

Global Sales and Operations Planning

**Releasing cash and capital, while improving
margins for global businesses**

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Date:

March 2009

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Do you need to do S&OP?

Do you have a clear process to readily reach irrevocable multifunctional consensus on what to do, when constraints prevent you from executing your idea plan?

Do you know the financial impact of your operating decisions before you make them?

If you answered yes, congratulations, you must already be doing S&OP.

If you are unable to collate information, reach agreement on what the 'real numbers' are, then do take time to read the rest of this paper.

1 Introduction

Basic Sales and Operations Planning (S&OP) principles have been well established for over twenty years. However in recent years, organisations with global scale have discovered that the changes to both their business and the global environment have rendered legacy S&OP processes obsolete. To remain competitive, these leading organisations now have to re-invigorate S&OP process to release capital and deliver true business control.

Fundamentally, S&OP is a simple 3-step process: demand review, supply review and reconciliation. The global challenge lies in creating an effective and practical design that deals with the nuances of a multi-continent, multi-executive, distributed business environment with all of its inherent cultural and regional dynamics.

The most appropriate design supports the flow of information between functions and geographies. It also determines the **when**, the **where** and the **who** for the wide array of decisions the business needs to make. It must recognise both geographic and functional diversity to ensure widespread advocacy and ultimately successful implementation.

Benefits realised by adopting a truly global S&OP process will lead to class leading levels of inventory and upper quartile service levels. These enhanced service levels trigger a virtuous spiral which then leads to greater category domination, greater impact from marketing spend and increased predictability of financial results.

Global S&OP is therefore a 'survival factor' in the race to see who will win in the current global turmoil.

2 Fundamentals of S&OP

*“Demand Planning, Supply Planning
and Executive Reconciliation”*

Initial Sales and Operations Planning implementations in the 1980s provided significant business benefits in many organisations through creating a more proactive approach to ensuring continuity of supply. This process and design was commonly applied to medium size businesses which typically consisted of one or two factories and a single sales and marketing organisation.

Typically S&OP was undertaken in a 3- or 5-step process. This connected sales, through operations, to an executive decision making forum. The steps were carried out sequentially each month. Such a process supported cross-functional working and gave increased visibility of potential constraints in operations. The majority of case studies, found in text books and on the web, reflect the suitability of this model for businesses with manufactured products sold in restricted geographic markets.

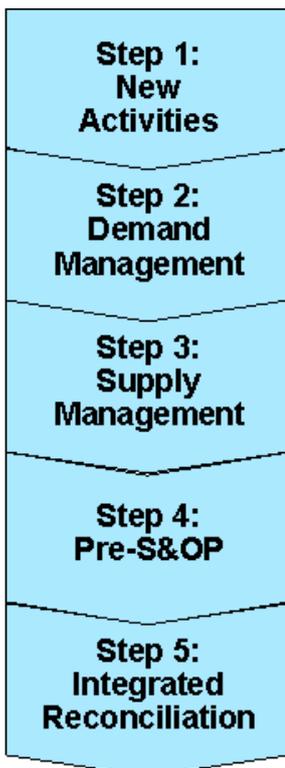
The addition of the New Activities and Pre-S&OP steps brought a more explicit focus on two areas which were believed to support businesses in delivering a more effective S&OP process, by focussing on:

- Innovation pipelines - an agreement on quantities and when to include them in the demand forecast.
- Developing options for addressing supply and demand - often the work of middle managers delivered via a meeting before the final presentation at executive level.

These models illustrate the fundamentals of any S&OP process. They continue to be suitable for use in businesses where the sales geography is supplied by a factory on an exclusive basis and when both sales and operations financial reporting is consolidated into one P&L.

When the business operating model contains functional divisions within a geographically dispersed supply chain, a more advanced S&OP process must be designed and implemented to remain effective and maximise business benefit.

Typical 5 step S&OP



3 Challenges for Global Supply Chains

“Change is the only constant”

Over the intervening decades since S&OP was first introduced, the world has changed:

- Companies have grown through mergers and acquisitions creating larger, more complex global organisations with multiple autonomous business units.
- Product complexities have increased – with greater quantity of new products and more range extensions which are often invisible to the planning teams in the operation’s silos.
- Retailers are far more demanding of service levels, quality and cost - they apply aggressive leverage to achieve their price and customer service objectives.
- Stock holding is costly - stock is targeted for reduction without full consideration as to why it was required, i.e., poor forecast accuracy or lack of production flexibility.
- Production sites have been rationalised – the requirement for an increased return on investment (ROI) has led to higher asset utilisation and with it reduced production flexibility.
- The global market place is more volatile - Europe is mature and stable, while growth in the BRIC markets (Brazil, Russia, India and China) creates swings in demand for a once stable product.
- Supply chains have become more protracted. Regional or global planning centres often created to derive tax benefits have replaced traditional country level full service chains.

In response to these challenges, many global organisations have structured themselves using global operating models which vest customer intimacy with a geographically dispersed set of local sales companies that are supplied services, product and leadership through regional or global centres of excellence.

Consequently, global S&OP processes must recognise the new requirements inherent in this structure and overcome the challenges inherent in operating through a combination of local, cluster, regional and global levels.

4 Requirements of S&OP in Global Businesses

“Each element of the process must add value to the business functions that use it, in addition to adding value to the whole business”

Aligning worlds

To create an effective S&OP Model the differing worlds of Sales and Supply have to be brought together.

This will mean creating new forums at the correct level, without destroying local relationships that deliver service to customers.

Typical Sales view of the world with 6 regions



North America
Britain and Ireland
Latin
Africa
Asia
Australia/NZ

Typical Supply view of the world with 4 clusters



Americas
Europe
Asia and Africa
Australia/NZ

The fundamental steps within S&OP remain the same in global businesses but they now have to span the distributed nature of each function and deal with:

- **Organisational needs** – the needs of sales regions may differ from the supply plants in the same region.
- **Business maturity levels** – some locations will have sophisticated processes and technologies undertaken by highly competent and experienced staff, while others will have basic spreadsheets and staff with employees who are still learning.
- **Conflicting goals** – S&OP processes frequently need to be structured to resolve the tension between local sales units and regional or global supply units (e.g., ultra-high service levels vs. minimised operational costs).
- **Communications** – sales units may be on a different continent from the supplying factory. No longer are the same individuals present in all meetings so the use of formalised narratives and communications is vital.
- **Reconciling** – within silos as well as between markets goes hand in hand with regional allocations and optimising the loading of factories across the supply network.

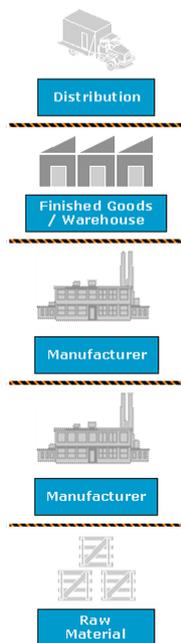
The justification for running the whole process is very easily lost on the departments or functions that are separated by thousands of miles; it is therefore critical that each step adds value and is shown to add value to the managers who undertake it.

The process of demand planning has to be integrated into the sales account planning, the marketing planning and the finance processes. Sharing one number with supply chain must be a by-product of their activities not an additional task.

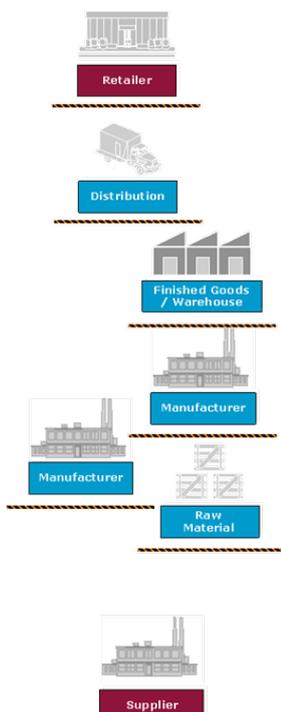
The historical tendency of the supply team undertaking the demand forecast has to stop. Sales departments can be reluctant to take responsibility for projecting the sales numbers

S&OP must now connect shelf to supplier

Older solutions connected within simple structures.



They must now connect shelf to supplier with various routes



even though they have ultimate responsibility for delivering them. When separated by great distance reluctance can often be replaced by silence. Local executives must see that the forecasting process adds value and will help them achieve local goals.

The supply step has to recognise the need to support medium to long term planning and go beyond the factory gate. It must connect with:

- Suppliers of critical components with production plans to support their S&OP processes and provide feedback on capacity constraints and headroom.
- All factories with common capabilities, to create virtual units and allow for optimisation within the network.
- Capital expenditure planning activities and budgeting.
- Working capital budgeting to align stock levels (finished stock and raw materials) with the requirements of cash to fund them.
- The forums that resolve imbalance in demand and supply.

Reconciliation forums must have clear authority levels recognised by themselves and the entities they are linked to, be that a market or a factory. Varying authority levels may result in a need to have multiple tiers of reconciliation forums, some as simple aggregation points for demand or supply that sign-off allocations, others might resolve imbalance for a specific category within an entire sales or manufacturing portfolio.

In complex global organisation reconciliation cannot be by volume alone. Volume may load the supply chain and sales may focus on quantity (volume) targets, but only by bringing in value will holistic business decisions be possible. In businesses with constrained supply, allocation decisions must be on a best value basis.

Do you need a crisis before you implement S&OP?

What happens when a large corporation recognises that volumes have declined as a result of supermarkets entering its sector with heavy discounts? What solutions might be proposed?

Supply could recognise the low utilisation of the network, increasing costs per unit delivered. A network review could recommend a rationalisation plan with site closures and job losses.

Sales and marketing might plan a volume fight back based on reminding everyone of the values of the brand, the benefits of the product and discounting.

Both plans meet the needs of the situation, but what if both are run at the same time

in the same business? It has happened, the result after much frantic activity to deliver the sales initiative, was a clear realisation that S&OP was a must do project.

5 Solutions for S&OP in Global Businesses

“One size does not fit all”

Global organisations should not simply select an S&OP Model used by another organisation and expect it to work. They must spend time reflecting on their business model and their current and future challenges both internal and external. Specifically, agreement must be reached on:

- Strategic drivers – influencing business decisions, such as growth rates, medium to long term constraints, future manufacturing footprint and route to market decisions.
- Which entities need to be connected, e.g., sales business, factories, planning centres, brand marketing, etc.
- Decisions that need to be made, e.g., capital expenditure allocations, stock levels, service trade-offs.

When these are detailed into design principles, it becomes possible to create the fundamental process design across business entities, recognising the consolidation and control points and shaping the authority levels of the formal S&OP decision meetings.

This global S&OP Model although similar to that of other global businesses will be unique to the business it is built for.

The model can then be enriched with detailed processes, technology and organisation design. This detailed design must take into consideration the availability of people and technology. The greater the change from existing process, technology and people capability the greater the implementation task.

Recognising the availability and capability of people provides a ‘realism challenge’ to potential designs and should not be overlooked.

The technology used to support S&OP Models ranges from manual MS Excel spreadsheets, through ‘industrialised’ spreadsheets and MS Access user screens, to a range of

specialist planning and data warehousing solutions. Though technology does not constrain the S&OP Model, it does impact the speed at which information can flow around it and the level of detail that can be presented at different time horizons. As a rule you should not wait for significant IT implementation as all but the most advance process steps can run on a limited technology platform (e.g., MS Excel and Access).

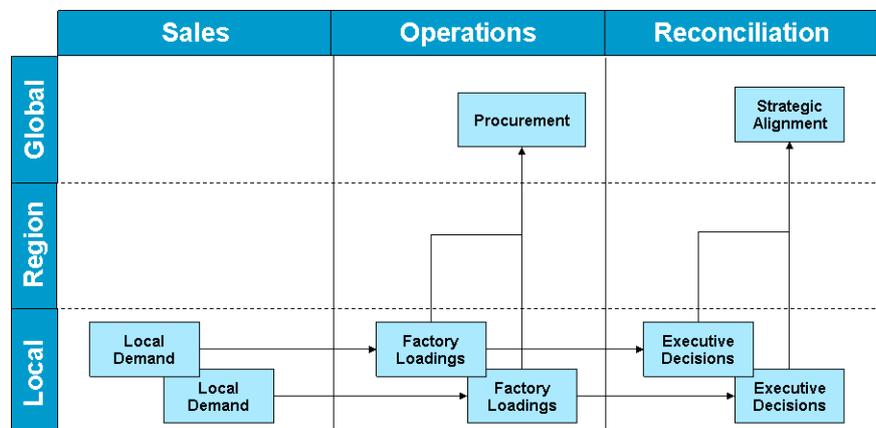
Simple technology is best limited to aggregated data, typically S&OP families in monthly buckets and the production of KPIs. In more sophisticated technology environments, data is often collected by Stock Keeping Unit (SKU), location and week, but sharing in S&OP forums is still best done at an aggregated family level on a monthly basis.

Though each Global S&OP Model will be organisation specific, some common templates can be used:

Global Distributed Model

This construct is typically seen in businesses with local factories supplying packaged and heavy bulk items to co-located sales businesses. This model is very close to the fundamental 3 and 5 step processes. Global leverage can be made of the data set. This may not be synchronous with the local monthly cycle at a local level, but would still add value in confirming alignment to global strategic objects and leveraging some procurement.

Figure 1: Global Distributed Model



Key characteristics of the distributed model are:

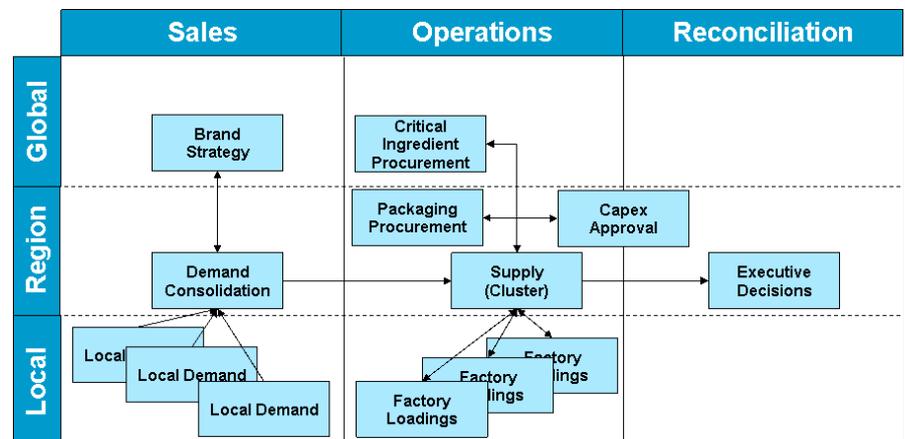
- Control is mainly devolved to a local level.
- Supports global level procurement of critical raw materials.
- Allocations during shortage of critical raw materials.

The model has the advantage of not needing total alignment of process and calendar but this is offset by the lack of integration.

Regional or Category Model

This is the most common model seen in global businesses, where the span from local to global is too great and regional or product category levels are used to break this span. This model is seen in businesses without global SKUs (though brand could be global) in food, beverage and other low value, frequent consumption products.

Figure 2: Regional or Category Model



Key characteristics of this model are:

- Demand and supply operate in silos.
- Support planning service centres.
- Reconciliation though not at executive board level, is at published account reporting level, e.g., Europe.

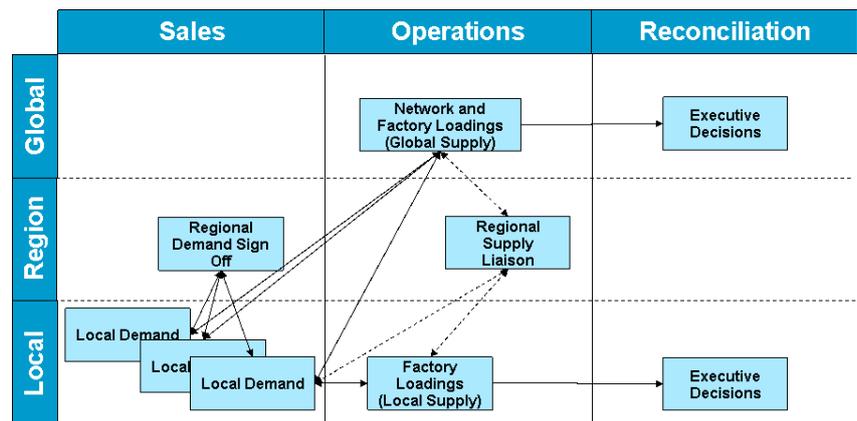
Centralised supply chain planning service centres are frequently found in this model. The processes undertaken in the centre can vary from simply setting network routings, to full service: undertaking all supply planning processes with the

exception of scheduling and sequencing which is normally left to individual factories.

Global Model

This is typically seen in businesses with a truly global scale, producing products in multiple locations. This is usually a consequence of volumes (e.g., high volume, low value potato chips). It is also appropriate for single locations driven by low volume, high value (e.g., pharmaceuticals) or product authenticity (e.g., Bourbon only comes from Kentucky). In most cases this is supplemented by the sales organisations to suit local market demands, combining a mixture of the global mega brands and local specialities.

Figure 3: Global Model



Key characteristics of this model are:

- Supports global sourcing from single factories.
- Demand can be consolidated and managed regionally and/or globally.
- Regional and Global service centres for planning are included allowing for mixed sourcing models.
- Reconciliation is developed geographically – dependent on the sourcing model.
- Produces the big picture and supports top down and bottom up alignment to corporate strategy.

There is no out of the box solution, but a common project approach supported with templates can accelerate the process of going from a broad range of possible answers to the tailored

solution that is right for the specific global organisation under development.

6 Implementing S&OP Within Global Businesses

“The establishment (or enhancement) of the S&OP Model and its detailed layers requires many challenges to be met by the design and implementation team”

In delivering the programme any Global S&OP implementation has to address 6 major challenges:

- **Engaging and educating** stakeholders across both demand and supply, on the what, the why, the how and the who.
- **Gaining alignment** to a ‘one number’ plan for all functions within the business.
- **Delivering a S&OP Model** and detailed design with clear accountabilities by process activity and decision forums.
- **Aligning business objectives** both at a programme level and within the process when live.
- **Achieving a focus** on the medium- to long-term time horizon and preventing it becoming another ‘current issues’ meeting.
- Obtaining and maintaining **tangible executive sponsorship** throughout the design and implementation.

Engaging and educating stakeholders across both demand and supply, on the what, the why, the how and the who.

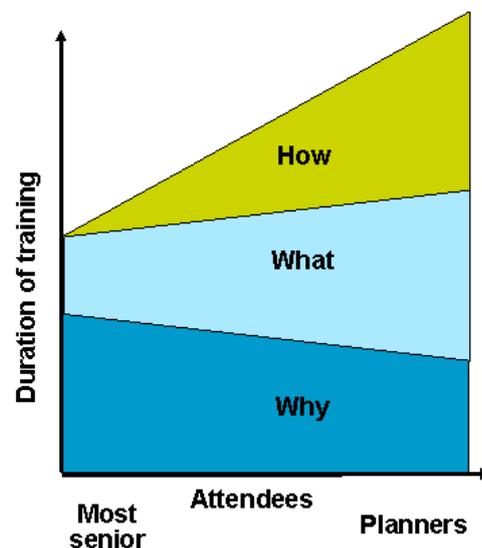
As the S&OP process spans the entire business it becomes essential to engage a very broad range of senior stakeholders.

It is therefore important that all these stakeholders are educated to understand the objectives and principles that underpin the decisions, and ultimately the business unit and business wide benefits of S&OP, to ensure they add their support to both design and implementation. This tension of benefit elsewhere must be mitigated by ensuring the S&OP activities in any single entity bring benefit to that entity in addition to the whole. So in local sales and marketing entities the sales forecast is a consolidation of the account plans and the marketing plans with the volume informing the financial forecast to create a ‘one number’ view of the future in both volume and value.

When it comes to effective engaging and education, one size does not fit all. Course structures need to reflect both business entities and the role of the attendees within the S&OP process.

Who attends an input meeting, who is in the decision forums, who will prepare the meeting packs and what technology is being used?

Figure 4: Content Balance Chart of S&OP Education



The course structures will reflect the difference in balance between explaining:

- Why S&OP is important
- What S&OP is
- How S&OP will be done

The most senior attendees only work on S&OP 2 hours per month, while planners may be with it full time.

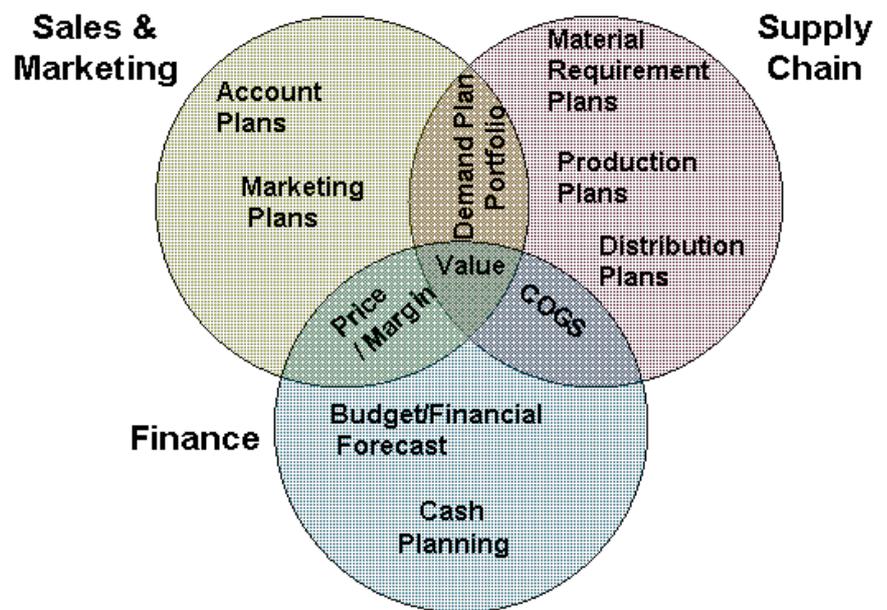
Gaining alignment to a ‘one number’ plan for all functions.

The majority of today’s global companies are conversant with the ‘one number’ forecast. However, it has scarcely been universally adopted by all business units. Finance, commercial and supply organisations choose instead to use their own figures in isolation as best fits their particular business need. The weaknesses of such an approach frequently result in costly errors impacting the bottom line.

To truly drive holistic business value, all plans must be aligned. For example, if the sales plan is not recognised in cash revenue and profit and does not match the financial plan and targets, last-minute sales and marketing activities will be required to plug the gap. If this was not planned by supply chain and they cannot therefore deliver, it is likely to lead to a vicious circle of failure and additional cost. Alternatively, if all

plans are continually aligned, all parties will understand the deviations and risks and can jointly and proactively manage the the plan.

Figure 5: 'One Number' Connects Sales, Supply and Finance



The horizons targeted within joint planning must cover a significant enough duration to allow the correct decisions to be made. Typically this requires a 24 month horizon to allow consideration of, for example, advertising and promotion (A&P), a change to brand strategy, product innovation/renovation or installing new production capacity. This should be extended if seasonality is high and supply lead times are long. An obvious example is Christmas confectionary, when special SKUs are re-worked to seasonal multi-packs with fixed end date and constrained supply.

Delivering an S&OP Model and detailed design with clear accountabilities by process activity and decision forums.

In the complex global structures of major companies, multiple geographical layers often exist in demand and supply that do not necessarily correlate with one another. This frequently makes identification of the true decision makers difficult. It is therefore crucial to understand who has the authority for the

different decisions that need to be made across both the demand and supply sides of the organisation.

Authority maps will help establish what S&OP meetings are required within the new design, who the required attendees are and what information has to be presented to enable the decisions to be made. An example of misaligned responsibility is the ownership of the demand signal. Too often the supply chain team creates and owns the demand signal as a foundation of their supply plans. But these individuals tend not to be responsible for actually delivering the sales so it is apparent that this is not the correct home. Ultimately, the figures must be owned by the sales and marketing organisations in both the end market and/or the regions.

Aligning business objectives both at a programme level and within the process when live.

By our own human nature, we tend to look after ourselves. If we are rewarded for looking after our own patch that is exactly what we will tend to do. If a country general manager's key performance indicators (KPIs) and bonus are linked to the profitability and volume within his market, he will do everything in his power to deliver against those objectives regardless of the impact on other parts of the business. The same applies to the production director who may be primarily interested in 'cost per case' and 'asset utilisation'. In this scenario, he will take more commercial risks and incur additional cost to produce higher volume if the products were produced at another site.

Effective S&OP solutions have to align to KPIs that drive the best result for the corporation. An example would be operations that are tasked to customer service as a primary measure with a stock parameter, rather than 'cost per case' or overall equipment effectiveness (OEE). The dynamic nature of business means that the KPI suite must be regularly reviewed to maintain alignment as business priorities evolve.

Achieving a focus on the medium to long term time horizon and preventing it becoming another 'current issues' meeting.

Objective decision making can only occur when all relevant information is readily available, for example:

- What is the profitability of the promotion versus the cost of producing it?
- What is the total cost of holding a stock as primary inventory or sending it to the end market?

The difficulty in most global organisations is sifting the key information from the masses of data within the business. Effective S&OP endeavours to support decision making by aggregating this data into S&OP families and focusing conversation on the big picture in mid to long term future time horizons.

Even in a very large organisation, using aggregated family data you must allow for multiple layer roll-up with simple tools to support overviews and effective S&OP decision making. The key with either simple or complex system solutions is to ensure that the information is shared openly and that entities share one set of data and have faith in its reliability regardless of the source.

Both sales and operational teams can find it difficult to break out of under promising and over delivering. Sales keeps the number low and then sells more, increasing turnover and profit; such behaviour is often rewarded. In a similar way production hides the real capacity so they can turn around emergency orders and save the day. A good S&OP process will recognise this behaviour and use KPIs to check both the forecast and the conversion potential of the plants.

Obtaining and maintaining tangible executive sponsorship throughout the design and implementation.

Given the challenges described above, it is apparent that global programmes will fail without a global sponsor. S&OP reaches into every sales location and every owned or contracted production and storage location, to create the big picture of the forward journey of the organisation. To achieve penetration into all of these corners requires an informed and active sponsor. This sponsor must be someone who is prepared to do more than attend governance board meetings. She/he must be active in keeping S&OP on the executive agenda. The journey from programme inception to achieving a fully global

set of demand data can be long (up to 2 years). During this time a good sponsor continues their support by understanding that benefits will be incremental and not achieved in an instant.

Case Study: Bringing the Right Information to Key Decision Makers

A global drinks business formed through several years of mergers and acquisitions was surprised when unanticipated demand from the BRIC (Brazil, Russia, India and China) economies resulted in significant supply issues causing poor customer service and increased costs. A root-cause analysis found that the old S&OP processes were no longer fit for purpose within the new organisation.

Capgemini worked with the business through a number of distinct project phases:

- Conceptual design – aligning stakeholders to the S&OP Model.
- Detailed design – expanding the model into process activities, assigning which activities were supported by what technology, defining the roles that undertook activities, defining KPIs and designing the meeting packs. Developing a range of education material to take the design out into the business.
- Pilot phase – testing the design in the live business, refining the process, technology and people elements of the design.
- Implementation – supporting the client’s team as they develop competence as S&OP practitioners and became self-sustaining.

Capgemini’s sector knowledge and the use of ‘S&OP in a box’ accelerated the joint team’s work to complete the whole design within 12 weeks. Our extensive experience ensures we close rapidly to appropriate solutions without ‘force fitting’.

Our approach builds commitment from the first day as we work in a joint team to deliver key workshops, engagement events, conference room pilots, communication material and Executive Steering Groups.

Rapid delivery of the design and the pilot built momentum within the client’s senior executives to support and champion S&OP. This was critical to maintain progress through the longest phase of the global roll-out. Our approach leveraged those who were converted to ‘sell’ to their peers in future waves of implementation, creating truly effective bottom up – top down engagement.

The new global process brought the right information to the fingertips of the key decision makers, helped break down the old functional silos and ensured that the decisions made optimised value to the entire business. Early successes were created when country-level Sales and Marketing entities started to break out of a ‘this quarter’ mindset and worked proactively to close gaps over several months rather than last-minute ‘buying of volume’.

Capgemini’s Global Supply Chain Practice has extensive experience in S&OP, including drinks, oil, retail, steel, automotive, high fashion, pharmaceuticals, etc. Our capability is global; we believe our diversity of cultures, languages and knowledge is key to our many global successes in the delivery of global S&OP solutions.

7 Benefits of S&OP for Global Businesses

“Having a working bridge from the aspirations of strategy to the reality of orders, shipments, schedules, batches and receipts”

For organisations that are great at S&OP, it is so deeply embedded in the way they do things, they find it hard to articulate the benefits. Benefits are clearer when a comparison is made between organisations that have S&OP and ones that do not.

The following diagram gives a generic view of the areas of difference, with organisations with formal Global S&OP regimes showing enhanced performance in virtually every one of the areas mentioned.

The most tangible difference is stock turn/stock days; when comparison is made of the month-end figures (as distinct from any year-end manoeuvres) best-in-class FMCG businesses would typically be around 25 to 30 days of stock cover. Those that have weak S&OP processes and expect the unexpected compensate for lack of information with inventory and have stock days of around 60 days.

Sadly, for those with high stock days the stock is too often the wrong stock and on time in full (OTIF) levels remain low (often less than 90%). This brings with it the challenge for sales of defending the accusation of being a bad supplier. This in turn can create a chain reaction of ‘buying business’ and pushing more un-forecast volume into the system. Businesses with strong S&OP processes can expect ‘best supplier’ awards. For those supplying supermarkets, the category leadership and the ability to have real integrated planning between customer and supplier is a realistic goal that also brings greater forecast accuracy and more supply chain certainty. This virtuous spiral should then bring the benefits of increased sales and a greater market share.

Other benefits that stem from the resulting forecast accuracy come from the avoidance of ‘rush’. This has a positive impact on the premium costs associated with expediting. No more air

freighting of product that could have gone by container ship, no more unplanned extra shifts on the packaging lines and no more out of contract procurement at prices above expectation.

Creating good Global S&OP processes is not wholly about the avoidance of uncertainty. Global supply chains can never be made immune from impacts beyond the organisation's boundary, but good Global S&OP recognises the imperfections and regularly re-optimises the plan across the entire supply chain.

Fundamentally, powerful Global S&OP processes will:

- Obtain the strongest demand signal through validation across all the commercial layers.
- Utilise and optimise the full network of factories for the production requirements.
- Utilise all available stock (both primary and secondary) to optimise product and protect service.
- Take the decisions that maximise value to the overall business.
- Keep everyone informed of pinch points, demand sensitivities, allocations, costs, strategy and what is needed to win.

8 Conclusion

The famous 3- or 5-step S&OP Model is at the core of improvements, but it MUST be adapted to suit the specific requirements of the global organisation. In summary:

- S&OP is widely proven to deliver benefits for local and vertically integrated organisations.
- The world is changing and the tight vertical integration between sales and supply is giving way to regional or global centres of excellence servicing local sales organisations.
- S&OP in this global world needs to be different; you can't just transplant the old model.
- Tangible and vocal executive sponsorship, at the most senior level, is the 'ticket to the game'.

In the end, modern Global S&OP Models are essential to give today's businesses both the cash release and competitive edge needed to succeed in today's hugely challenging environment.

Glossary

Term	Definition
APS	Advanced Planning and Scheduling.
Balance sheet	Statement of assets and liabilities in the company's annual report.
BRIC	Brazil, Russia, India and China – economies with large rates of growth.
Business	Either a corporation or a substantial part that effectively has its own financial report with the corporate statement.
Capacity	The capability of manufacturing to produce.
Capex	Capital expenditure – usually discussed in the context of supply chain assets from warehouse and factories down to items on exiting packing lines.
Cash flow statement	Statutory requirement in the annual account to illustrate the flow of funds into and out of the organisation.
Corporation	The whole of the company – the level at which they report to shareholders.
ERP	Enterprise Requirement Planning.
Headroom	The difference between capacity and plan.
KPI	Key Performance Indicator.
OEE	Operational Equipment Effectiveness – a measure of production performance.
P&L	Profit and Loss Statement found in annual company reports.
ROI	Return on investment.
S&OP	Sales and Operations Planning.
S&OP family	A collection of products with similar characteristics of manufacturer or sales.
Sandbagging	Holding back information – as one might try to hold back a river with sandbags.
Volume	Used in S&OP to mean the quantity of products, typical units of measure are tonnes, kilogram, litres, barrels, standard cases.

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