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Evolution of Sales & Operations Planning - From Production Planning to Integrated Decision Making

By Andy Coldrick, Dick Ling & Chris Turner

StrataBridge

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Executive Summary

This report traces the evolution of Sales & Operations Planning (S&OP) from its inception in the late 1980's, where the primary objective was a *medium to long-term stable production plan*, to the 21st century, where several successful businesses are using it as a *dynamic business performance management* process tracking their progress against strategic direction.

The foundational benefits of improved customer service and lower working capital are still important, but today more advanced companies have built on a robust operational foundation and now use the latest view from S&OP to generate the quarterly forecast for corporate headquarters. These businesses no longer have annual budgeting as a separate exercise.

The report traces some learnings to be gained from the evolution of Sales & Operations Planning if these powerful benefits are to be realised in a wider context:

I. The process should not be led by supply. At the very least supply chain and finance should jointly lead the process. Direction of the process must come from sales & marketing. Ideally senior business management should champion the process, but in large multinational companies this is not always possible. Senior management do not normally 'buy the process'; they 'buy the results'.

II. Volume and value must be integrated in the medium to long-term view. Many businesses have separate processes for volume and financial forecasts.

III. Obsession with extrapolation of detailed forecasts is unhealthy and will 'turn off' business management. 'Roughly right not precisely wrong' is the recommended approach. There must be an understanding of different ways of reducing and coping with uncertainty.

IV. New activities must be integrated into demand / supply discussions from the outset.

V. 'Drowning in data, but starved of knowledge' are very important watchwords. The key to success is to get a shared understanding of what the numbers in the latest view mean, rather than just debating the numbers. Achieving this insight requires a focus on assumption changes, risks and opportunities.

VI. The process must clearly 'join up' functions. There must be a recognition that different views add value, give a richer understanding of trends and where the business is going. Cross functional corrective action must be identified since flawless execution in *all* functions is demanded.

VII. Globalisation and regionalisation raise greater challenges to integration and reconciling different views. A major reason for an upsurge in interest in S&OP is that many multi national businesses are wrestling with separate short-term plans, different medium to long-term views in regional optimisation, leading to confusion and poor execution in countries. Category and country views are often looked at in disconnected processes.

VIII. S&OP as the umbrella for operational excellence is a flawed premise. If operational excellence is your driving discipline then this is appropriate. However many fast moving consumer goods, pharmaceutical and hi tech companies are often consumer led and / or customer driven and have difficulty with the tenet of a 'single set of numbers', because their rationale is high risk, innovation and uncertainty. These businesses need a process which copes with these issues. Scenario planning, ranges, assumption documentation are main agenda items, and the ability to cope with ambiguity.

IX. Successful implementation is achieved by setting an aggressive schedule, focusing on fast results (in six months), and a commitment to 'learn by doing'. The focus is more often than not on 'joining things up' rather than inventing them from scratch. Beware of prescription and 'one size fits all'. S&OP has to be tailored to your business needs. The dimensions of *values* and *behaviours*, *processes* and *resources* must be understood. Our experience clearly shows that behaviour change is a major issue to address in ensuring your integrated decision making process delivers sustainable results.

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Introduction

Sales & Operations Planning has been used extensively since its creation in the late 1980's. The process evolved during the 1990's and some companies have gained tangible business benefits in improved customer service and reduced inventories, and have used the process to facilitate growth and sustained profitability. Other organisations are struggling with supply chain planning collecting data for a monthly meeting, in which sales, marketing and finance are less than enthusiastic attendees.

This report, first in a series, traces the evolution of Sales & Operations Planning (S&OP), suggests reasons why some companies have maximised the benefits while others have just become stuck in old paradigms. Our intent is that, by understanding the evolution, we provide you a context and frame of reference to allow you to identify where you are today and gain some insights in how to improve or change what you have. Evolution takes too long and does not guarantee success. Achievement of fast sustainable benefits is through a proactive 'transition' plan, identifying those activities and functions that need change prior to 'joining-up' through an integrated decision making process. For those who are just about to start an implementation, or re-implementation, we suggest taking the learning from the 1990's and insist on business leadership from the start and avoid the pain a supply driven process brings.

The second report in the series, *Integrated Decision Making - The Choices*[1], gives further insights into these distinctions, to aid the decision about what you want from your decision making process and support you in making the right choice.

About the Authors

Sales & Operations Planning has been used for the last fifteen years or so and during that time has evolved. Dick Ling was the originator of the process back in 1987. He realised that a forward looking planning process was essential to make MRP II work in a single manufacturing plant. From 1993 Dick and Andy Coldrick developed the process to integrate New Product, Volume and Financial Planning and answer some of the challenges raised by globalisation and regionalisation in large multi national companies. Chris Turner joined the effort in the mid-90's, expanding the view beyond 'product' and manufacturing sectors and expanding the application of 'new' to the broader definition of 'New Activities'. Throughout this period the process has developed into a means of business integration and is now seen as a powerful integrated decision making process along with an integrated scorecard to accomplish the updating of strategies. In 2000 Andy, Chris, Dick with others, founded StrataBridge. This was to answer a specific need in the market place to help businesses develop S&OP to be used as the bridge between strategic direction and operational management. The intellectual property rights belong to the authors who are founder members of StrataBridge Ltd.

Frame of Reference

Today we see Sales & Operations Planning as a process for integrated decision making. There are choices about how this decision making process is implemented and used, these distinctions are expanded further in the second report in this series – *Integrated Decision Making - The Choices*[1]. Ultimately the process enables a business to accomplish the monitoring and updating of its strategies using the monthly operating plan as a robust foundation.

However, through its evolution, it has taken different forms in different applications (See 'What's in a name?'), and in many cases fallen short of its full potential.

It is a forward looking process with a minimum horizon of 18 months or 6 quarters, integrating and aligning strategic and tactical views and decisions and directing operational planning and execution (figure 1). It is not a short term scheduling tool with only a 4-6 month horizon.

There are two key points in figure 1. Firstly, S&OP as the integrated decision making process has to be the driver of tactical and operational planning and execution, with the financial view from S&OP credibly supporting the business plan. Secondly, the planning horizon must be a minimum of 18 months to ensure that decisions are made about 'year end' in the context of the following year. A simple way of visualising this is to see operational planning as the short term 'day-to-day' flawless execution. Tactical planning is about delivering 'this year's budget', and strategic planning is delivering 'future years' performance'. S&OP, a monthly process, looking both inwardly and outwardly enables changes in assumptions to be evaluated, used to monitor progress forward and update strategies when needed.

What's in a name?

What started out as 'Sales & Operations Planning' has taken many different forms, now being referred to by a multitude of names. These include: *Integrated Business Planning, Integrated Business Management, Integrated Performance Management, Rolling Business Planning, and Regional Business Management*, to name a few. Some organisations continue to use the phrase 'S&OP', although many mean something quite different from the original process. Unfortunately for many, a change in name does not guarantee a corresponding change in the underlying process, behaviours and results.

Figure 1: Integration - Business Management Process

The principal focus of S&OP during the 1980's and 1990's was how to get a good operational foundation in place. This foundation provides the ability to evaluate demand and to ensure that sufficient resources are in place across the business to meet it. Changes are assessed monthly, and plans updated and communicated. The first impetus was provided by Dick Ling with the creation of S&OP, to which we now refer as 'Traditional Sales & Operations Planning'.

Traditional Sales & Operations Planning

S&OP was created in the late 1980's by Dick Ling (his book "Orchestrating Success" co-authored with Walter Goddard was published in 1988[2]). At the time Manufacturing Resource Planning (MRP II) was in vogue and S&OP started to be seen as a driver whose principal focus was to make MRPII work in a single manufacturing plant within a business.

At the time Sales & Operations Planning was a *breakthrough*, because in many businesses annual business planning, sales planning and production planning were completely separate exercises. There were 'one-way hand offs' and massive disconnects; finance as the neutral function were often used as the referee of disputes between sales, marketing and manufacturing. Multiple sets of numbers existed and all improvements were functional and therefore disconnected. For example, an inventory reduction project to improve cash flow would be initiated by finance, and supported by manufacturing. Sales and marketing would make no contribution until customer service suffered. The inventory reduction project would then be followed by a 'Customer First' project led by sales, until inventory again, or the cost of complexity, became the focal point.

The premise of traditional S&OP is that customer service and inventory are 'resultants'. To effectively manage them we must manage the drivers, i.e demand and supply.

Sales and Operations Planning was a *breakthrough* in that it forced sales, marketing and manufacturing to agree once a month to 'one set of numbers' for sales, production and inventory.

S&OP – The Manufacturing View of the World

Early versions of S&OP were driven by manufacturing to make Material Planning and Manufacturing Planning more stable. These manufacturing origins show through in many applications of 'S&OP' and are characterised in some telling ways, including:

- The timetable set around 'Supply Meetings' – representatives from sales, marketing and commercial having to attend a set of 'S&OP Meetings' established around manufacturing locations and planning routine, rather than category/range reviews, or customer and market driven events and calendars
- The view that 'Sales and Marketing' are one homogenous organisation with 'a view' – missing the very fact that sales and marketing have different drivers and objectives and potentially conflicting views that need to be understood and reconciled
- The obsession with a 'single set of numbers' – based on the naive belief that it is possible to create 'one number' that will represent all views of the business, and that all uncertainty can be eliminated to the degree that you can plan and control the future that rigidly through the entire planning horizon.

Within the month there would be a sales planning meeting chaired by the sales director agreeing the volumes at family level predicted for sale for the next 12-18 months, called 'demand planning'. The manufacturing director would then run a meeting called 'supply planning' to respond, using resource capacity management, with the corresponding production and inventory plans. This would be followed by a pre- S&OP meeting where sales, marketing and manufacturing agreed with each other for one day in the month, to prepare for a management meeting with the G.M. /M.D. and other board members in an S&OP meeting. Following the S&OP meeting, or just before, some reconciliation of volumes with financials would be done as a check against the budget

Is this revolutionary? No! It is merely 'organised common sense'. The process is shown (figure 2).

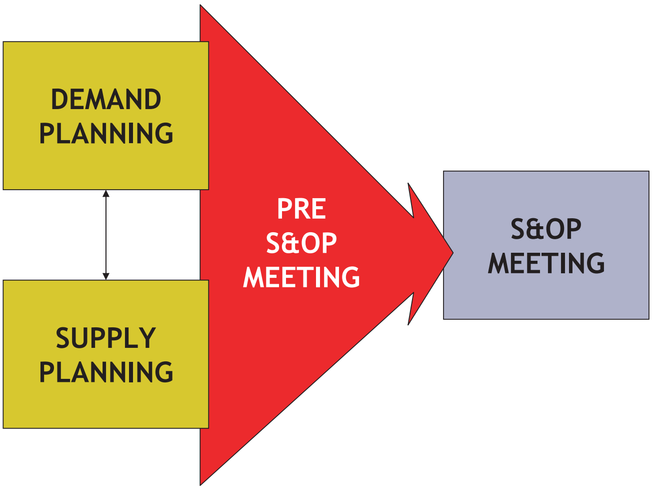


Figure 2: Traditional Sales & Operations Planning

The focus on managing demand and supply as drivers (seeing inventory as a resultant) gave many businesses improved customer service and lower inventories. These operational benefits often stemmed from an attention to detail and the 'S&OP Spreadsheet' provided the data that helped to spot the results of independently managed events.

Many early applications of this focused on 'manufacturing views' of product families, rather than external views of the business e.g. channel or brand. An example of the output from traditional S&OP meetings for an assembled product is shown (figure 3).

Sales & Operations Plan
Product Family - Dining Tables

	PAST MONTHS			FUTURE MONTHS									
SALES	-3	-2	-1	1	2	3	4	5	6	7	8	9	ANN
PLANNED	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	14400
PREVIOUS	1211	1197	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	14408
ACT/PROJ	1211	1197	1257	1225	1250	1250	1250	1250	1250	1250	1250	1250	14890
DIFF	11	-3	57	25	50	50	50	50	50	50	50	50	490
CUM DIFF	11	8	65										
PRODUCTION													
PLANNED	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	14400
PREVIOUS	1195	1202	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	14397
ACT/PROJ	1195	1202	1197	1200	1200	1400	1250	1250	1250	1250	1250	1250	14894
DIFF	-5	2	-3	0	0	200	50	50	50	50	50	50	494
CUM DIFF	-5	-3	-6										
INVENTORY													
PLANNED	600	600	600	600	600	600	600	600	600	600	600	600	600
PREVIOUS	584	589	589	589	589	589	589	589	589	589	589	589	589
ACT/PROJ	584	589	529	504	454	604	604	604	604	604	604	604	604
DIFF	-16	-11	-71	-96	-146	4	4	4	4	4	4	4	4
COVER (WKS)	2.06	2.07	1.83	1.75	1.56	2.08	2.08	2.08	2.08	2.08	2.08	2.08	2.08

Figure 3: Output from a Traditional S&OP

During the late 1980's and early 1990's we saw many people struggling because they saw basic demand and supply planning as an end in itself. The 'attention to detail' and desire for stability that drove early benefits was pursued to extreme lengths, creating a new set of problems.

Traditional S&OP Challenged

Following the initial euphoria of 'getting control', enthusiasm waned and traditional S&OP started to be seen as a logistics project, merely demand and supply volume planning focused on 'year end' only, with too much detail (sku / pack level / line item forecasts going out for twelve months). Demand planners, often reporting into the supply organisation, owned the numbers rather than sales and marketing management, and the process was not designed to cope with the impact of increased innovation and customer responsiveness that many organisations were driving.

A 'single set of numbers' was a supply chain dream; sales, marketing and finance were more interested in a 'range', doing their own financial scenario planning in separate activities from supply.

Without robust financial linking, volume forecasting became a lower

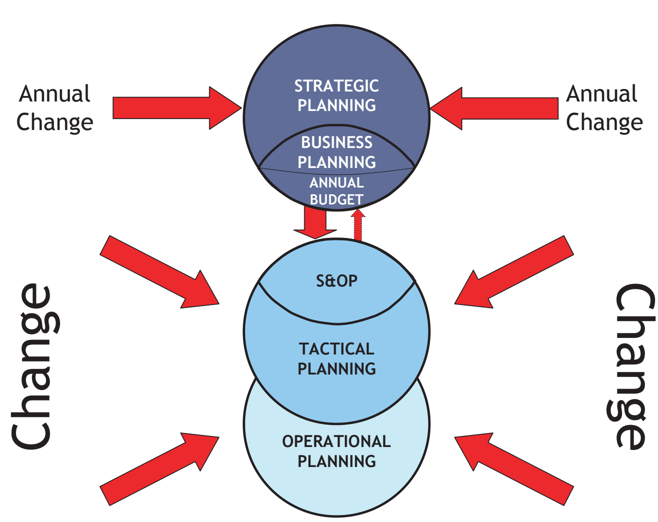


Figure 4: Traditional S&OP Output vs Business Plan

priority than financial forecasting. Sales, marketing and general management were measured on financial results, and manufacturing and supply chain were measured on operational targets based on volume predictions, where new activities were not well forecast (figure 4).

The two vertical arrows illustrate the point: whatever the output is from S&OP (thin upward arrow), the 'weight' carried by the budget number (thick downward arrow) takes precedence, overriding any decisions made in S&OP.

Because the operational number for the supply chain was lower in priority than the financial number, and was very often different, the S&OP meeting became the forum where supply people grumbled about forecast accuracy against their 'single set of numbers'- the impossible dream.

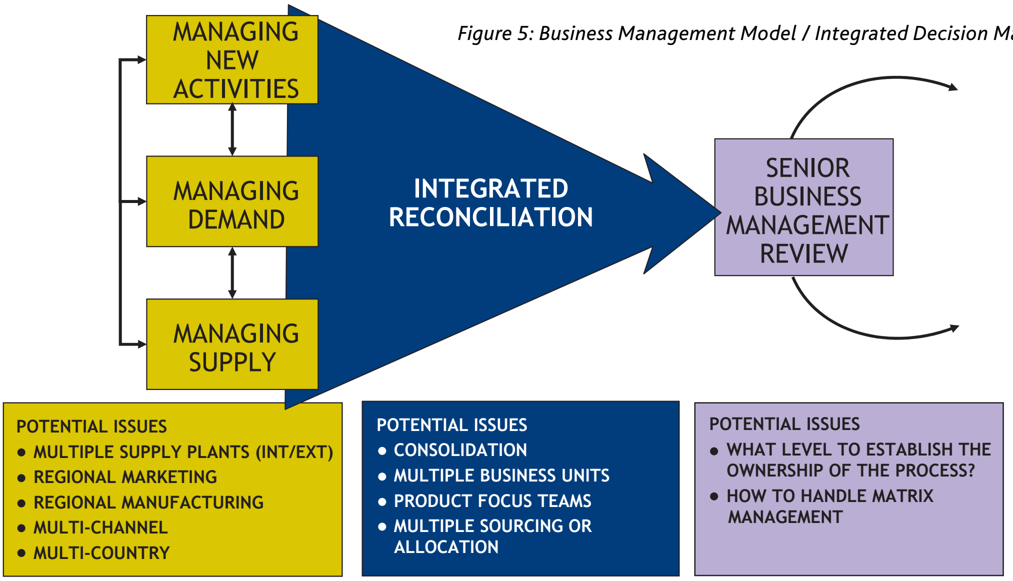
The early 1990's saw an additional complication, the advent of the 'single market' in Europe. This heralded the regional business concept, where the business unit or category, strategic marketing, finance and supply chain were to be managed regionally. Sales, tactical marketing and financial management of the legal entity were to be managed in the countries. This added complexity and ambiguity to the traditional S&OP process. Multiple sales and marketing units interfacing with multiple sourcing units raise questions. How many meetings do you have? Do you have a meeting in a sourcing unit or in the market or both? Should you have *meetings* or should you focus on an *integrated process*?

We know some people wedded to the traditional S&OP concept who religiously hold S&OP meetings at their European plants, and ensure that sales and marketing attend monthly meetings at all the plants which supply their products. Imagine a sales director/manager who sells product supplied from 5 different plants in Europe! This poor soul wastes five days a month of precious time with customers by being trapped in some outdated S&OP concept.

The Five Step Process

With this background, and some early work on Europeanisation with several multinational businesses, Dick Ling and Andy Coldrick developed a more robust framework in 1993 which we call the Five Step Process. Since then the process continued to evolve into a model that we use to frame the key steps of integrated business management / integrated decision making (figure 5).

Figure 5: Business Management Model / Integrated Decision Making



The relevance and significance of the five steps and their interdependencies have been tested over the last decade, adapted to meet the pressures of different business strategies, and handle the needs of different industry sectors within and beyond manufacturing, including retail and services. A number of key themes have emerged.

The development of **integrated reconciliation** has highlighted the importance of financial involvement and leadership early in the process and has changed the agenda from a volume discussion to a business one. There are three issues in integrated reconciliation:

I. What is the impact of integrating new activities, demand and supply on the *business* (not just supply chain)? What are the emerging issues and gaps? What are the opportunities and risks? You must have volume and value information and assumption changes to answer these questions.

II. What scenarios are important to make better decisions on the future?

III. What decisions should we take, and which ones should be escalated to the senior management review?

The step is not a meeting as such, but an iterative process run by a senior cross functional team in the business. They highlight key issues and decisions required for the senior management team. This is fundamentally different from the pre-S&OP meeting in traditional S&OP, where the main focus was on volume and its impact on resources. Understanding integrated reconciliation has directed a broadening of the scope of new activities, demand and supply management.

New activities has developed significantly over the last ten years. As with traditional S&OP in the '80's the notion of integrating new product planning with supply and demand planning of the existing portfolio was something of a breakthrough, despite being common sense. With increasing focus on innovation and the use of 'stage and gate' decision processes and 'innovation funnel management', some companies took the opportunity to integrate these approaches that were emerging and developing in parallel to S&OP. Early attempts at integration often focused on the commercialisation / introduction stage of the funnel. The aims were to ensure preparation for launch, phase-in / phase-out, and that cannibalisation effects were understood, motivated by helping production not to be 'caught-out' when introducing a new product.

Progressive organisations, often those driving very aggressive innovation agendas, realised that connecting only the 'back-end' of the process missed opportunities to manage the innovation funnel in an integrated way.

The scope also broadened in another direction by those who saw the need to manage *new activities* beyond the narrower definition of *product*. Although the list is different in every application, a common theme in opening up this step beyond just product is the identification of those activities that:

I. Have a significant impact on demand and / or supply (volume and value) and any other support resources.

II. Need to be managed across the business in a 'joined-up' way, with decisions driven through a structured review process.

III. Require visibility and management across a portfolio of activities, leading to better prioritisation, resource allocation and decisions.

This redefinition from *new product* to *new activities* opened the scope outside of a 'business as usual' and in doing so opened up the appeal to a much broader audience in the business.

This changing context had a dramatic effect on the view and understanding of the demand and supply steps of the process.

Demand Management including the accountability for forecasting has developed significantly. In the early years of S&OP, a lot of effort went into agreeing a volume forecast emphasising a 'single set of numbers'. Demand forecasting was very often part of the supply organisation, and forecast accuracy was seen as the principal measure rather than customer service. Some organisations even went as far as saying, "You did not forecast this, therefore we cannot make it!", obviously alienating sales and marketing. The thinking that sales and marketing form one homogeneous organisation with 'a single view' of the numbers misses the fact that these two functions have different drivers and objectives.

By the mid 1990's, people realised the importance of sales and marketing inclusion in forecasting. At the same time, "Customer, Customer, Customer!" was fashionable, and sales became the focal point for forecasting and the 'one size fits all' solution, ignoring the importance of marketing input.

In many 'customer led' businesses sales leadership is appropriate, but in 'consumer / end user led' organisations marketing is the principal driver of medium to long term demand prediction. This distinction is covered in more depth later in this report in the section on Value Proposition.

Giving sales single accountability for the forecast led to some organisations spending too much time analysing detailed history trying to get the forecast accurate, instead of being with the customers gaining knowledge about future trends.

Against this background of trying to get the forecast accurate there was a growing realisation that there is a different inherent uncertainty in different markets, channels and sectors, and with different products and customers. After years of complaining about forecast accuracy and trying to 'crank the handle faster' on the same old detailed forecasting machine, companies began to wake up to forecasting for what it is – the technical name for 'guessing'! By no means does this remove the responsibility for forecasting, but it did lead to new and innovative ways of making a more educated guess. In agreeing a forecast an important piece of knowledge is to understand the range (high and low), and providing numbers without supporting documented assumptions is unhelpful. A summary example is shown later in this article in figures 12 and 13.

Today we understand that a robust demand plan over a minimum of 18 months is only possible by reconciling cross functional views; volume and value must be integrated. Finance and logistics / supply chain are committed to this output. In general sales input by major customer(with input from account managers) and channel is important in the short term, typically the first 4 – 6 months. Marketing provide information beyond 4 months based on market share, goals and brand / product health and marketing investment. Strategic marketing and research and development in many cases, have a role beyond 12 months particularly in new activities. These are guidelines only to illustrate the collaborative approach and will vary depending on the business. Responsibility of finance and supply chain / logistics is ensuring that the volume and financial forecast are reconciled and aligned. The demand plan is at an aggregate level and the aggregate families chosen, understood and used by all functions.

Traditional S&OP tended to use manufacturing families; in the more demand driven environments today, we see the aggregate being *brand* or *brand / technology*.

Supply Management has also broadened in its scope. Traditionally it used to apply to just manufacturing but it is now extended from manufacturing to a wider view of 'sourcing', which includes other resources including external ones. In multi national organisations it has extended to supply chain optimisation, making the best sourcing decisions from scenario planning. This has challenged the planning capability in many organisations in that traditionally many planners have been used to management and execution in detail at single supply points; supply chain optimisation is a wider role calling for the ability to test different scenarios and recommend and make the right choices.

The widening scope of new activities, demand and supply has put even greater pressure on a more 'joined-up' approach as businesses have become bigger and more complex, Sales & Operations Planning has become a bigger challenge. We have noticed that without an integrated process organisations attempt to solve complexity by being more functional.

Highlighting the importance of new activities and its impact on demand and supply, and forcing volume and financial integration through the integrated reconciliation process we facilitate a business management process based on a robust operational view (volume and value) from across the organisation.

This integration, combined with the increased future horizon, emphasises the connection between the steps as the most important element in 'joined- up' decision making. It also stresses the need for this to be seen as an iterative process, normally run on a monthly cycle so that decisions taken during the process and confirmed in the senior management review in month are fully communicated into the organisation and executed through the process in month 2 and beyond (figure 6). The arrows from the senior business management review into the next cycle show the importance of making, committing to, and communicating decisions and taking action.

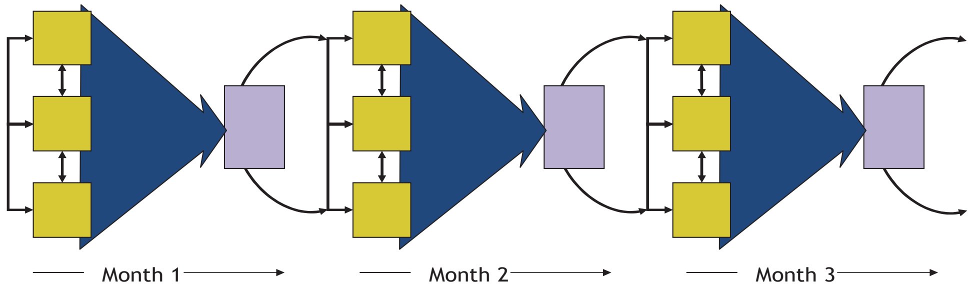


Figure 6: Iterative Business Management

These changes to the process had a major impact on the leadership of the implementation, and its use in the organisation.

Traditional S&OP was normally led from the supply side of the organisation. The importance of new activity integration and early volume/financial reconciliation will not be recognised if supply people lead the implementation. The result will be a process which has all the hallmarks of figure 4.

Early engagement of finance is crucial and strategic influencing of sales and marketing is vital from the beginning to ensure success.

The paradox is that supply chain people are normally the first to recognise a need for S&OP, but they should not be seen as the principal leaders.

Managing Paradox

Used properly, the S&OP process provides a means of managing the choices and trade-offs across the business, and taking decisions to keep on track with strategic direction, Inevitably, these decisions will need to cut through the conflict caused by opposing pressures of seemingly contradictory views. The implementation, as well as the use, of S&OP is riddled with paradoxical choices.

Reconciling these paradoxes is a key to unlock the real potential of Joined-up Decision Making. To illustrate, here are a few of the 'repeat offenders':

The 'Leadership' paradox – in many companies, the 'supply' organisation initiate the S&OP process as a reaction/response to the pain caused by changing forecasts and the apparent disregard from the 'demand' side of the business for stability, efficiency and reduced complexity. By biasing the S&OP 'agenda' with a supply perspective, typically those functions that need to be actively involved and driving the process are often alienated. These situations pose a challenge: those who have initiated the process need to relinquish their leadership of it if they are to realise the total business benefits.

The 'Horizon' paradox – there is a constant tension between the need to take decisions to protect long-term value and the necessity to hit the numbers now! There are compelling arguments for each of these objectives and the only sustainable proposition is to do BOTH! Some have made the error of defining S&OP with an horizon of 3-18 months; the intention was good in attempting to focus management attention beyond the immediate short term. Unfortunately it led to disconnected processes – a short term Sales and Operations *Scheduling* process (0-3 months) with weekly or daily review, and a separate S&OP process (3-18 months) reviewed monthly, and sadly no link between the two. A major benefit of S&OP is that decisions taken in the medium to long term will decrease the number of 'surprises' in the short term. For example, a demand peak in months 9-11 must be solved by outsourcing; S&OP would make that decision proactively knowing ahead of time the consequences of that decision so that when months 9-11 become months 2-4 we already know how to manage this peak. If S&OP is disconnected, planners in short term scheduling will behave reactively when they see the demand peak in month 3, make decisions and count the cost afterwards.

Sales & Operations Planning done properly would show 0-18 months at an aggregate level over the whole horizon providing an aggregate view of the short term in the context of the medium to long term. Quarterly and 'year end' targets are important, but decisions must be taken in the wider perspective of 'next year' etc. *A 'year end' focus is pragmatic and appropriate; a 'year end' obsession is unhealthy for future sustainability*. This is why a minimum of 18 months visibility is recommended.

The 'Consistency' paradox – 'One person's consistency is another's bureaucracy'. A mix of personal preferences, functional bias, national and company cultures all add-up to a very specific reaction to a 'prescribed' way of doing things. Ultimately, we would want to strike the *appropriate balance* between allowing 'space' for people to be creative in addressing issues and opportunities, taking decisions close to 'the action', while providing a framework to direct that creative energy and allow the interdependent elements of the organisation to effectively mesh together. The paradox is buried in the phrase '*appropriate balance*'. Why is it in some environments a 'timetable' is taken as an 'absolute deadline' while in others it's merely a 'suggestion' or even an 'imposition'? Why do some organisations see a consistent 'template/format' as a necessary way to allow integration and aggregation of information, while others see it as a request or challenge for innovative ideas on how to lay-out things differently?

In this report we have touched-on some other potential dilemmas that will need to be reconciled. We work to develop the behaviours and capabilities to cope with, and thrive on, this ambiguity and confront the choices - allowing you to break through these paradoxes and establish solutions that 'get both' and in doing so add more value!

The changes made from the traditional S&OP model (figure 2) to the five step process (figure 5) have led many businesses to a robust operational foundation (figure 7).

The two arrows between S&OP and the business plan are of equal strength, which means that we have a robust and credible latest view of the business which may be different from the budget, but the two must be reconciled. Each is credible, and we must answer questions on what we need to do differently to meet the business plan. Building the ongoing reconciliation process is the first step towards an integrated business planning process (figure 7).

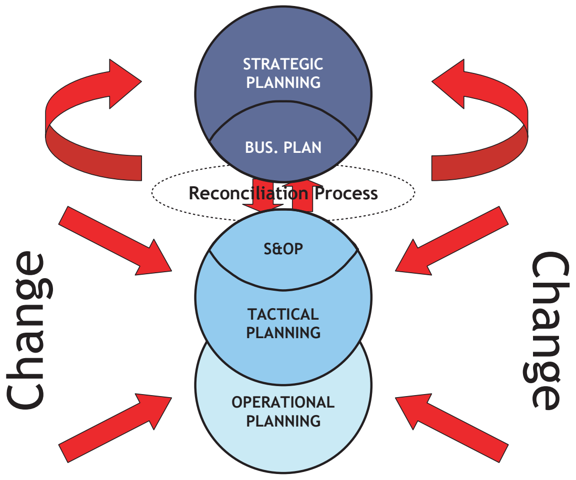


Figure 7: Reconciling a robust Operational Plan with Business Plan

The next step is updating of strategies from the reconciliation of the business and operating plans, which is the goal expressed in figure 1. The ultimate test is whether the senior team have the commitment and confidence in the process to dismantle the incumbent budgeting process.

Globalisation and Regionalisation

The Five Step Process robustly answers questions raised in complex global, regional businesses. The approach outlined below, has been used successfully in multi-national businesses with different organisation structures and in different sectors.

A major reason for an upsurge in interest in S&OP today is that regionalisation and globalisation has fragmented the value chain, and many see a process such as S&OP as the 'glue' to integrate the value chain. To illustrate the point we take a European example. This is because our knowledge of regionalisation started in Europe with the advent of the 'single market'. In 2003 we do see trends towards regionalisation reflected in Asia/Pacific and Latin America, as organisations recognise they have unexploited opportunities for improved co-operation, coordination and improved productivity.

Before regionalisation in Europe, many multinationals operated with largely independent country businesses where the M.D. was responsible for the entire value chain (figure 8). Some were using a form of local S&OP and the M.D. would chair a monthly meeting to agree the latest view.

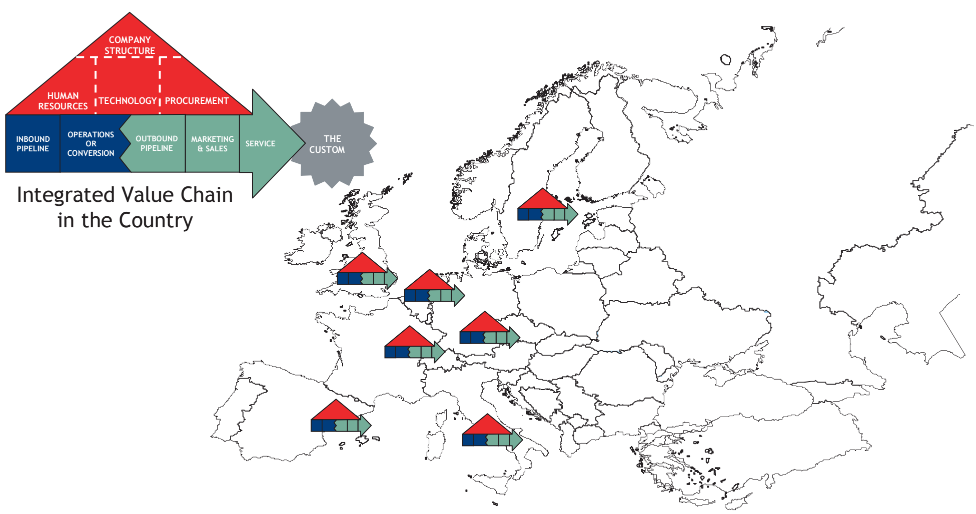


Figure 8: Country businesses before regionalisation 1980-90's

Regionalisation presents a new challenge. Some businesses have a European organisation where Country M.D.'s are responsible for the commercial side only (marketing, sales and finance); supply is regional with several supply points responsible for meeting demand in multiple countries (figure 9). In this example, the business headquarters is in Brussels (represented by a red triangle), marketing and sales organisations are in multiple countries (represented by a fractured green arrow), and regional supply points are in the UK, Spain, Italy and Poland (represented by a blue fractured arrow).

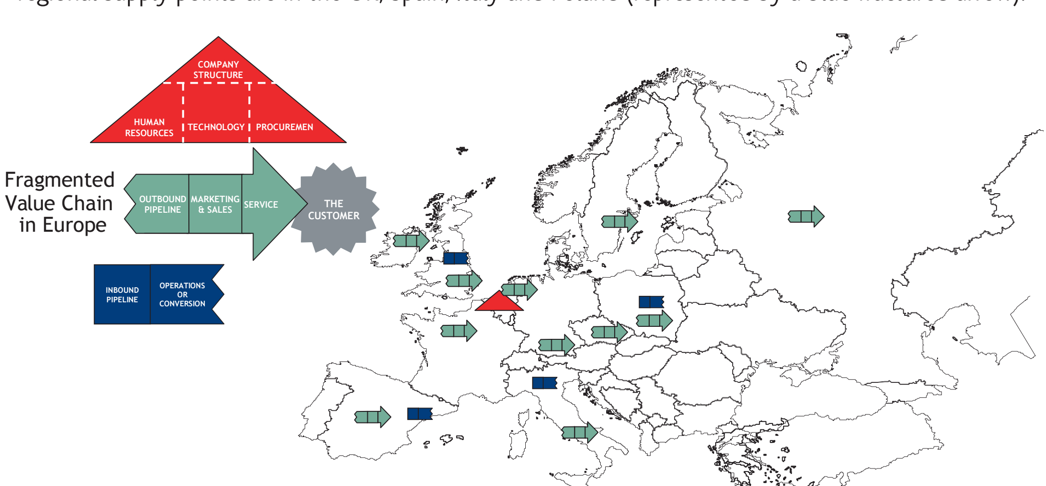


Figure 9: Regional scenario

The emphasis of S&OP in the regional scenario is to 'join-up' the elements of the value chain into one that integrates regionally. The challenge is to determine where each of the activities represented by the five steps (new activities, demand, supply, integrated reconciliation and senior management review) should take place. Our work with regional and global multi-nationals coming to terms with the new business models and structures through the 1990's, triggered us to develop a means of navigating through the choices, understanding where decision making rights and accountabilities lie. The example (Figure 10) outlines the approach in a 'geographic' model (e.g. Global, Regional and Country), however the levels on the Y axis can be replaced with various aspects of organisational design (e.g. Business Unit, Category, Channel, Country Cluster, etc). The X axis is used as a guide to show the timing of activities during the month.

Taking into account the business drivers, organisational responsibilities in both today's environment and the future, the result of applying our approach is an architecture of how your version of the Five Steps of the integrated decision making process fits your organisation and where your strategy is taking you. "One size fits all" is completely inappropriate in this environment. For example, in multi- national food companies many activities and decisions are still taken locally with some regional direction and co-ordination. In many fast moving consumer goods companies new activity launches and demand management are normally handled in the countries, but new activity direction is managed regionally or globally; supply is managed regionally, reconciliation processes are in the countries and region, as are the senior management reviews. In pharmaceutical and chemical companies more decisions are managed and taken globally. These are generalisations and each business has to examine its drivers using a decision making framework (figure 11).

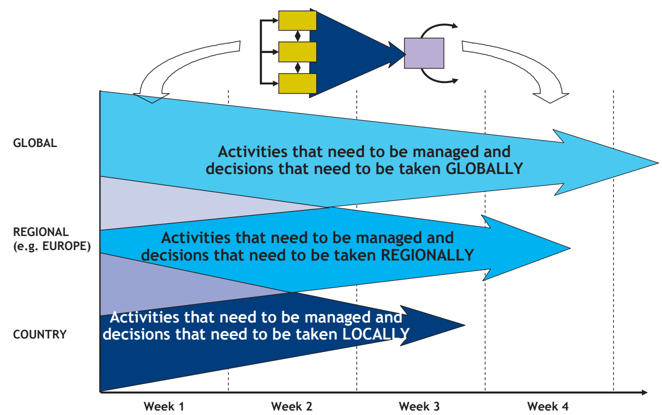


Figure 10: Simple Integrated Approach - Aligning Decision Making with Your Organisational Shape

Developing the Decision-Making Framework - A Regional Household Goods Example

DRIVER	COUNTRY	REGION	GLOBAL
MARKETING - STRATEGIC		Regional Centres of Excellence	Global Category Direction
MARKETING - TACTICAL			
R & D - NEW PRODUCTS			
PRODUCT LINE EXTENSION		Driven Regionally	Requires Global Support/Resource
CUSTOMERS	Most 'operating' at Country Level	Some Developing Regional Organisation	
SALES		Price/Terms 'Harmonisation' Drive	
PRODUCT AVAILABILITY - FGI		Some 'CMI'	
SUPPLY - INTERNAL			
SUPPLY - EXTERNAL (Contractors/Toll Mfg)			
COMPETITORS	Private Label/ Local Brands		Majors
FINANCIALS	P&L Accountability	Regional 'Aggregation'	
STRATEGIC DIRECTION	Alignment	Cascade	Direction

Predominant Emphasis
'Supporting' Emphasis
Emerging Trends

Figure 11. Developing the Decision Making Framework – A Regional Household Goods Example

This matrix originally developed by Dick and Andy in 1993 (a catalyst for this work was *Total Global Strategy by George S Yip*[3]) has been used extensively and has evolved during the last ten years. Through our work with numerous multi-national corporations across sectors, we have developed an extensive menu of the drivers that need to be considered. A simplified example of the approach (figure 11) illustrates some of the issues that could be relevant in a household goods company managed regionally, with sales and tactical marketing in countries.

Each business must have a shared cross-functional understanding of not only of where the business is today but where it is likely to be in the coming years, which is why it is important to understand emerging trends. We have helped many businesses use this tool as a means to understand organisational roles, to get process clarity, to understand and correct gaps in 'joined-up' communication and behaviour prior to achieving a successful integration. Assigning accountability, understanding why decisions are made at different levels and embedding the escalation process is crucial for success in any organisation.

There are two key findings worth emphasising. Firstly, the major need is to 'join-up' the five steps in the process as opposed to focusing on excellence in the steps, e.g. full integration of all demand by understanding the impact of new activities on base demand, integrating new activity direction regionally with individual countries' new activity launch plans and their execution. This puts an emphasis on the two-way arrows (figure 5) connecting new activities, demand and supply and integrated reconciliation, and major effort in reconciling country and regional views of the market.

Secondly, regionalisation calls for a much more formal documentation of assumptions, changes to assumptions and evaluation of risks and opportunities. Before regionalisation local S&OP meetings were convened in a country with an agenda focusing on an agreed set of numbers. Assumptions were known about and discussed informally. Changes to those assumptions were discussed around the senior managers 'coffee machine', made easier because the senior team were located in one office facility. One impact of regionalisation means that there is no single senior management location where assumptions can be informally shared. In the early days of regional S&OP, demand was aggregated from multiple countries into one European demand plan with a focus on numbers and detail with no supporting qualitative information. When the forecast changed in the country, month by month, the aggregate demand number changed with little or no possibility of understanding why at the regional level. During the mid to late 90's, common IT platforms with wall to wall ERP systems were seen as the answer but while systems are excellent at aggregating and disaggregating numbers, they are not designed to aggregate and disaggregate assumptions.

We designed a typical management information spread- sheet in 1997 showing the importance of integrating volumes and financials with underpinning qualitative information on assumptions, changes to assumptions and decision support. This format has been proven as a powerful means of communication and ensuring consistent understanding of the 'story behind the numbers'. Enhanced by today's powerful information technology, this allows succinct management information to be available in a multi-national environment for fast, effective decision making (figure 12).

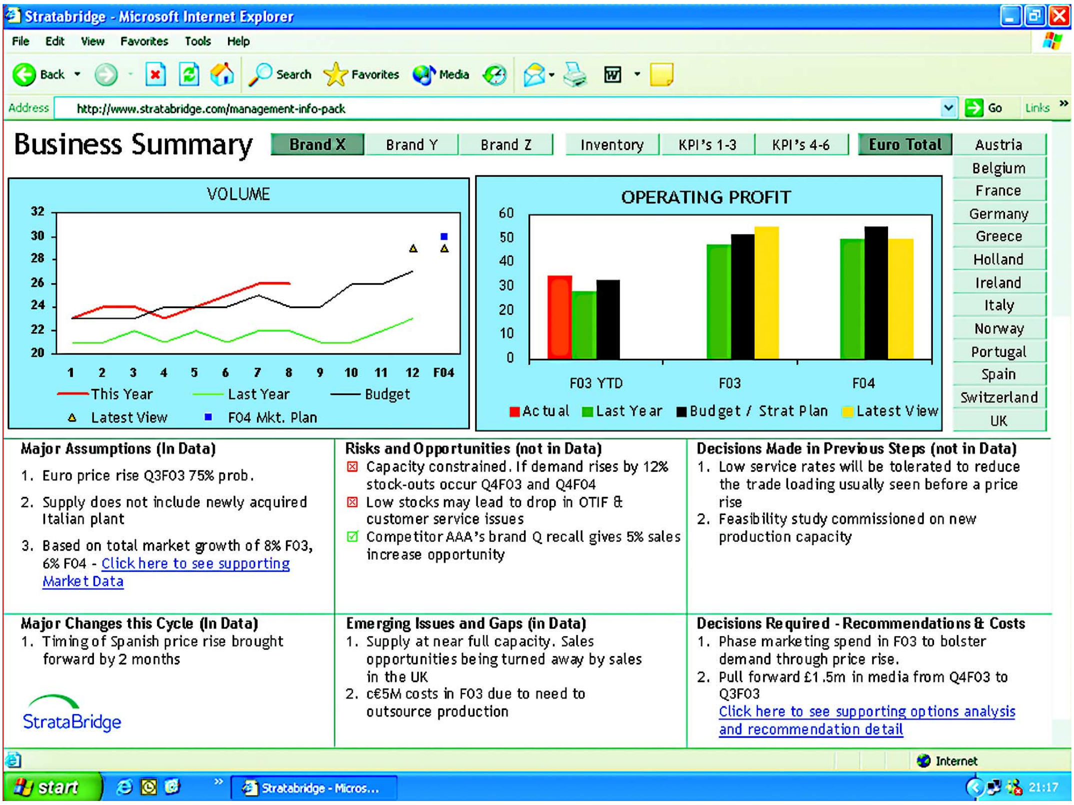


Figure 12: Brand X Business Summary

Management Information vs. Data

Any implementation (global, regional, or local) puts pressure on the need for management information (figure 12) and not transactional detail. Our experience in developing a business management process has led to some interesting findings that aggregating data alone does not necessarily give good management information, sometimes called "Drowning in data, but but starved of knowledge".

Our emphasis is on 'roughly right rather than precisely wrong' to help businesses avoid the trap of projecting forward two years worth of detail at the stock keeping unit level. The detailed approach commonly found in statistical forecasting software leads to an answer which looks about right but cannot be understood. Thousands of minor changes within the 'Black Box' are not visible at a higher level. Management have no idea why the latest view has changed, or whether the latest changes to plans have been incorporated. Instead they are told the system says, "This is the answer, you have to believe it!".

- What major assumptions is this forecast based on?
- What changes to assumptions have been built in to this forecast since last cycle?
- What are the issues and gaps I should know about?
- What are the risks and opportunities around this latest view?
- What decisions have already been taken but are not yet reflected in this view?
- What decisions should we be taking now?

The statistical forecast is always a useful input to the S&OP process, but is not as valuable as understanding changes to assumptions. For example, the assumption on low volume growth in the budget to support increased margin, may now have changed to a big volume push to hit a 'year end' target at the expense of margin. Making a high level adjustment on the 'roughly right' principle will be easier to do and more accurate for the medium to long term than changing the forecast at customer or SKU detail level.

If businesses pour enough resource (sales people, demand managers and systems) into planning at detailed level over a medium term to long term horizon, they can get an answer, albeit an answer which will not be understandable to management because of the lack of high level assumptions. The main danger, apart from diverting the sales force from selling, is in creating an illusion of accuracy. The huge effort and cost involved in creating the forecast means people will tend to believe in it, whatever external changes may be occurring.

A further problem with detailed planning over the medium to long term is that no businesses have enough resource to do scenario planning and optimisation at SKU/customer level. Simplification by looking at the overall context (e.g. region, brand, channel, technology type etc.) of the data that reflect major drivers of change in the market place and align the application of 'roughly right' assumptions rather than 'precisely wrong' tinkering is fundamental before trying to model even a few options.

Finally any strategy that calls for fewer and faster innovations, and shortened product life cycles will mean that more items will fall into the planning horizon even though they have not been invented yet, let alone have an assigned product code!

The level of detail involved in planning should change as the time horizon changes (figure 13). In the short term businesses need accurate transactional data on supply, sales, stocks etc. and will be focusing resource on collaboration with customers and the deployment of advanced supply chain optimisation tools. In the medium to long term the 'roughly right, not precisely wrong' level of detail is required. Aggregating data, using brand families, average revenues by technology type etc. with a focus on the development of scenarios using business planning / simulation tools becomes important. This can only be achieved if finance have a strong leadership role in the implementation.

Uncertainty vs Single Set of Numbers.

Although there has always been a recognition that forecasts are either wrong or lucky, the early S&OP movement followed a premise that with immense pressure and focus the quest for a 'single set of numbers' could remove uncertainty. In the early years that pressure and focus often created some benefit by putting a basic rigour in place in sales and marketing and raising the profile of the need for improved forecast accuracy for operations. But for many, the operational ownership and quest for a 'single set of numbers' continued to dominate the conversation and became a mindless pursuit of accuracy beyond what was intrinsic in the markets operated in.

Finance, meanwhile, had their own systems and realised that robust projections about the future relied on understanding *scenarios*. S&OP demands for a 'single set of numbers' were perceived by many finance people to be naive.

In the context of integrated decision making, the role of managing and communicating assumptions played a huge part in enhancing the understanding and reconciliation of different views of the future. Supporting the numbers with the underlying assumptions, risks and opportunities brings a richer dialogue about future projections and helps to focus on the greatest causes of uncertainty. Understanding the range (high / low) opportunities, risks, and uncertainties is crucial to the discussion before agreeing the 'latest view' (figure 13).

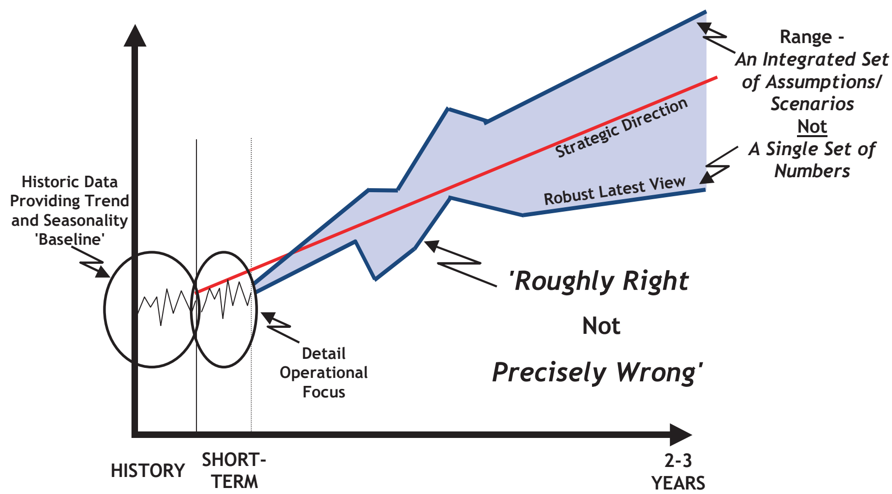


Figure 13: Recognising inherent uncertainty and reflecting this in your decision making process

In recent years, increased innovation, broader offerings to customers, reduced product lifecycles have made the old 'one-size-fits-all' approach to crunching the numbers simply inadequate. Progressive organisations have switched the focus from numbers only, to balance numbers with the underlying assumptions to reduce the inherent uncertainty to a minimum and better manage risk.

However, uncertainty cannot be removed completely. There is still a range and that range needs to be understood in the context of the decisions that will be taken on that information. In environments with extreme uncertainties (for example, companies on the 'bleeding-edge' of technology breakthrough, movement into new markets and channels, pharmaceutical companies in the early stages of development), there is a need to go beyond understanding the 'range' around a given projection and may be the need to run alternative scenarios based on unique sets of different assumptions.

This level of sophistication requires a different level of input from across the business, and an understanding of how and when to use the output from different scenarios, but the acceptance of a range of uncertainty and the probable need for scenario planning typifies maturity in the decision making process.

Value Proposition

The value proposition, an important consequence of strategic intent, defines the way a business offers, creates and delivers value to its customers and consumers / end users. Any business decision making process must enhance that delivery of value.

In the mid 1990's we saw many businesses implementing 'supply-led' Sales & Operations Planning ('one-size-fits-all') even though their value propositions were entirely different from each other e.g. The value focus of commodity chemicals is not the same as fast moving consumer goods, or pharmaceutical companies.

A principal driver for the formation of StrataBridge in June 2000 was to help businesses link their operational improvement and decision making to strategic direction. A strategic consequence such as value focus, must drive the shape of the decision making process.

Some of our earlier development in this area was triggered by the work done by Treacy and Wiersema[4]. Their research indicated that any business clearly needs to understand its value focus and using their language, *Operational Excellence, Customer Intimacy* and *Product Leadership* are the choices.

There are three main points. Firstly, if you pursue all three choices simultaneously with the same emphasis *you chase universal excellence and end up world class at nothing*.

Secondly, following one of the choices exclusively and ignoring the need for minimum threshold levels of performance in the other two leads to disappointment.

Thirdly, the important factor is to understand the 'balance of emphasis' given to the three, and recognise that this balance will change to cope with increasing competition and tougher business conditions.

To illustrate this 'balance of emphasis', consider the three 'radar charts' describing businesses that have chosen different propositions (Figures 14x, y and x). These stress the focal point of the organisations attention (*Consumer/End-User, Customer* and *Operational Effectiveness*) and highlight some of the fundamental differences that come with a different balance of emphasis. In all three cases operational effectiveness is a mandatory discipline: minimum standards of operational effectiveness are compulsory for any business. Each organisation must understand the threshold levels of performance set by customers, competition and other influences on the marketplace. More importantly, each organisation must tailor its unique offering, and the additional value its individual differentiators can bring.

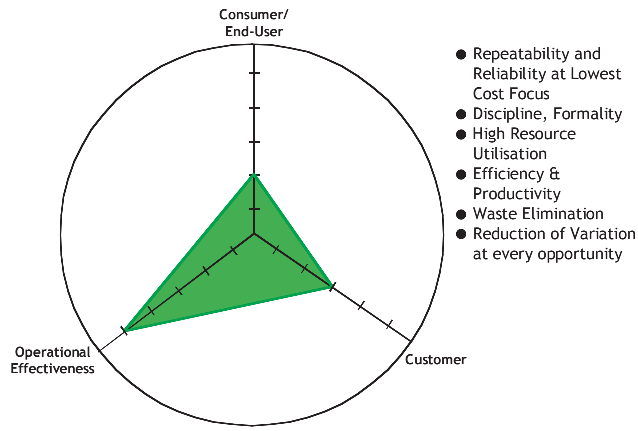


Figure 14X. Balance of Emphasis - Business X, "Operational Excellence Led"

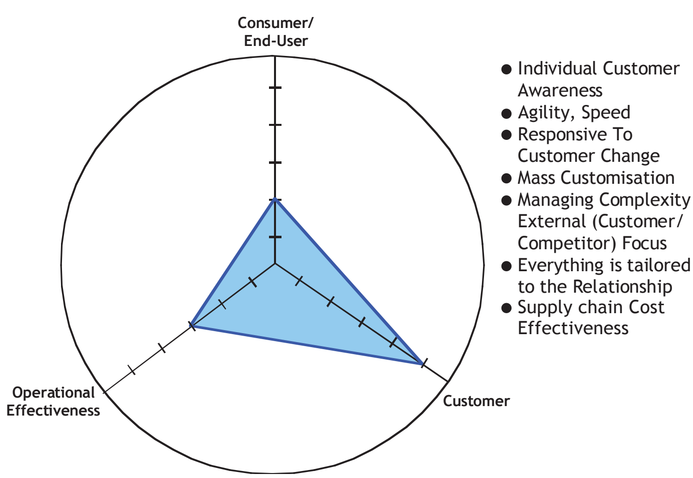
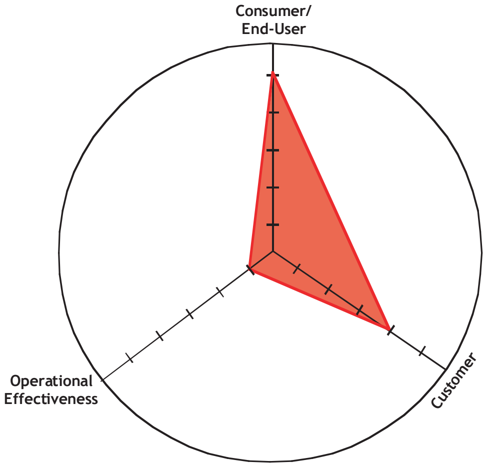


Figure 14Y. Balance of Emphasis - Business Y, "Customer Driven"

Business X is 'Operational Excellence led' and clearly focused on operational effectiveness, with support on the consumer and customer axes. An example is a commodity chemicals business where products are good but do not have a technical edge over competitors, and customers mainly buy on lowest price. This business sees standards of operational effectiveness not just as mandatory but as a discipline in which to excel with cost leadership and efficiency as primary goals. Leadership in implementation would normally be finance and supply. An appropriate decision making process would be closer to traditional S&OP focusing on volume and cost implications, emphasising 'one set of numbers' for supply. The importance of forecast accuracy is based on the premise that variation kills efficiency and cannot be tolerated. Principal targets would include reliable customer service, high asset utilisation and lowest cost.

Business Y is 'Customer driven' seeing that developing customer relationships and providing a tailored service are the keys to growth and success. An example is a fast moving consumer goods company who sees itself as a follower, i.e. reliable brands but not "power" brands, maybe including "own label", and seeking to gain leverage with a strong portfolio of products and win with important customers. Implementation of a decision making process is led by sales with



- Managing Creativity
- Living With Uncertainty/ Ambiguity
- "One Step Ahead"
- Ruthless Portfolio Management
- Consumer Understanding/ Insight
- Managing New Technology/ Capital
- External (Consumer/ Competitor) Focus
- High "Innovation Churn"
- Agility, Speed
- Responsive to Market Change
- Supply chain Cost Effectiveness

Figure 14Z. Balance of Emphasis - Business Z, "Consumer Led / Customer Focused"

strong support from marketing, finance and supply chain.

The decision making process focuses on volume and revenue growth, understanding opportunities and risks – a 'range' of numbers rather than a 'single set'. Emphasis is on sales planning with extensive involvement of account managers, product line extensions and promotional activity. High levels of customer service and supply chain responsiveness are standard expectations at minimum cost. Management of cost is always important, but in this environment cost leadership is not the principal driver. Traditional 'time fence' policies and 'frozen schedules' applied across the portfolio are constraining and there is a deep understanding of the effect of demand volatility and the need for supply responsiveness. Principal targets include customer retention, revenue and profit by customer / channel.

X and Y are two examples of businesses with a ***primary*** value focus. Others have a different 'balance of emphasis', where two of the three predominate. Z is an example of a food and drinks business with a compelling brands portfolio focusing on high channel penetration with customers. The consumer axis leads, closely followed by the customer axis and we call such a business 'Consumer led / Customer focused'.

Leadership in implementation of a decision making process is normally in marketing and research & development, with strong support from sales, finance and supply chain.

Decision making focuses on volume and margin growth, understanding opportunities and risks – again a 'range' of numbers rather than a 'single set' and in certain cases scenario planning; uncertainty goes with the turf. Emphasis is strongly on strategic marketing, new activity success, pipeline fill, minimising obsolescence, and portfolio management. High levels of customer service and supply chain responsiveness are expected, although there is forecast uncertainty. Primary targets include new products as a % profit, profit by brand / segment, brand health and market share.

In pharmaceuticals and high tech businesses product life cycle impacts the value proposition. In the early stages (new product development and launch) the S&OP process will have many of the characteristics of business Z, where uncertainty goes with the turf. This may continue through the growth stage or there may be a change of emphasis towards 'customer driven' commensurate with greater market penetration. As the product stabilises and demand and supply variability are reduced, the 'balance of emphasis' switches to higher levels of operational effectiveness. As the product matures and declines, excelling in operational effectiveness becomes the driver and also raises other choices such as outsourcing or divestment; the S&OP process would then have many of the characteristics described in business X.

Getting clarity in value proposition is important before embarking on a Sales & Operations Planning implementation or a re-implementation.

We have seen different businesses embark on "one size fits all" approach using S&OP as a driver for operational excellence. This approach is appropriate for business X, and those in the latter stages of product life cycle.

However, if this approach is followed for businesses like Y and Z, or those in the early stages of product life cycle, there is no enthusiasm from marketing, sales, finance or business management in spending valuable time in a process which spends several hours in a month focused on volume and cost implications, one set of numbers for supply, and a set of measures which mainly interest supply chain and only one measure (customer service) of interest to sales, and little to offer marketing.

Implementation Choices

In the mid 1990's Dick Ling and Andy Coldrick collated extensive implementation experiences with many businesses throughout the world and published their findings in the form of a summary chart showing how people went through three phases before they achieved an integrated decision making process (figure 15).

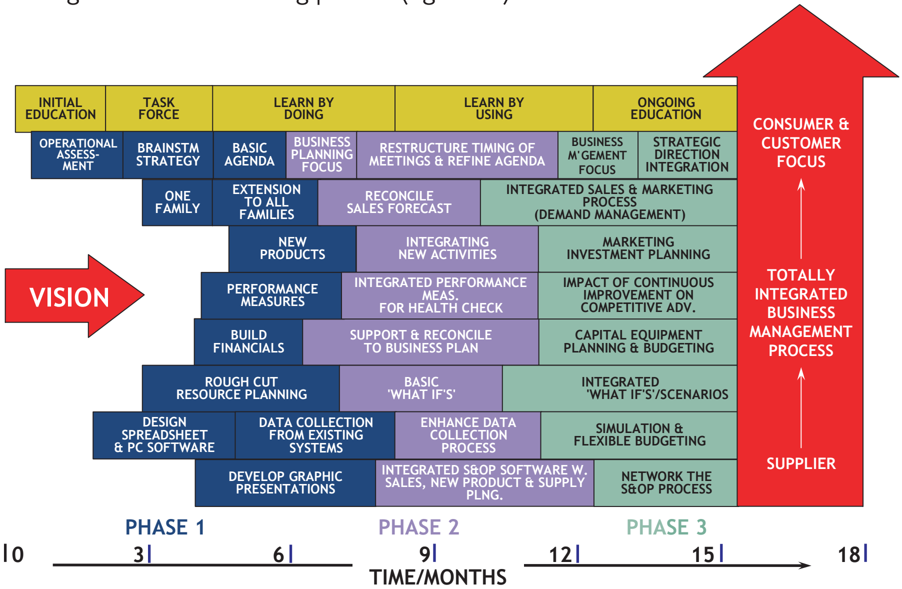


Figure 15: Evolution of Sales & Operations Planning to Business Management

The intent was to show how successful businesses evolved, (some more quickly than others), why others struggled, and why some stayed with an operational project only. The three phases shown are:

Phase 1: Operational Planning (Dark blue) which we have called traditional S&OP in this report.

Phase 2. Integrated Planning (Light blue) involving finance, then sales and marketing.

Phase 3: Business Management (green), using the process to update strategies.

Unfortunately, some have taken this chart and attempted to use it as an implementation blueprint, believing that this process evolves and takes at least 18 months before benefits are seen, rather than seeing this as a reference point to see where you are on some of the typical strands of S&OP development.

To overcome this 'prescription', we developed an implementation approach in 2000 to provide a macro structure for raising *awareness*, gaining *understanding* and accelerating through to *realisation* – FAST (typically within 6 months). This model (Figure 16) was intentionally broad – the activities defined in the 'boxes' (and there's a problem in itself, as many of these strands cannot be 'boxed-off') are open to the ideas, creativity and needs of each of our individual clients. It was also intentionally vague in prescribing the timeline - the length of the 'boxes' is dictated only by the length of the words in them – the focus is to commit to an aggressive schedule and deliver results.

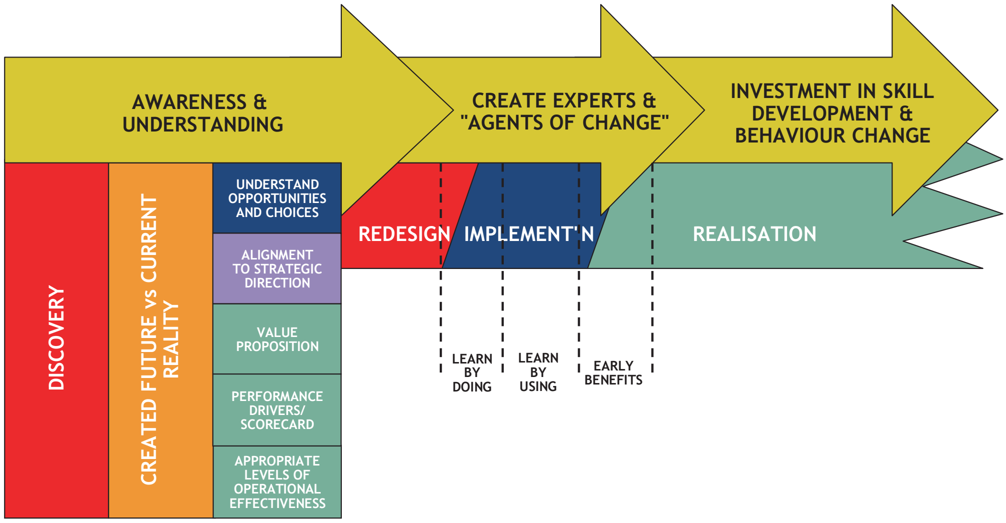


Figure 16: Implementation / 'Transition' Approach

Since the mid-late '90's, organisations have become increasingly weary of 'big projects' and the army of consultants that accompany them. Companies that survive and continue to operate in today's world quite rightly feel that they can't be doing everything wrong; in fact they are probably doing many of the 'right things'. Our recent experience, working with many successful organisations, is that the focus more often than not needs to be on 'joining things up', rather than reinventing them from scratch. For most organisations, it is a 'transition' rather than 'implementation' that is required, challenging the notion of 'prescription' even further. This recognised need for 'transition' is likely to continue and will probably accelerate for most companies. Growth, mergers, acquisitions, organisational changes are here to stay. Building the capability to adapt and keep the process alive is a far better 'implementation decision' than a neat, contained 'project', the result of which may be obsolete in a couple of years.

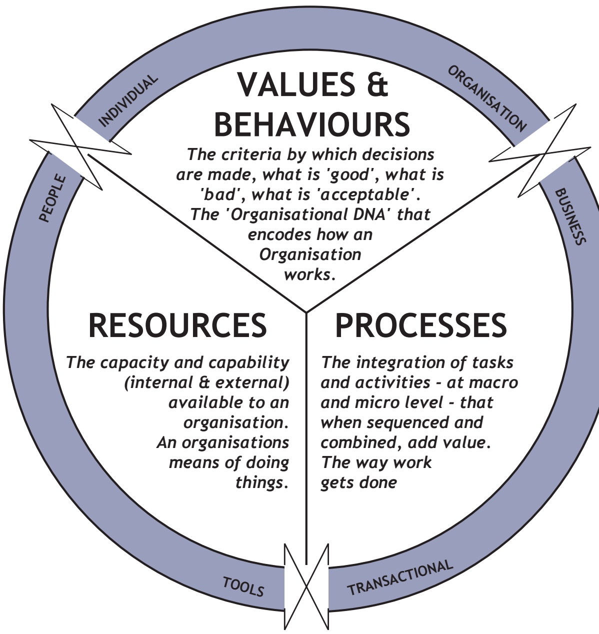


Figure 17: Dimensions Effecting Sustainability

Obviously each application is different, not only in the resulting S&OP process required, but also in how to approach the implementation/ transition. This requires a bespoke approach, not a regurgitation of a prescriptive 'best practice' approach that, by definition, has been done many times before. How does this help you if you are positioning yourself to be different from your competitors?

There is a paradox in this model (see 'Managing the Paradox' sidebar). The need to find the '*appropriate balance*' between having a structure and leaving people to 'make it up as they go along' is critical, albeit this balance is different in every organisation. The Five Step process has stood the test of time and adapted to current and emerging needs, as has our distinction of the dimensions that need to be addressed to make lasting changes and deliver sustainable results - *Values & Behaviours, Processes* and *Resources* (Figure 17).

In conclusion – your leadership role

Understanding the evolution of S&OP is of historical interest to those who are implementors currently or who have implemented. More valuable than the history is for you to identify the strengths and weaknesses of your current process, and identify improvements you could make to fully realise the potential benefits.

The second report in this series, *Integrated Decision Making – The Choices*[1] gives further insights into the distinctions to help you decide on the most valuable way forward.

The lesson is that *'evolution' takes too long and does not guarantee success*. *Achievement of fast sustainable benefits is through a proactive 'transition' plan by identifying those activities and functions that need change prior to 'joining-up'*.

---

[1] Integrated Decision Making - The Choices, Andy Coldrick, Dick Ling and Chris Turner (September 2003).

[2] Orchestrating Success: Improve Control of the Business with Sales & Operations Planning, Richard C Ling and Walter E Goddard (Wiley June 1992)

[3] Total Global Strategy: Managing for Worldwide Competitive Advantage, George S Yip (US Imports & PHIPEs; ISBN March 1995).

[4] The Discipline of Market Leaders: Choose your Customers, Narrow your Focus, Dominate your Market, Michael Treacy and Fred Wiersema (Perseus Publishing January 1995).

For further general reading and information please see various editions of our regularly published though piece, "Knowledge" available from StrataBridge or our website on **www.stratabridge.com/news.asp**

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