Sales and operations planning (S&OP) is all about balancing supply and demand and to take and execute decisions to keep this balance in line with company strategies and targets.

In theory, S&OP is really simple to implement, but due to cross-functional processes, involvement of different parts of the organisation and the need for IT support, it often turns out to be a difficult task to implement S&OP.

S&OP is about doing what is best for the company as a whole, and therefore the overall purpose of the S&OP process is to establish one overall plan.

- Sales wants to have plenty of inventory in order to keep customers happy
- Operations wants to run the production as stably and efficiently as possible
- Finance wants to reduce net working capital to increase profits

S&OP brings these different views into one balanced decision process.
The wave of new SAP Integrated Business Planning (SAP IBP) applications opens up numerous new and powerful opportunities in order to support the S&OP process. However, it is important not only to focus on the features of the system when choosing directions for a new S&OP solution. The business, people/mindset and S&OP process also need attention when applying the system. The new IBP opportunities should improve the S&OP process – not confuse it.

The 7 viewpoints presented in this article aim to concretise and address some of the functionalities provided by SAP IBP for S&OP to support a successful and impactful implementation.

1. We need a “Google Translate” in our S&OP process
2. The suicide quadrant will kill you – the system survives!
3. Data integration is a one-way highway
4. Scalability defines decisions
5. Flexibility requires structure
6. S&OP meetings are decision meetings – not discussion meetings
7. Don't go for new – go for better!
We need a “Google Translate” in our S&OP process

One common language is key to one common S&OP process. The S&OP process needs input from and evaluation by different stakeholders. Sales is normally focusing on $ and units sold per market, segment or brand. Finance is focusing on $ per business group, division or region. Operations is focusing on units or volume per hour per production site, capacity groups or production lines.

The idea of a common language in the S&OP process is strongly supported in IBP for S&OP. The possibility of creating attributes “freely” on master data makes it possible for Sales, Finance and Operations to aggregate and disaggregate data on desired levels – based on one data model. The attributes and “one data model” give the “Google Translate” in our S&OP process.

An example of a common S&OP demand review template for Sales, Finance and Operations is seen in the figure below, where Finance reviews revenue aggregated on division.

Figure 1: Example of a demand review template that can be used by Sales, Finance and Operations – at different aggregation levels.
The suicide quadrant will kill you – the system survives!
The HANA engine in SAP IBP makes is possible to do fast calculations at a
detailed level on the full S&OP horizon. Evaluating S&OP at a detailed level on
a long horizon will typically not improve accuracy, but it requires a lot of effort.
Therefore, the S&OP evaluations should be done at an aggregated level defined by
each of the stakeholders (Sales, Finance and Operations). In case of deep dives,
the data is immediately available in the system, enabling planning on mix in
special situations (illustrated the in figure below).

When detailed data are available in the system, there is a risk that it will be evalu-
ated – also on long horizons. A robust and well-defined S&OP process will mitigate
this risk and ensures that the powerful possibility to do detailed planning is
utilised properly.

Figure 2: S&OP should be evaluated at an aggregated level. Long-term planning at a detailed level will not improve accuracy,
but it requires a lot of effort. Still, it is powerful to have the detailed data available in case of deep dives in the S&OP
evaluation. Source: Tom Wallace
Data integration is a one-way highway

The S&OP process should be separated from operational planning without losing the link, though. The S&OP planning process should always be built on a realistic foundation, as the base line determines the trustworthiness of the S&OP plan. That is why the operational plan should integrate towards IBP for S&OP (preferably via HANA Cloud Integration, HCI). HCI allows you to integrate data from your legacy system to IBP for S&OP applying translation rules for both master data and transactional data. For example, create combinations of the existing master data in the legacy system into new master data in IBP for S&OP (e.g. sales quantity x sales price = revenue).

The integration from IBP for S&OP to the legacy system should be handled manually, though. The actions agreed upon at the S&OP meetings are typically much more than a technical integration, and here automation could lead to misunderstandings and misalignment. Let us say that at an S&OP meeting you decide to increase to three shifts at one of your production sites in five months from now. The least that needs to be done is to update the data in the system. The heavy workload is to get the agreement with production, hire people and talk to HR etc. Therefore, we want to separate S&OP from operational planning, as decisions from the S&OP meeting are typically more than just a data update.

Figure 3: S&OP should be separated from operational planning. However, operational planning should form the base line of a reliable S&OP plan.
Scalability defines decisions
Scalability and planning horizons must be clarified for timely decision-making. Production, warehousing, transportation, suppliers and sub-contractors have different levels on supply chain capacities on different horizons. The decision time needed in order to increase/decrease capacity should be clarified for each key supply chain constraint modelled in the system.

Build the scalability of your capacities into your Excel planning template in IBP for S&OP. This makes it clear when to react to certain changes in your supply chain, i.e. handling an increase in demand by 50% in the coming six months as illustrated in the figure below. The scalability will determine decisions to be made per horizon and forms the foundation of the S&OP process.

Figure 4: Scalability in S&OP is built into the Excel planning template to highlight reaction times in the supply chain.
Flexibility requires structure

Improve decision-making in an uncertain environment through scenario planning and simulations. Scenario planning is an important part of S&OP and serves to evaluate risk and consequences when the supply chain planning is not in a steady state.

Scenario planning helps to increase:

- Focus on risk management and decision-making
- Forecast quality in an uncertain environment
- Focus on consequences for the business (delivery performance, NWC, lead times, efficiency)
- Focus on opportunities rather than discussing bias

SAP IBP for S&OP provides a wide range of possibilities to do scenario planning. The flexible creation of master data attributes, master data types and planning levels allows scenarios to be conducted by different stakeholders in the S&OP process and at different aggregation levels. It is recommended that the flexibility in relation to scenario planning is handled in a structured way. An example of how to structure the flexibility and what to bring into a scenario is illustrated in the figure below.

When conducting simulations and scenarios, it is possible to compare results. An example of comparison between three scenarios/versions in IBP for S&OP is seen in figure 6. Here the capacity load of three different scenarios, best-case, base line and worst-case, is compared in the same Excel planning template.

Figure 5: The flexibility in relation to scenario planning in SAP IBP for S&OP should be structured in order to control the many opportunities.
Figure 6: Comparison of capacity utilisation on “resource 1” in three scenarios; best-case, worst-case and base line.
S&OP meetings are decision meetings – not discussion meetings

The ability to make decisions is the most central element in the whole process! Even though the HANA engine allows running simulations directly at the S&OP meeting, it is still recommended that focus is on decision-making and information rather than data. Analysis, recommendations and decision materials should be prepared before the S&OP meeting. The materials should include recommendations and consequences in an executive overview – still having background analysis available if needed.

It is suggested that Excel planning templates are built and prepared to support the S&OP meeting. When data, scenarios, graphs etc. are already available in the Excel planning template, it is easy to snip it directly into the S&OP material (see example in the figure below).

Figure 7: Graphs and data are prepared in Excel planning templates and snipped directly into the S&OP decision meeting material.

Don’t go for new – go for better!

Your company has probably already invested heavily in planning solutions and processes. It is therefore important that you leverage your current investments and decide accordingly when deploying SAP IBP applications to the existing system landscape.

When giving advice on road maps for planning solutions in SAP IBP applications, the answer is almost always: “Well that depends ...”.

The very first step is to answer the three questions below:

- Where are the weaknesses of the current planning solutions?
- What would make sense to move to SAP IBP – for improvement?
- Where are the strengths of the current planning solutions?

Put in another way, only move what makes sense into the SAP IBP applications. For example, if your demand planning process is performing well in e.g. SAP APO demand planning, there may be no reason to move into SAP IBP for demand. On the figure below there are a few examples of different system landscapes, including SAP ECC, SAP APO and SAP IBP for S&OP, demand, supply and operational planning.
Be aware that the full list of combinations is wide. The main features of the SAP IBP applications are listed in the figure below and serve to show how IBP can complement the existing planning solutions.

**IBP supply chain control tower**
- Navigate, analyse and manage profitability in end-to-end supply chain in real time
- Visibility across the supply chain (and underlying IBP applications)
- Historical and forward-looking KPIs

**IBP S&OP**
- Traditional algorithms
- Short-term forecasting and demand sensing
- Predictive/forecasting analytics techniques
- Complements SAP APO demand planning (integration via HCI)
- Tactical inventory management
- Optimise service levels and net working capital
- Set multi-echelon inventory targets
- Integrate parameters to SAP APO SNP/PPDS via HCI
- Tactical supply planning simulations for S&OP
- Rough cut capacity planning in time series bucket plan
- Unconstrained heuristics or optimisation algorithms
- Integrate to operational planning in SAP APO/ECC (via HCI)

Figure 8: Examples of four different planning system landscapes using combinations of SAP ECC, SAP APO and SAP IBP. The overall rule is: Don’t go for new – go for better!

Figure 9: The main features of the new SAP IBP applications: supply chain control tower, demand, inventory and supply & response. Main features of SAP IBP for S&OP are highlighted in this article.
Implementation principles

According to Tom Wallace, the importance of the system is very low when implementing S&OP. Focus should be on people/mindset and process. However, the focus is often the other way around (see the figure below).

Hence, the people/mindset and process should be in focus. Prototyping is a good way to ensure this, and via prototyping the implementation can be done within a year as illustrated in the figure below.

**Figure 10:** When implementing S&OP, the focus tends to be on the system. Instead the main focus should be on people/mindset and process.

**“DON’T GO FOR NEW – GO FOR BETTER!”**

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**Building a business case**
- Involving top management
- Decision to start

**Analysis**
- Establish S&OP process
- Define S&OP planning needs and horizons
- Include all S&OP stakeholders
- Reinforce top management involvement

**Pilot**
- Spend time on data model
- Prototype solution built in sprints
- Prove pilot results (in sprints)
- Reinforce stakeholder and top management involvement

**System development**
- Full financial forecast
- Proving results
- Cutover
- Full S&OP

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The first step is to build the business case for an S&OP implementation. Here top management should be involved and take the decision to start. The next month’s focus is on analysis to establish the S&OP process, define decision horizons, agree on a common language (basically look into the viewpoints presented in this article) and reinforcement of top management involvement. The next 3–4 months are spent on the prototype/pilot. It is important to spend time on the data model, as it is the foundation of enabling the full benefit of IBP for S&OP. The pilot should be proven in small sprints where top management and stakeholders are heavily involved in reviewing. When the prototype is proven, the cutover is made, and the IBP for S&OP application and process is live. The solution is further developed as results are proven.

SAP IBP for S&OP provides a wide range of new and powerful functionalities to support the S&OP process in an efficient manner across different stakeholders in the organisation (Sales, Finance and Operations). When starting an S&OP implementation, the trick is to focus on people/mindset and process rather than system and at the same time take advantage of the new and strong features in SAP IBP for S&OP as presented in the 7 viewpoints.

Keep in mind the 7th viewpoint throughout the implementation project: Don’t go for new—go for better!

Good luck on your S&OP implementation—maybe supported by SAP Integrated Business Planning for S&OP.