



Breathing Life into S&OP

Introduction

Why do so many executives in companies get so frustrated that their supply and demand is not in balance? Their experience is that products are not available, resulting in lost sales when inventory is too high and manufacturing plants complain:

- Demand is not stable
- Forecasts are a waste of time
- People in sales don't know what they are doing

Often in this scenario new investment, which increases capacity, is done on a 'just too late basis' reinforcing the vicious circle.

Joint research between LCP Consulting and Cranfield University focussed on senior managers, within companies that had implemented a sales and operations planning process (S&OP), and what they thought with the benefit of hindsight. This enabled the research team to develop an S&OP maturity tool to facilitate discussions about capability and specification prior to implementation rather than rely on hindsight and rework. This has since been successfully used to initiate discussion prior to design and implementation projects or an S&OP refresh after a previous implementation has at least partially failed.

S&OP After 20 Years

Numerous implementation projects have enabled an integrated sales and operations process to become a tool in companies competitive armoury, but begs the question why, after 20 or more years, are major companies still wrestling with implementation.

Project experience suggests several areas:

1. The shape of organisations is not constant either due to acquisitions and divestment activity or major internal reorganisation. Sometimes processes that have worked well in the past lose their sponsorship in new organisations, or processes and cultures get blended in a way which is not effective.
2. S&OP processes initiated within national companies, serving national markets, are often not effective in handling the additional complexity associated with multiple markets and/or plants as companies expand beyond their original markets.
3. There is a tendency in some companies to focus on technology and systems when S&OP is about the people being able to share insight and make informed decisions. This often results in a 'crank the handle'

approach devoid of the necessary critique of the output. People can feel that they do not really have a voice in S&OP.

4. Often S&OP meetings revolve around validating the data, or worse making plans to validate the data! Preventing discussion about future business issues based on insight enabling a proactive organisational response with execution coordinated across functional silos. Personal insight is only gained through analysis and shared through documentation prior to meetings

Although the 4 areas above, and no doubt others, are true, many implementation projects occur after a previous recent programme has at least partially failed.

Here we see two general areas relating to the failure, the first internal to the organisation and relates to things under its control:

- Lack of a clear objectives and definition
- Resource deficit, no responsible person with sufficient skills and leverage to drive implementation and maintain the process
- Inability to generate meaningful reports based on trusted data

The second aligns to things in the companies environment over which it has limited control, the planning of supply chains is continually getting more challenging:

- Increased supply chain velocity
- Greater demand volatility
- Shorter product lifecycles
- Growth of global sourcing

These all pose growing challenges to supply chain coordination, further straining integration efforts across functional silos and external suppliers or trading partners, this complexity was not adequately considered in addressing S&OP.

The joint research with Cranfield University has expanded the available sample of companies to enable a better understanding of why companies find it hard to get S&OP right. This enables a better understanding of the organisations reflections with the benefit of hindsight after S&OP has been implemented. Let's start by understanding what we mean by sales and operations planning.

What is S&OP

Sales and operations planning (S&OP) is about resolving the inevitable tensions that organisations have between those responsible for generating demand (who expect infinite flexibility) and those who are responsible for managing supply (who have to contend with physical constraints).

Although many people talk about the 'S&OP meeting' or the 'S&OP sheet' what we are talking about is a process. It typically revolves around events in a monthly calendar taking the organisation through generation of forecasts, validating demand, creating a feasible supply plan, generating insight about both supply and demand and taking executive decisions about the issues that the people operating the process have been unable to resolve. This takes face to face contact and time to achieve, and requires full senior management support so a single plan is signed up to by the business. The result should be a 'run rate' of product supply that enables supply and demand be somewhere near balanced.

The Research

The research with Cranfield University involved 25 companies across UK, France and Germany in several sectors. All 25 companies answered a questionnaire with a smaller number participating with face to face interviews. Each organisation, including many household names, highlighted the strategic nature of the information imparted so anonymity was guaranteed.

The research focused on 2 areas, the formality of the S&OP implementation and the maturity of how the process was actually operated following the model in figure 1.

- The formality characterises, how companies went about getting S&OP up and running, which was split into 2 phases:
 - Phase 1, analysis and design, working out what's wrong and what should be done
 - Phase 2, implementation ,getting the process solution up and running
- The maturity was split into phases 3 and 4:
 - Phase 3 –how the process is operating currently
 - Phase 4 - the steps being taken to maintain and improve the process.

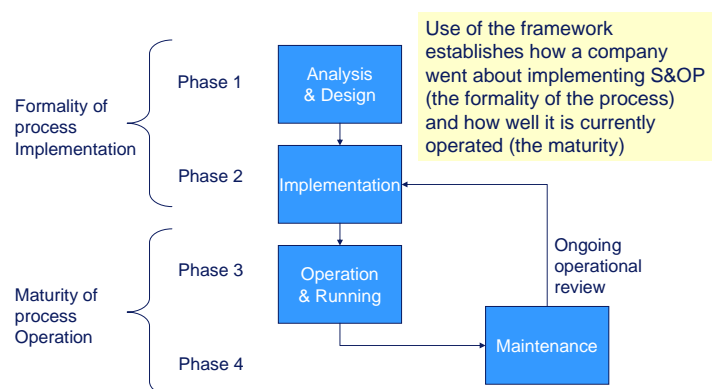


Figure 1 The Framework for S&OP Formality and Maturity

The Benefit of Hindsight

The companies indicated what issues they would like to have approached differently with the benefit of hindsight

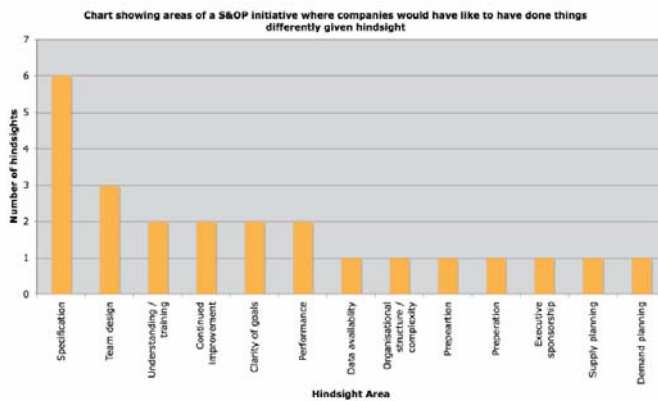


Figure 2 Areas that organisations would have approached differently with the benefit of hindsight

A quarter of the respondents said that thinking about the specification of the process up front was the main thing they would have put more emphasis on. The other major area was getting the right team together with the right level of understanding of the business and influence and respect from the business to get the process implemented effectively and in a timely manner.

Anecdotal evidence has suggested that S&OP processes get established in many organisations, and then deteriorate for some reason. The research aimed to understand this better by understanding how the 4 phases in figure 1 were influenced by various factors, this is indicated in figure 3.

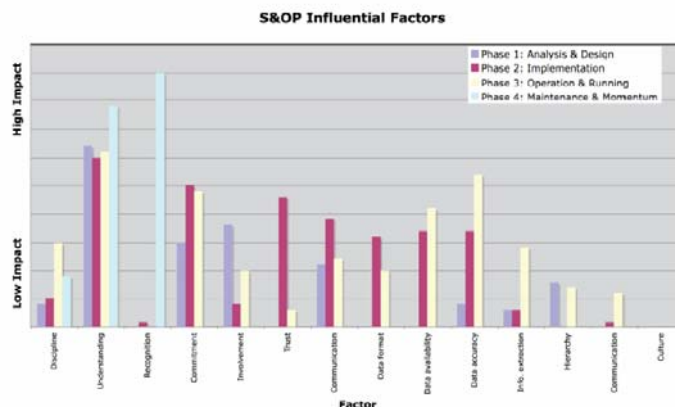


Figure 3 The Research also explored influential factors and their impact during the 4 phases of the S&OP model illustrated in figure 1

Analysis of the influential factors highlights 2 areas in particular:

1. Lack of understanding affects the process through all phases of the process
2. A lack of recognition for the people making the process work was a particular factor in maintaining the S&OP process (phase 4)

Poor understanding reduces the effectiveness from design through to process maintenance. This is partially driven through poor specification at the start of analysis and design since training should be specified from the project that initiates S&OP for the organisation. This is especially important, as lack of understanding affects all phases of the framework from design through to maintenance.

Initial training for the functional groups within the S&OP process does need refreshing periodically to keep people informed and able to keep continuous improvement going. Frequent staff rotation, promotion and turnover increases the required training emphasis since the designers of the process often do not end up running it long term. All companies recognised that that training and education of process participants was essential to ensure successful implementation, with each citing that they had organised either a 2 or 3 day training workshop:

- A 'learn by doing' approach was seen to be the most successful approach with piloting leading to a smooth transition from design to operation
- Meetings management was a frequent concern for over half the companies, with poor meetings attendance and process discipline. This was addressed through strong facilitation, strict agendas, measures of attendance and in some cases disciplinary action
- Interviews showed lack of recognition for individuals driving the process as a major reason why S&OP processes do not 'bed in'. This reinforces the questionnaire responses confirming lack of recognition from senior management contributes especially to poor maintenance. Early phases of design and implementation generate enthusiasm coupled with recognition which diminishes when the process becomes the norm. This is an indicator of poor strategic backing which is essential for success and links to concerns over measures of success for S&OP being difficult to pinpoint, with success in business being potentially attributable to a plethora of causes.

Data collection coupled with data aggregation/integration was seen as being a notable issue especially with companies that had experienced merger/demerger, with legacy systems often criticised, central databases were often used to address issues of data integration and improve access and quality of data.

Good quality data does help facilitate speed in analysis of data, there had been confusion over the accuracy of data required to enable S&OP to work. Several companies were fixated with the accuracy of data without regard to

the accuracy that they required. The data needs to be sufficiently accurate to get the appropriate insight about business direction.

Ensuring data was of a format accessible to the process participants was essential to allow common understanding. Problems here included:

- The exact definition of data lines for example the definition of sales, is it orders booked or invoices in a period does it include every category of order e.g. samples or demo stock.
- Spreadsheets were often used to circulate data, which can result in version control problems
- Poorly designed spreadsheets have lead to data being difficult to analyse without manipulating the data e.g. removing lines or manually separating out data with many recipients being tempted to make modifications, in order to get his or her preferred layout.

Distributing tables of numbers does not enable understanding to many participants with several participants developing graphical summaries of their data.

Making S&OP Implementation Happen

All companies interviewed had some compelling event which drove the adoption of S&OP, e.g. acquisition, poor financial performance or inherent inability to win contracts, difficulty to innovate in their respective market places.

All companies reflected that successful S&OP was very much attributable to a well designed specification, defining what has to be done by whom and when, this gives the foundation for the necessary process activities. No company tackled defining their practises alone. They either engaged external help or worked with experienced partners from within their parent company.

The joint research resulted in the development of a tool to assess the maturity of the S&OP process within companies based on the framework in figure 1. This is a maturity matrix with 5 statements reflecting increasing levels of process maturity across 17 aspects of the S&OP process. Several S&OP implementation projects have used this approach so that management teams understand the status of their own S&OP process engaging them and the organisation in charting a way forward.

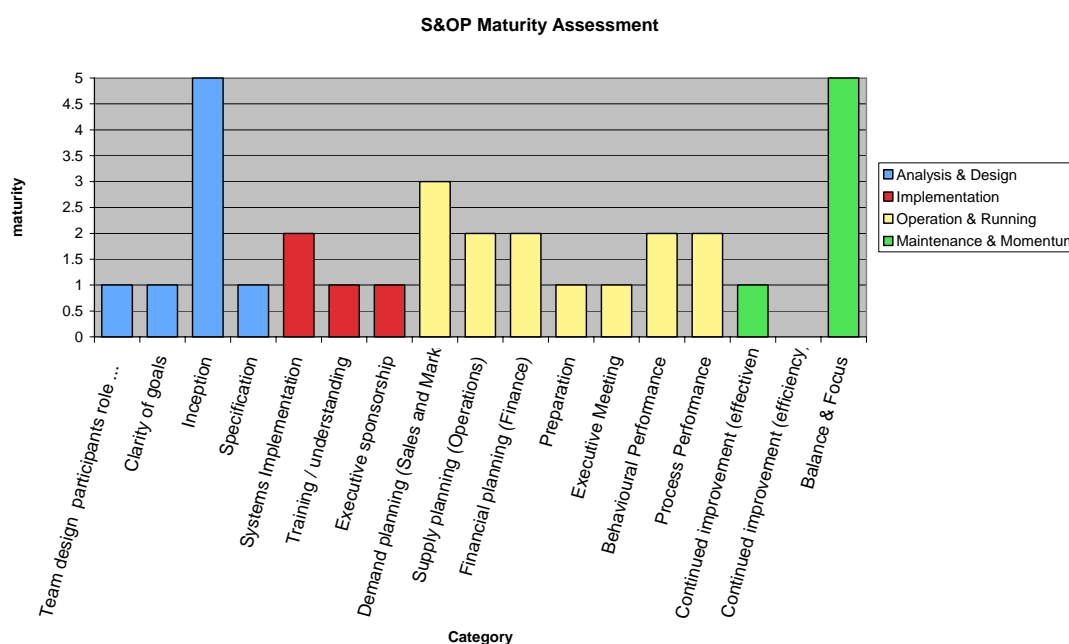


Figure 4 Example Graphical summary of company assessing its own S&OP process at the beginning of an S&OP implementation

The tool helps inform about the status of the current process elements and the areas of differences of opinion within the organisation. It was developed to help facilitate the management debate that is a prerequisite for assembling the appropriate specification for an S&OP implementation.

Conclusion

S&OP implementation is still a big issue for many companies. Hindsight from companies that have implemented S&OP emphasises that clear specification of the process prior to implementation is paramount. This needs to be coupled to the necessary resource and training to enable the implementation to proceed with people that understand what they are doing. S&OP processes need maintenance so that they remain effective and evolve. The tool developed from the research formalises S&OP discussion helping senior management groups structure a specification for S&OP within their organisation. The authors will return to the tool and its use in the next article about S&OP.

Authors Julian Mosquera and Richard Renshaw, based on joint research sponsored by LCP Consulting at Cranfield University

Richard Renshaw is a Principal Consultant with LCP Consulting having previously worked in operational roles with Honda, Lucas and Caterpillar and recently led S&OP implementations in healthcare products and hi-tec cash processing equipment. Sandra Ngeuveu and Bryn Sharp completed their theses for M.Sc. under the supervision of Andrew Johnstone lecturer at the



School of Industrial and Manufacturing Science at Cranfield University with
input from Richard Renshaw.