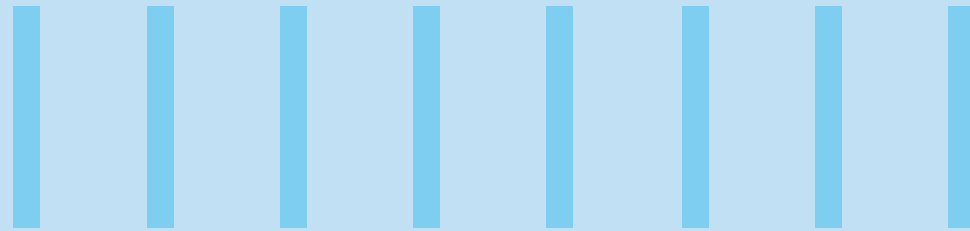


# FUTURISTIC SUPPLY CHAIN – INTEGRATED PLANNING APPROACH

With effective and flexible supply chain planning.



## Abstract

Supply chain planning is core to effective supply chain management of an organization. An integrated sales and operations planning (S&OP) plays a critical role in a company's ability to match supply with demand fluctuations. This paper talks about equipping the organization towards the future of supply chain planning through digitization and analytical interventions. It also explores the possibilities of a hybrid model where transaction planning process could be outsourced while retaining the core decision making needed for effective S&OP process, thus delivering an undeniable competitive edge.



## Supply Chain Planning - a competitive edge for organization

A supply chain plan can be considered excellent only when it greatly minimizes the demand-supply gap. Manufacturing and CPG industries have been making constant efforts towards bridging the gap between their forecasting and fulfillment capabilities.

The ability of an organization to use technology and analytics to optimally balance demand and supply defines its dominance over competitors through its capacity to deliver the right products at the right time for their clients. Though demand supply balancing techniques vary across industries, there are a few fundamental elements which are common for all organizations:

- An organization's ability to consistently follow a good S&OP process and ensure strict

governance will guarantee the results it seeks

- A planning calendar must be defined for performing the bottom-up number extraction, demand planning, supply planning, and supply balancing as per the agreed daily, weekly, and monthly schedules
- Any lack of consistency in following the process will lead to a bullwhip effect, resulting in missed sales opportunities or excess inventory across the value chain
- Through defined SLAs and strict process adherence, organizations can ensure the consistency of their S&OP processes

Every stakeholder in the value chain has a unique set of requirements and a company's S&OP processes have to cater to all of their needs in order to be considered reliable:

- Retailers want to ensure shelf stock to minimize sales loss
- Distributors expect a quicker turnaround time (TAT) of inventory and in turn, working capital
- Warehouses require to optimize space with 100% fulfillment of inventory
- Manufacturers focus to maximize the capacity utilization and lower fluctuations to the plans
- Upstream suppliers would warrant confidence on the plan to be able to invest based on demand

The success of S&OP processes of individual organizations varies on maturity levels based on the size and complexity of the business. A more robust and structured S&OP process is often what defines a company's edge over competition.

## Key challenges for supply chain leaders in running efficient S&OP

As per the APQC's 2020 Supply Chain Challenges and Priorities Survey Report (March 2020), the key priorities of supply chain leaders were surveyed and 66% of them felt the need for implementing new technologies, while 63% wanted to benchmark the best practices.

Majority of supply chain practitioners

and leaders had to leverage process, people, and technology to evaluate multiple scenarios – both externally and internally to the organization's favor – by making right decisions that could increase the value of organization and bring innovation thereby assuring a high level of compliance. They are looking at ways to

further optimize their planning processes. In the current way of working, the S&OP leaders probably should be asking some of the basic questions, the absence of which leads to problems in the supply chain. Leaders either fail to ask these question or don't have answers

-  Is there a systematic framework to measure the current supply chain health?
-  Where do we stand in terms of supply chain performance?
-  Where does supply chain performance stand with respect to peers?
-  Are my current KPIs aligned with current business strategy and goals?
-  How to identify processes and functions that require improvements to move to the target maturity level?
-  Do we have the right operating model to maximize value?
-  Do we have right tools, technology in place to achieve the target performance?



## Shortcomings in traditional planning process:

Traditional S&OP processes are mostly non-collaborative in nature as the information flow is unidirectional. Forecasts are shared to players in upstream supply chain, while supply confirmations flow downstream.

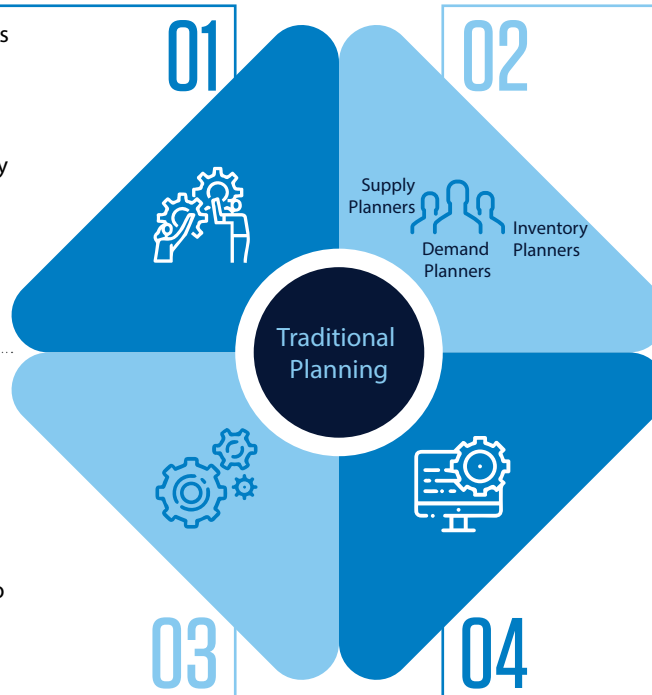
Planning is usually siloed in nature, as planners tend to focus on their own plans without understanding the overall impact it might create because of – either lack of information on dependent nodes due to

system limitations or working towards non-harmonized goals. This results in sequential execution of processes rather than a unified and integrated approach towards maximizing revenue while optimizing cost.

### Non Collaborative Process

- **Lack of consensus** (decision) as each functions questions the feasibility of others plan
- Most organization don't measure supply chain efficiency holistically which has an **ripple effect** on the system (across functions)

- **Non standard process** across functions (both internal & external)
- **Plan becomes obsolete** due to long time for information flow from one end to other in SC



### Siloed Planning

- Planners **work in isolation** towards their own priorities and overall objectives are not aligned
- Redundant reports with very limited insights are generated due to **lack of harmonized data** across functions and also accuracy of these reports are questioned

- **Inefficient structures** result in difficulty to share plans and information quickly
- Prone to **inaccuracies** due to non availability of seamless entries during collaboration

### Sequential Execution

### System Limitation





## Future of supply chain – integrated planning model

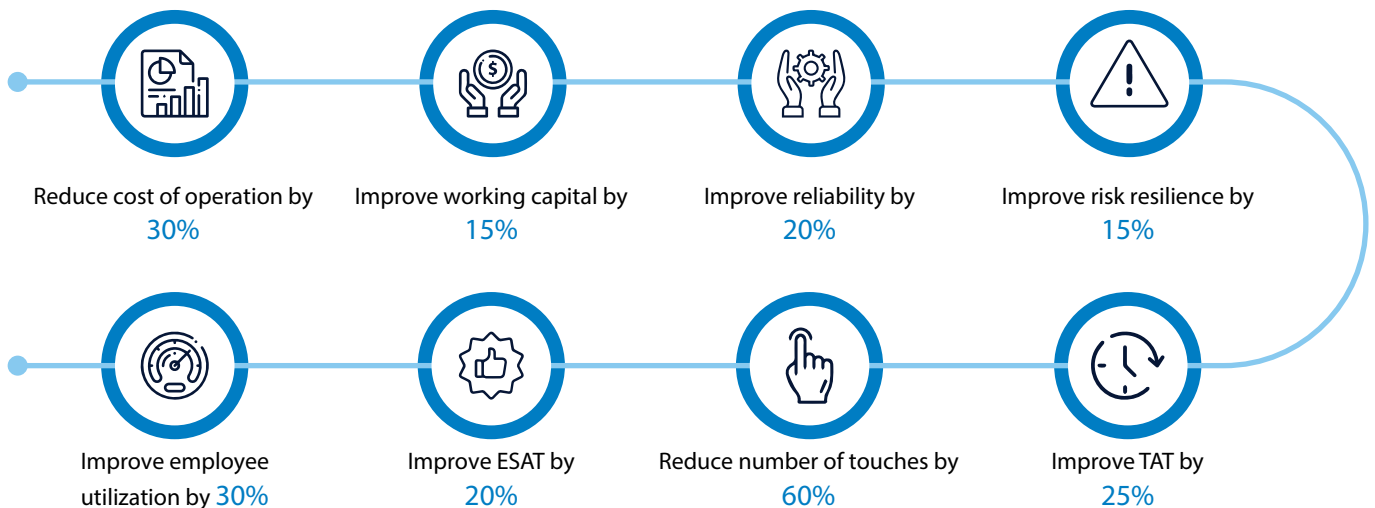
The futurist supply chain has a need to consolidate planning function across supply chain to an integrated planning hub. It is imperative to arrive at “one plan” using collaboration platform to bring the entire value chain together, by ensuring transparency and trust across various partners of supply chain.

An integrated planning model is where the various planning functions across value chain are consolidated and brought

under an integrated planning hub. Using advanced analytical models to improve planning accuracy, increasing the effectiveness and optimizing the efficiencies of supply chain using data-driven interventions in decision making are possible when the planning functions are integrated under a hub model. Planners can come to “one plan” through consensus approach taking in to consideration of upstream and downstream constraints.

This will transform the planning process to a collaborative model where planners work in tandem, and simultaneously plan for a flawless execution where data and technology act as the backbone.

Based on our experience across industries, organizations typically were able to achieve benefits across people, process, technology, analytics, and financials with direct impact to key operational metrics:



As per APQC’s 2020 Supply Chain Challenges and Priorities Survey Report (March 2020), 44% of organization’s felt the need for an integrated and collaborative planning with their upstream and downstream supply chain partners.



## Transitioning to an integrated planning model

In order to accelerate to the futuristic integrated supply chain planning model, organizations need to follow a structured framework

1. Assess the supply chain health: A supply chain diagnostics tool kit to assess the process maturity of supply chain across people, process, technology and analytics levers to:
  - a. evaluate the relevance of current business and process metrics to the organization's goal
  - b. benchmark the metrics
  - c. bottom up risk assessment to bring out the business risk and readiness of organizations to mitigate
  - d. combine the qualitative, and quantitative data to arrive at the supply chain maturity and health
2. Build the future state operating model: Based on the current maturity level of organizations and the risk appetite, design the future state operating model which is more integrated end-to-end by carving out the planning process across nodes to one integrated planning.

The typical outcome of the operating model will encompass the integrated planning hub model to bring in the planning functions across value chain to improve effectiveness and efficiency – a good mix of nearshore-offshore shared service model.

3. Technology and analytics as key differentiator: An optimum level of technology and analytics intervention to:
  - a. provide deep business insights
  - b. enable data-driven decision and innovation to adapt to world class technologies
  - c. accelerate the digitization journey with RPA, AI/ML models
  - d. assure 100% compliance through risk vulnerability assessment and mitigation there by improving the overall customer experience
4. Transition to “one plan” model: With the help of technology and analytical interventions, organizations will be better equipped to capture variations in different nodes using advanced

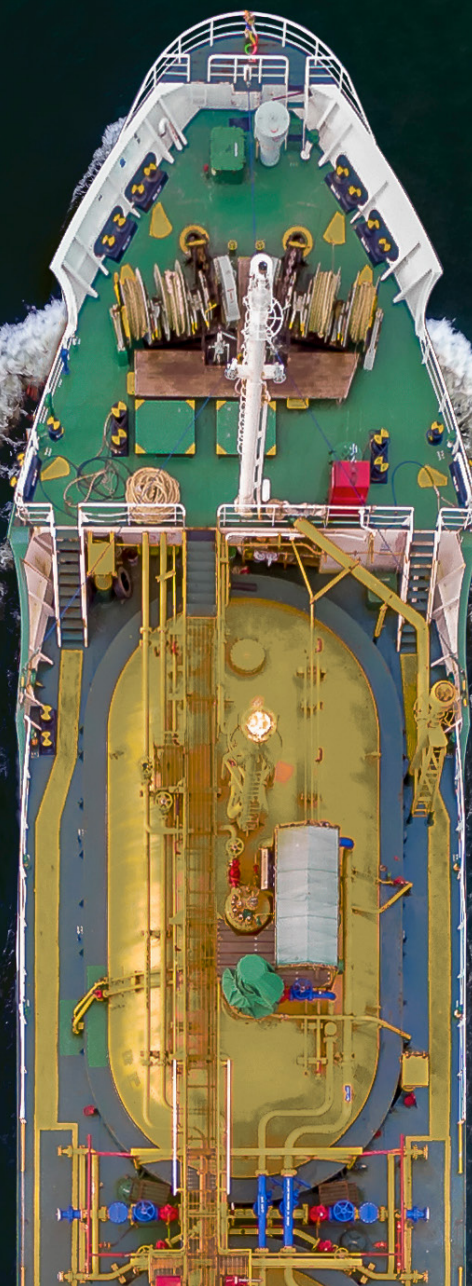
demand sensing capabilities there by taking quicker decisions to evaluate changes and adapt to “one plan” across the value chain which results in consistent and trust worthy plan.

5. Potentially consolidated the planning hub to a hybrid model: Integrated supply chain planning function has the potential to outsource the tactical part of supply chain planning while retaining key decision making within to drive business value. In large organizations, processes are usually not harmonized across geographies, leading to complexity in carving out the right processes for consolidation. A structured methodology will be required to categorize and rank the process-based fitment and risk criteria. Also, an appropriate framework needs to be used to segregate these processes into different buckets to decide on the proximity of running them, namely those to be retained in-house versus those for consolidation to nearshore and offshore locations.

## Tying it all together

Meticulous planning at all levels and being consistent are the two key factors to successful S&OP, especially in uncertain scenarios like the current COVID-19 pandemic. Outsourcing companies having mastered these skills over a period of time, offer a strong portfolio of services including advisory, digitization and business process managed service with advance AI/ML based analytical intervention in demand planning, inventory planning, supply planning and financial planning services along with digital transformation capabilities.

Organizations collaborating closely with such partners having strong domain expertise can intelligently consider their futuristic supply chain planning process fully integrated with upstream and downstream functions. This will greatly improve the efficiency of supply chain processes while enabling broader coverage and deeper capabilities for effective operations resulting in best-in class 'On-Time, In-Full' (OTIF), customer satisfaction scores at optimized cost of operations.



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Madhukar's focus is increasing the Digital footprint into the clients leveraging automation, analytics, and domain.

He has been advising multiple organizations in various geographies and industry verticals in crafting their transformation strategies. His past experience includes stints with McKinsey, Ford, Delphi and HP in the areas of manufacturing, quality, operations and Shared Services advisory.

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Karthikeyan has been with Infosys since 2017 and has worked with multiple clients to provide consulting and advisory services in Sales and Fulfillment domains across industry verticals such as manufacturing, Hi-tech, and CPG. He has 20 years of experience in various facets of supply chain globally. Prior to joining Infosys, he has been with Daimler, Nokia, and Godrej, in various supply chain role managing operations, technology transformation and business excellence.

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