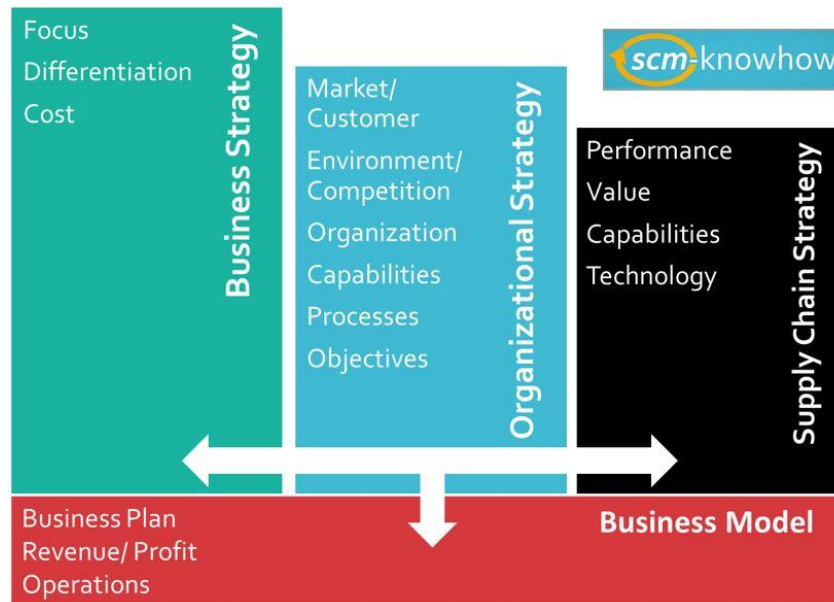# HOW TO STRUCTURE
A SUPPLY CHAIN STRATEGY?

There is no question that a strong Supply Chain Management is known and needed as a key element to execute successful the overall Business Model of each company. And with this, it is key for success to develop a Supply Chain Strategy integrated in and interdependent to the Business and Organizational Strategy.

To share one approach how to structure and build the Supply Chain Strategy, with reference to well-known concepts and methodologies, is the target of this document.

SUPPLY CHAIN MANAGEMENT

The overall target of Supply Chain Management (SCM) can be summarized as to deliver the right product, at the right volume and right time, at a competitive price and in consistency to the company's strategy (Ref1: SCM). The fulfillment of this target generates the appropriate customers, financial and social value within the network and for all other stakeholders.

Hereby a "simplified" Supply Chain with its partners, flows of material, information, and cash as well as its major attributes can be described as follows:
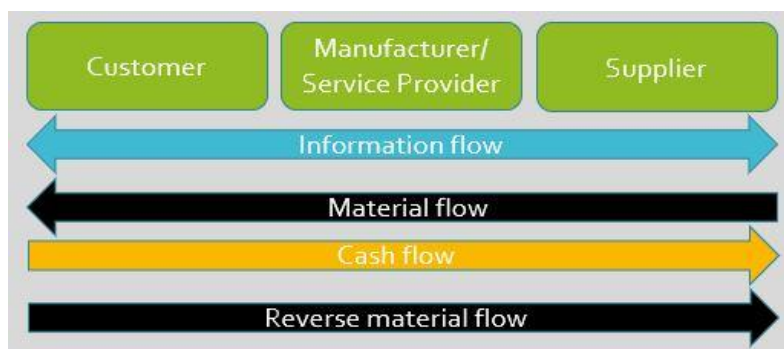
- Creates and adds value
- Orchestrates all entities
- Balances competing interests
- Keeps network connected
- Implements technologies & equipment
- Controls all flows

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A powerful and very well-known methodology to develop, describe, document, analyze and benchmark a supply chain is the Supply Chain Operations Reference model (SCOR) as part of the APICS framework (Ref2: APICS).

Beside all the provided capabilities, reference processes and KPIs within this planning framework, the six primary management processes deliver a great structure which can be also used as orientation during the Supply Chain Strategy development.
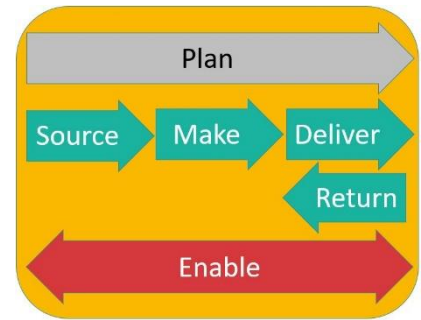
BUSINESS STRATEGY

The Business Strategy describes how to compete in a market to achieve a valuable position with the chosen product and/or service portfolio fulfilling a customer need over the next 5-10 years. The future state or purpose of a company is described by a formulated vision and/or mission statement. This statement is then used like a "NorthStar" to develop the Business Strategy framework defining as clear as possible the boundaries what to do and what not to do. This process can be supported by different existing management strategy concepts, like the "Generic Strategies" by Porter (Ref3: Porter). Porter's concept is based on three categories (Focus, Differentiation and Cost) which can be used and combined to develop a strategy. Hereby the chosen category will drive the Organizational and Supply Chain Strategy development as these translate the Business Strategy into execution.

FOCUS ADVANTAGE

➢ Niche: Customer group, Product group, Sales channel, ...

➢ Region: Global, Country, Region, Area, ...

➢ Responsiveness: Speed, Individuality, ...

➢ Innovation: Product updates, Features, ...

DIFFERENTIATION ADVANTAGE

➢ Availability: Modularity, Portfolio range, Lead-time, Stores, Customer Service, ...

➢ Durability: Long or short, Season, ...

➢ Quality: Product, Service, Warranty, ...

➢ Reliability: Product, Contract conditions, Service parts and support-time, ...

COST ADVANTAGE

➢ Standardization

➢ Self-Service

➢ Sales-Channel

ORGANIZATIONAL STRATEGY

The Organizational Strategy is a dynamic long-term plan, linked to the Business Strategy and leading the Functional Strategies, that frames the corridor towards the realization of a company's vision and goals. The purpose of an organization is to develop and deliver the value proposition and go-to-market, to fulfill the needs of customers better than competitors as well as to achieve the mission efficiently & effectively (Ref4: STRATECHI).

08-May-2022

The strategy describes how the company will function in its environment with the goals to satisfy customers, support business growth, increase competitiveness, manage the organization, develop the needed capabilities and to achieve financial objectives (Ref5: APICS SC Strategy Report). The starting point hereby is in general the Customer needs and/or the Market requirements, supported by information related to market size and share as wells as Competitor's strategies and strength. These inputs are then used to identify, plan, and describe the needed organizational framework and objectives.

Hereby the organizational planning could be clustered in **5 Major Building Blocks**:

1) **People & Teams:** All topics around culture, values, norms as well as compensation & benefits. Further on the overall organizational design, leadership approach and career path options.
2) **Organizational Structure & Functions:** Definition of the needed departments, functions, interfaces, resources, and job profiles.
3) **Capabilities & Processes:** Description of the value proposition, value streams, business processes, internal vs. external capabilities, cost structure transparency, and revenue model.
4) **Infrastructure & Information:** Definition of the footprint, facilities, equipment, and IT-systems.
5) **Network & Partners:** Framework related to suppliers, service providers, sales & distribution channels, and other stakeholders.

Finally, the given boundaries by the Business Strategy gets translated into the Competitive Priorities to ensure the organizational alignment and focus of all functions. These priorities should describe how to focus & align with the Customer (e.g., quality vs. price vs. availability), what types of Products/ Services are developed and offered (e.g., functional vs. innovative) and how to drive Operations (e.g., forecast/ push vs. demand/ pull driven).
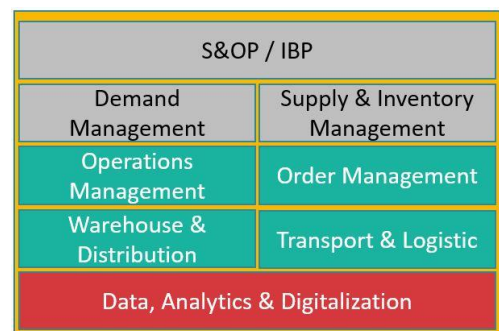
SUPPLY CHAIN STRATEGY

The Supply Chain Strategy can be seen as an interdependent extension to the Organizational Strategy. As a result, some of the same elements are also usable within this planning process, for example value proposition, capabilities, cost structure and/ or revenue model.

The objectives driving the development and implementation of the Supply Chain Strategy can be summarized as:

➢ Enhance the **business & market know how** within and beyond the network
➢ Increase the network **transparency**, **speed** of material flow, and demand **smoothing**
➢ Improve the **communication** as well as the **volume** & **mix** attainment capability
➢ **Streamline operations**
➢ Improve the **risk management** and **sustainability**

As explained above, the strategic planning process might be supported for the Business Strategy by "Porter's Generic Strategies" and for the Organizational Strategy by the "5 Major Building Blocks". A great structure to develop the Supply Chain Strategy can be based along the needed **Core Capabilities**. To identify the different key areas the SCOR (Plan, Source, Make, Deliver, Return Enable) might be a very helpful framework supporting the thought process. With this input, the 8 Core Capabilities shown in the picture on the right would be sufficient to cover all areas to build a highly competitive, best-in-class supply chain. Hereby, driven by the entrepreneurial activity of a company, these core capabilities may vary.

S&OP / IBP	
Demand Management	Supply & Inventory Management
Operations Management	Order Management
Warehouse & Distribution	Transport & Logistic
Data, Analytics & Digitalization	

Before the strategic planning process is started, the clear definition of the Strategy Content for each capability is very important. This can be seen like an agenda or common thread to structure the and to ensure completeness of the deliverables. The following table show a reference strategy content structure and the related business contribution by core capability.

Capability	Strategy Content	Business Contribution

S&OP / IBP	- Integrated Business Planning Cycle (IBP)
	- Risk Management:
	  - Regulatory
	  - Demand & Supply
	  - Process
	  - Environment & Hazard
	  - Financial
	
	Plan
		Strategy execution, decision making and monitoring via the IBP-Cycle:
		
		- Executive Portfolio Review (EPR)
		- Executive Demand Review (EDR)
		- Net Requirement Review (NRR)
		- Executive Supply Review (ESR)
		- Executive Reconciliation Review (ERR)
		- Executive S&OP Review (ESOPR)

Demand Management	- Product Portfolio & Lifecycle (PLCM):
	  - Region / Market
	  - New Product Introduction (NPI)
	  - Phase Out & Cannibalization
	- Sales Channel & Revenue Model
	- Demand Planning & Forecasting
	- Demand Influencing:
	  - Launches / Events
	  - Advertisement / Pricing
	
	Plan
		Top-line Financial Reconciliation:
		
		- Demand Plan (DP)
		- Financial Plan (FP):
		  - Revenue / Sales
		  - Gross Margin
		- Net Requirement Plan (NRP)

Supply & Inventory Management	- Footprint & Network
	- Supply Chain Echelons
	- Make vs. Buy
	- Forecast-to-Fulfill-Model
	- Capacity & Resources
	- Inventory & Safety Stock
	- Cost Structure
	- Supplier Management:
	  - TCO
	  - Relationship-Level
	
	Plan
		Bottom-Line Financial Reconciliation:
		
		- Master Production Schedule (MPS)
		- Rough Cut Capacity Plan (RCCP)
		- Financial Plan Operations (FPO):
		  - COGS
		  - Cost, Absorption
		  - Operating Income
		  - Inventory

Operations Management	- Operating Model:
	  - Make-to-Stock
	  - Make-to-Order
	  - Assemble-to-Order
	  - Configure-to-Order
	  - Engineer-to-Order
	- Capacity (Des-)Investment
	- Supplier Network:
	  - Procure-to-Pay-Model
	  - Contracts
	- Operations effectivity & efficiency
	
	Source / Make
		Supply execution and Financial Performance:
		
		- Material Requirement Planning (MRP)
		- Capacity Requirement Planning (CRP)
		
		- Lean Management
		- Six Sigma Program
		- Managing Daily Improvement (MDI)
		- Leader Standard Work (LSW)
		- Practical Problem Solving (PPS)

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08-May-2022

Order Management	- Customer Service Model
	- (Multi-)Channel Definition
	- Order-to-Cash-Model
	- Business Rules:
	  - Service Level Agreement
	  - Orders vs. NRP
	  - Backorder Management
	  - Standard Lead-times
	 Deliver / Return
		Customer Service execution:
		
		- Sales & Operations Execution (S&OE)
		- Available-to-Promise (ATP)
		- Capable-to-Promise (CTP)
		- Inventory Allocation

Warehouse & Distribution	- Footprint & Capacity
	- Technology:
	  - Warehouse Management System (WMS)
	  - Vendor Managed Inventory (VMI)
	  - Consignment Capability
	 Deliver / Return
		Delivery & Return execution:
		
		- Distribution Requirement Plan (DRP)
		- Sales & Order Fulfillment

Transport & Logistic	- Transportation Channel & Modes:
	  - Truck, Train, Plane, Ship
	  - Routing & Incoterms
	- Service Provider Model (3PL, 4PL)
	- Technology:
	  - Transportation Management System (TMS)
	  - Forwarder integration
	 Deliver / Return
		Delivery & Return execution:
		
		- Delivery Order Fulfillment:
		  - Global Track & Trace
		- Trade Compliance
		- Customs Clearance
		- Harmonized Tariff Scheduling (HTS)

Data, Analytics & Digitalization	- IT Technology, Platform & Network:
	  - Engineering Change Control (ECC)
	  - Customer Relationship Management (CRM)
	  - Enterprise Resource Planning (ERP)
	  - Supplier Relationship Management (SRM)
	  - Supply Chain Event Management (SCEM)
	- E2E Business & Data Integration:
	  - Data Analytics
	 Enable
		Support & Enabler for all Capabilities:
		
		- Manufacturing Resource Planning (MRPII)
		- Advance Planning & Scheduling (APS)
		- Business tracking and monitoring within each capability (KPIs):
		  - Reports, Analytics, Deep dives
		- Process, KPI, Data, and Communication Standardization
		- Business Integration (EAI, SOA, EDI)
		  - Date Exchange

Afterwards the strategic planning process is started with definition of the accountable sponsor at the Senior Management Board (e.g., COO) and the identification of the needed experts, stakeholders, and process owners for each capability area. The framework given by the Business Strategy, the Organizational Strategy and the Core Capability requirements should enable each team to develop and document a strategic plan to build the required supply chain component.

Hereby it is key for success that all teams work highly collaborative, cross functional, integrative and interdepend-able to ensure the seamless integration of all capabilities within the Supply Chain Strategy, but also back to the Organizational Strategy. The major process steps are:

1) Define **content**, **objectives**, and **value proposition** for each capability
2) Map and **validate** supply chain objectives **to overall business objectives**
3) Identify **revenue model(s)**
4) Evaluate and align **internal vs. contracted** supply chain operating model(s)

5) Specify technologies and estimate **investments & cost structure**
6) **Documentation** and integration review across all capabilities
7) Review, changes, and **approval** by Senior Management Board
8) Compare Supply Chain Strategy vs. current stage and start **Supply Chain (Re-)Design**

As soon as a company has the strategic planning processes in all areas completed, it is advisable to implement a yearly strategy review to check, validate and/or adjust the different Strategic Building Blocks as needed.

SUPPLY CHAIN DESIGN

The (re-)design and continuous improvement of the supply chain is driven by the Supply Chain Strategy. With this process the strategy is transferred, handed over and rolled out to the company's organization, business areas, and departments for execution. The following major steps can be used as a reference-model for by area managers, department heads, project leaders and contributors to manage, plan and execute the Supply Chain Strategy within the owned area of responsibility.

1) IDENTIFY BUSINESS REQUIREMENTS & SUPPLY CHAIN OBJECTIVES

➢ Research Business Strategy, Supply Chain Strategy & Value Proposition

➢ Clarify needed responsiveness and efficiency to serve Customer & Market

➢ Understand long-term impacts driven by the Portfolio Lifecycle Management

➢ Identify special needs for the supply chain, logistics, network, and external collaboration

➢ Determine technology requirements

2) EVALUATE CURRENT & FUTURE STATE

➢ Model, Map and collect as-is SC Processes and Data

➢ Analyze and understand current SC state

➢ Evaluate future processes and/or services to support the strategy and PLCM

➢ Design and develop to-be SC and needed technology model

➢ Document, communicate and get feedback & approval for implementation

3) DEVELOP STRATEGIC PROJECT-PORTFOLIO

➢ Perform gap analysis and compare as-is vs. to-be SC state

➢ Define and plan priority & scope of change and project portfolio

➢ Evaluate resources, time, cost, and ROI per project

➢ Prepare business and investment plan(s) and get approval

4) PERFORM PROJECT EXECUTION

➢ Define change management & communication strategy

➢ Project scoping, scheduling, budgeting, approval, and staffing

➢ Project execution, monitoring, controlling, and closing

Depending of the size of the company and/ or the number of projects it might be helpful for coordination and monitoring to implement a Project Management Office (Ref6: PMO). Further on the Supply Chain Design process should be linked to the yearly budgeting process to ensure financial funding and a reasonable overall project portfolio scoping. Finally, there should be a regular review of the Supply Chain Design journey, in alignment with the strategic planning cycle, to ensure that always latest changes and/ or adjustments in the Business or Supply Chain Strategy are recognized.

SUMMARY

To be successful in building the needed best in class supply chain for a company, an embedded, integrated, and independent Supply Chain Strategy management process should be implemented first. Only a strong interaction between the Business Strategy, the Organizational Strategy and the Supply Chain Strategy ensures alignment, effectiveness, and efficiency to build the needed competitive strength to achieve the strategic objectives. Hereby using a structured approach based on the needed Core Capabilities to plan and design the supply chain can help to build a sustainable Supply Chain Strategy.

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Ref2: APICS: http://www.apics.org/docs/default-source/scor-training/scor-v12-0-framework-introduction.pdf

Ref3: Porter: https://en.wikipedia.org/wiki/Porter%27s_generic_strategies

Ref4: STRATECHI: https://www.stratechi.com/organizational-strategy

Ref5: APICS SC Strategy Report: http://www.apics.org/docs/default-source/industry-content/strategy-report.pdf

Ref6: PMO: https://en.wikipedia.org/wiki/Project_management_office