



Bridge the Gulf Between Supply Chain Planning and Finance

A QAD DynaSys Leadership White Paper
for the Global Supply Chain

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INTRODUCTION

According to the wisdom of Peter Drucker, “...the greatest danger in times of turbulence is not the turbulence itself; but it is to respond with yesterday’s logic...” In 2020 there is little doubt that global supply chains are going through disruptive and turbulent times. However, we are witnessing a continued reliance on ingrained planning methods by many manufacturers. Most manufacturing companies have two distinct forms of planning: the finance team, which determines the future budgets and capital requirements, and the operations team, which balances supply and demand and determines future capacity and material requirements. During prolonged periods of turbulence and volatility, the operations team continually makes major decisions to mitigate emerging risks or exploit unforeseen opportunities. Subsequently, the gap between the financial plan and the operations plan widens to the point where

the two plans bear no resemblance. But serving two disparate plans is like driving your car with two GPS navigation devices giving you verbal directions to two different destinations in two foreign languages.

Supply chain, as a function, has been under constant pressure to better align with and support a company’s broader strategy. Corporate strategy alignment traditionally falls within the responsibility of finance. For supply chain to better align with and support corporate strategy it must first align itself with finance and specifically financial planning. Supply Chain Planning can no longer exist in isolation. It is no longer about balancing supply and demand. It is about searching for and executing the most profitable strategy out of many possible scenarios. The keyword here is “profitable.” Profitable does not just mean the planning scenario with the highest revenue and lowest cost. It must also factor in capital costs and financial risks.



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Why is this a problem now?

The disconnection between supply chain planning and finance has a long history. Traditionally, the only mutual touchpoint was the budgeting process. Once a year, Finance would create the budget and Supply Chain would measure the budget adherence of the plan. This model is fraught with problems:

- The supply chain team often has minimal input into the budget creation. The demand plan for the fiscal year may be misaligned with the budget before the fiscal period even begins.
- The supply chain team is typically focused on objectives such as OTIF, Inventory Turns, and Resource Utilisation. The adherence to a budget was often a remote thought.
- The budget is usually locked in at the start of the year. But no plan survives first contact with the enemy and a budget is no different, which often results in changes.

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Current day manufacturers increasingly need to integrate more financial planning decision making into their supply chain planning. Traditionally, supply chain planning technologies have been focused on the volumes, not the values. These

systems supported metrics and business processes that were not conducive to driving supply chain decisions based upon financial logic.

So how can supply chain planning embrace financial planning decision making? It all starts with speaking a common language.

CHARTING THE COMMON JOURNEY

To work with finance, the supply chain team must speak the language of finance, and likewise, finance must speak at least some of the language of operations. When a supply chain practitioner performs plan analysis, they compare plans based on metrics such as service level attainment, inventory cover, and resource utilization. This analysis may be examined in a rolling period such as 10 or 12 weeks of operations.

Conversely, when a finance practitioner performs plan analysis they use metrics that include revenue, budget adherence, profitability, working capital requirements, and of course the impact on cash. This analysis is generally viewed in the fiscal period of the current fiscal year.

Where an operations planner manages “production overtime” and “expedited freight” exceptions, a finance analyst observes reduced profitability. Where an operations planner calculates a pre-season stock build to meet peak demand, a finance analyst notices increased working capital and the drain on cash. Where a demand planner is happy to recognise new demand from an emerging market, the finance analyst is concerned over the accounts receivable exposure to a volatile currency. There is no end to the list of potential conflicts.

Although the language, the time horizon, and the metrics between the two parties are different, the basic objectives are the same: to drive profitability, growth, and alignment with the corporate strategy.

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FINANCE & SUPPLY CHAIN ALIGNMENT

Align the planning models

The single most important step in aligning the planning between finance and operations is to work from a single planning model. The model should encompass all of the material movements, costs and revenues, and constraints within the enterprise. This is the most effective way to enable cross-functional collaboration.

Aligning the horizon

Supply Chain planners usually work in weekly and monthly based plans. Often the planning months will align with the company's fiscal periods although this is not always the case. Financial analysts work strictly in fiscal periods.

It is a challenge for the planning technology to ensure that the metrics used are calculated within the calendar structure required by an individual practitioner. Of course, this means that one team member is looking at a weekly value while another is reviewing a fiscal monthly value in order to make a joint decision. This is not a problem as long as both windows are viewing the same underlying data model.

Aligning the Metrics

Finance metrics are not new to supply chain planning. The ACSM (previously known as APICS) long ago published the SCOR model set of metrics which includes costs and asset efficiencies.

It is important that the appropriate financial metrics are available in the supply chain model. Most financial metrics can be categorized into Profitability, Budget, and Working Capital. A strong financial supply chain planning model should measure and support plan scenario comparison using a range of financial metrics.

PROFITABILITY

- Revenue
- Cost of Goods Sold
- Gross Profit
- Impact on EBITDA
- Impact on Contribution



BUDGETING

- Budget Value
- Budget Adherence
- FY Outlook



WORKING CAPITAL

- Working Capital Impact
- Inventory Days
- Receivable Days
- Payable Days
- Impact on Operating Cash Flow



Mature planning technology will ensure the metrics are dynamically recalculated for each required level of the planning hierarchy and time horizon to ensure support for the correct planning decision.

The primary purpose of the above metrics is to compare two or more scenarios and make a decision based upon financial insight. One must note that the role of Supply Chain finance planning is not to replace financial planning. It is to complement financial planning. There are many financial controls that are unrelated to the machinations of supply chain and this will not change.

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A rookie error of many supply planning systems is to use average unit prices to monetize the plan. Some planning tools use a standard cost to determine the cost of goods sold (COGS) and a standard sell price to determine revenue. Effectively, the tool is converting the volumes to values using a standard multiplier. Currency is not just another unit of measure.

This standard multiplier approach is intuitive to the planner and feels right. However, it may fail to accurately identify financial differentiation between any two plans with similar demand and supply. Consider Plan-A which has a high demand due to an aggressive BOGOF promotion against Plan-B which shows only baseline demand. Using purely aggregated average prices and standard costs, Plan-A will have higher revenue and profit than Plan-B. By using product-level promotional pricing it correctly reduces the revenue of Plan-A by half while maintaining the correct cost.

Similar examples exist in Supply Plan comparisons. Adding one overtime shift to an individual plan must show the incremental overtime costs in addition to the standard costs. Choosing expensive expedite freight for a given product must also be shown as a cost against that sale.

Align success criteria

When multiple analysts evaluate a plan, each has their own definition of what an optimal plan looks like. Each adheres to the plan that best satisfies their individual metrics. However, one planner's definition of optimal is most often in direct conflict with another's. A procurement planner is measured on the lowest unit cost. One method to broker a lower cost is to agree to larger volumes and longer order lead-times. However, both of these methods will naturally lead to higher inventories, which conflicts with the inventory planner's definition of optimal. The Finance team

is no different. They seek to achieve strong margins with revenue budget adherence and a strong return on capital. There are many potential conflicts.

It is important that a general accord is reached on what "good" looks like. It is infinitely easier to agree on what is "good" rather than what is "optimal". Often this means sharing the non-negotiable boundaries of specific metrics such as a minimum service level attainment. This process, although it sounds difficult, is best achieved by prototyping multiple scenarios. After several iterations, the team will understand what is acceptable and unacceptable to each functional area. This is done keeping in mind that the objective is to find mutual agreement, not to find mutual optimality.

This will require trade-offs—between financial metrics and constraints, and demand, supply, and inventory—to balance individual functional objectives against a coherent integrated business plan that aligns with corporate strategy.

ALIGN BUSINESS PROCESSES

Financial plans are generally based around business and accounting processes. Supply chain planning is based around Demand, Supply, and Sales & Operating planning processes. For Supply Chain and Finance practitioners to work effectively together, there must be a formal role for each to play in one another's processes. Finance can leverage the value of Supply Chain Planning can play in their existing processes such as Budgeting and Capital Planning. Likewise, Supply Chain Planning can align its outcomes closer to corporate objectives if finance expertise is applied in Sales & Operations Planning and/or Demand Planning processes. Some examples of business processes that benefit from a cross-functional team are:

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Budgeting: regardless of whether budgeting originates from a top-down finance plan, or a bottom-up long term supply chain plan, it is crucial that the budget process is supported by supply chain planning. Corporate finance teams need rapid financial budget generation tools that leverage from existing system interfaces, collaboration, and version control. With online simulation and what-if analysis, Supply Chain Planning is a natural contributor to a budget process.

Strategic Planning: long term infrastructure planning can use the long-term constraint-based planning tools of supply chain to identify required capacity and the likely pay-back period.

Sales & Operations Planning: S&OP has a purpose-built role for finance decision-makers to compare scenarios and influence the selection of the plan that best meets the company's objectives. Engaging finance in the S&OP discussions will clearly demonstrate how S&OP helps drive alignment to financial goals and objectives.

Demand Planning: when the shape of organic demand is not perfectly aligned with capacity or budget, the demand planners in coordination with marketing, take action to re-shape product demand. In consumer-goods industries, a key lever used to manipulate demand is the sale-price by way of trade promotion activity. However, when the finance team is included, there are additional levers to add to the marketing mix that could grow, defer, or expedite demand. These may include values such as:

- Longer Payment Terms by reallocating working capital.
- Shorter Lead-Times by executing some cost to serve analysis.

When finance and operations work together it is important to define the roles, responsibilities and methodology to monetize units and volumes to avoid scepticism about conclusions reached.

RISK MANAGEMENT

Risk management in supply chain planning is different than risk management in financial planning. Risks in supply chain planning are generally based on the validity of assumptions such as the realization of speculative demand or sustained manufacturing operations without unforeseen downtime. Risks in financial planning focus on subjects such as exposure to foreign currency or anticipated demand to justify a return on a capital investment.

S&OP is the natural process to assess supply chain risks and, as an extension, financial risks that originate in supply chain decisions. If a specific demand plan is weighted heavily to a market with a longer payment term and is invoiced in a volatile currency, then that risk should appear in the S&OP risk assessment in the same manner as a supply chain-centric risk. The 'cost' of such a risk can only be evaluated by a finance practitioner.

Scenarios

The purpose of financial supply chain planning is NOT to predict the future income statement or balance sheet. It is to use financial metrics to drive the best possible decision when comparing multiple scenarios. Therefore interactive scenario management needs to underpin all of the processes described in this paper. Perform dynamic "what-if" analysis to evaluate the impact of any potential event regardless of whether it is financial (currency exchange, cost increase) or supply chain (revised demand plan, loss of capacity) related. Evaluate each scenario using the agreed-upon success criteria assessing both supply chain and financial metrics simultaneously.

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Industry Benchmarking

When metrics are analysed in isolation they tend to lose context and become a simple number. Comparing a given metric across multiple planning scenarios provides more context. However, for some metrics, it will be important to gauge against competitors or industry benchmarks. This allows the plans to be easily compared to accepted norms. By tracking the comparison of specific metrics over time to an industry-benchmarks or a stated objective, it provides additional insight progress on the journey of continuous improvement.

WHAT ABOUT INTEGRATED BUSINESS PLANNING?

Many of the notions described in this paper are often included as part of a Sales & Operations Planning (S&OP) or Integrated Business Planning (IBP) process. S&OP is purpose-built to compare and reconcile operational plans with financial plans so that all planning stakeholders are synchronized and aligned with overall business objectives.

However, integrating financial planning with supply chain planning goes somewhat further than the boundaries of S&OP or IBP. S&OP & IBP processes focus on a fixed (tactical) horizon and manage aggregate levels of planning values in monthly periods. However, financial metrics may influence planning decisions across the horizon from daily operations to yearly strategic decisions. E.g. Is it profitable to serve this short horizon unforeseen demand signal using excess stock on the other side of the world? In summary, do not limit the influence of financial expertise to those planning decisions solely within the confines of S&OP or IBP.

CONCLUSION

Financial planning and supply chain planning can no longer exist in relative isolation. Manufacturers are using digital technologies to update operations plans almost in real-time with insights of new risks and opportunities. It is crucial that in such a dynamic environment, decisions are made in alignment with corporate strategy. Therefore financial decision drivers must be embedded into supply chain planning processes to ensure that it is no longer just about balancing supply and demand. It is about searching for and executing the most profitable strategy out of many possible scenarios.



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