supply Chain Maturity Assessment



SAPICS Spring Conference Offer: Free SCOR Qualitative Maturity Assessment: **Sign Up Form**

Thank you