File name: invest_ni_-_sales_&_operational_planning_webinar_(supply_chain_edit_2_3) (240p).mp4

Moderator questions in Bold, Respondents in Regular text.

KEY: **Unable to decipher** = (inaudible + timecode), **Phonetic spelling** (ph) + timecode), **Missed word** = (mw + timecode), **Talking over each other** = (talking over each other + timecode).

Mark Cahill: Good morning, everyone, and thanks for going us today, and welcome to this webinar on the fundamentals of sales and operation planning. My name is Mark Cahill, I'm joined today by my colleague, Stephen Drummond, and we're both supply chain advisors working in the supply chain development team within Invest NI. This webinar is one in a series on various supply chain topics that can be accessed by the Invest NI website. We hope you find them useful. They are available on the support for business section on that website. Today's webinar, it's aimed at developing an understanding of the S&OP process, and hopefully, leave you more confident about preparing for the implementation of the process, or improving your existing S&OP process, all from a supply chain perspective. Steven and I will take you through the presentation, and we'll jointly take your questions, at the end, and you access-, you can access the chat-box and put questions in there throughout the presentation, if need be. Thank you very much for you attendance and we'll start the presentation. Thanks.

Mark Cahill: Good morning, everyone. The subject we're covering today is around the fundamentals of sales and operations planning, how the supply chain function works within that process, and what influences it has to ensure success. We will cover the evolution of the process, walk through the various stages, and then consider its implementation and effectiveness. The webinar objectives today, they are to highlight the S&OP process and who's involved, understand the supply chain activities within the process, increase awareness of the challenges in implementation, and then look at the importance of cross-department collaboration. So, what is sales and operations planning? Well, for those of you who currently have an S&OP process in place, you'll know that it's a balancing act. It's a process that aligns sales, marketing, and the manufacturing operations with the target of developing a cohesive plan that not only meets your customers' needs, but optimises your resources and maximises profitability, and that's critical. Optimising resource and maximising profitability, that's key. Most companies are good at reacting and serving the customer, but do they do this consistently and, and is it part of their normal work? And when it's doing so, do they maintain a healthy profit margin? It's vital that the trade-off of reacting to your customer, expediting products, and delivering resources isn't one that negatively impacts your costs. The process itself typically involves forecasting demand, adjusting production and inventory levels, co-ordinating efforts across different departments to ensure the company can meet it's sales targets.

So, it's a balancing act with different resources, across various departments, and it requires senior management co-ordination and support. The departments will general have their own objectives and it's focused activities that they have can be siloed, and therefore, it's important that there's a mediation at senior level to finalise the plan. If we look at the history and evolution of the S&OP, S&OP is relevantly recent. It was born from the need to map demand, to capacity and capability, to the supply base. Originally developed by Richard Ling at Oliver Wight Business Consultants, and it's evolved from S&OE, sales and operations execution, where the focus is on service, via S&OP, sales and operations planning, where there's a need to balance supply and demand, and align with the business strategy, and finally, into IBP, integrated business planning, where the business will align strategy, tactical, and operational planning, and includes finance to create a fully unified, long-term business plan. Now, all of those terms are widely used today, but S&OP would probably be the most recognisable and more appropriate for most businesses. Throughout the last 40 years, businesses have needed to move away from that reactionary style of, of customer service, where predictable orders were placed, with minimal need for flexibility. The demands from the customer have changed dramatically, and have migrated towards quality products, delivered faster, with increased agility and service, and so, companies now need to be more strategic, plan better, balance their supply and demand in the supply chain, and ensure there's more collaboration across departments to make these changes in customer needs.

It's expected today that all suppliers, and all businesses, will have an element of the S&OP engrained in their business, and, and with some certainty-, some certainty, be able to predict how they will manage their sales and their portfolio. The process provides the opportunity to be able to do that with some success and, and balance operational and strategic focus against cost and service. What are the recognised benefits of the S&OP process? So, the first one is higher profitability. If you can deliver an end product to your customer and have an efficient end-to-end supply chain process, with full visibility from your raw material suppliers, to the end customer, then this will protect your margins. The better decision-making. Those decisions will be as a result of the S&OP process, after department collaboration, and agreement on a plan. So, there should be minimal surprises for those involved. A short planning process. One S&OP undertaken at regular intervals, with consistent monitoring. Improved cross-departmental collaboration. Again, this is the team effort, and it will involve sales, operations, supply chain, and finance, with senior leadership support and oversight. It connects business planning to tactical planning. This is self-explanatory, and the output of that process will drive short and medium plans into the wider business strategic vision, connection the plan to that activity. It provides for the effective management of inventory. So, and that's not just what's in the warehouse, but the entire work in progress, from goods received, to final assembly. Supply chain and operations with clear inventory visibility and control. Enhanced supply chain performance.

We'll, we'll touch on this later, but a resilient, low-risk, cost-effective supply chain will ensure the raw material and purchased parts are where they're meant to be, at the right time, and at the right cost. Visibility of the aggregated demand and the effect of planning of that demand will allow for such a supply chain to exist, and lastly, it creates a seamless feedback loop. It's, continuous improvement exercise. It's repeatable, and it should allow for minor changes, and some flexibility, as long as the team work together when they bring in that plan. Just for an unbiased view on this, Gartner, for those who don't know, they provide research and guidance for businesses on, on most activities globally, and, and what they do is rigorously vetted and they're completely vendor agnostic. So, they'll assess technologies that are put into practice by leaders around the world. So, this statement that they have on being the most single important and critical cross-functional process, and that it will lead to significant returns, it supports the benefits that we've already looked at, in the previous slide. So, what does the process look like and how do we create and implement it? Generally, there are five stages to an S&OP process. So, the data gathering stage. This initial stage involves collecting the data from various different departments, includes sales forecasts, inventory levels, and supply chain capacity. Accurate data is crucial for informed decision-making throughout the S&OP process. Stage two, demand planning. During this stage the, the demand planner works closely with sales and marketing teams to create a consensus demand forecast and we'll look-, go through how that forecast is developed later in the webinar, but this forecast is based on historical sales data, market trends, and promotional plans.

The goal here is to accurately predict customer demand for the upcoming period, and whatever you choose, but generally, somewhere between three and eighteen months, and provide accurate information for the supply planning and operations element of the process, and that leads us to Step Three, supply planning. With the demand forecast in hand, the supply chain and operations teams can assess the capacity to meet that demand. So, this includes evaluating production schedules, looking at inventory levels, supplier capabilities, and logistics. The focus this time is on balancing supply with demand, while optimising costs and resources, and then, we're onto Step Four. So, this is the demand and supply balancing. It's almost a pre-executive review. This stage has the cross-functional teams involved. They review the demand and supply plans together, identify the gaps, potential issues, and scenarios that could impact the overall plan. The meeting is a real crucial step. It's, it's, it's a step in aligning all departments, before the executive meeting, and agreement of a final plan, and then, the, the executive S&OP meeting. This is the fifth and final step, and it involves senior leadership reviewing the proposed plans and making strategic decisions. This meeting ensures the alignment with the company's financial and business objectives, and it resolves any conflict between demand and supply plans. The outcome is finalised plan that guides the operations for the upcoming period. So, these stages together create a feedback loop of planning and execution, and that helps the company align their, their operational capabilities with market demand, that ideally leads to better efficiency and profitability. So, who does what in the process? this slide is, is self-explanatory, and it summarises the rules and responsibilities for each department involved.

One thing to note, although there are five steps, and, and ideally, a department would be responsible for each, what we would suggest is that, depending on your maturity and, and size of operation, there's a good chance that you may have one department that has responsibility for a number of these stages. A lot of companies have a single planning department, for example. So, potentially, steps two and three may have the same owner, and that's fine. Similarly, the S&OP final decision on the plan could be made by the senior team, although that does harbour some risk and, and it, it should always be one S&OP leader who validates the input from the departments and rubber-stamps that plan. You do need that oversight an adjudication. It is also evident that this is a resource-heavy process and, by its design, there's little or no automation, because cross-department collaboration is required. There should always be a face-to-face meeting to balance the plan, and agree on it's execution. So, what's the influence of supply chain? This webinar is focused on the supply chain element of the S&OP process, and from our experience, we know there is significant input from that perspective. In the simple terms of plan, source, make, and deliver, the plan, source, and deliver elements of that, they all sit within the supply chain function, and typically, the executive chair of the meeting would be a, a COO or a supply chain director VP. If we look at this slide, which is a typical supply chain structure, and again, as we've noted before, some departments may be merged into one, depending on the scale and maturity of the business, but we'll see that there are a significant number of activities that are relevant to the process, any of which could negatively impact the outcome, if they weren't managed.

So, that's not to minimise the important work and input of sales and marketing and operations and manufacturing. They, they'll have their own structures that feed the process, but what we want to highlight, is how every supply chain department has it's part to play, from supplier risk management, placing orders, managing supplier quality, analysing the aggregated demand to feed MRP, planning materials for lineside delivery, managing lead times, and being responsible for the inbound and outbound deliveries. All supply chain functions and all very relevant to the S&OP process.

Stephen Drummond: Thanks, Mark. We covered the why of S&OP and who's involved. The next-, the next section we, we go into how it works. Going back to our process map, the first thing to consider is demand. the term demand refers to customer requirement for a product or service, over a given period of time. The time horizons are short, medium, and long-term, and depend on the nature of the business, and we'll discuss this in more detail later. Quantitative data, like historic order patterns, is available from the company's own records.

Stephen Drummond: Qualitative inputs rely on the experience of the sales team, their view of what's happening in the market. A 360 degree approach looks at internally available information, like current orders, historic patterns and trends, and may also use static-, sorry, and may also use statistical analysis to develop a forecast on a business or local level. Externally available market information can be found from open sources like the internet or trade publications, or from specialist organisations who track-, who track market data and provide insights for a fee. And this may be appropriate for a macro view of the market.

This slide illustrates some of the internal factors and external factors that can be considered. The factors shown in green, like price and promotion, are normally within the control of the business, and can be used to regulate or stimulate demand. The blue notes show external factors, such as competitor behaviour. These may not be directly linked to your business, but will attract macro market movements. For example, Hallmark created demand by inventing Valentines day, and now every card-maker predicts high sales in February.

Demand planning is one of the expert roles that involve a consideration and manipulation of lots of information, sometimes giving conflicting messages. AI, running as a co-pilot to the expertise of the planner, may speed up and improve the process in the future. Demand planning requires the skill to be able to analyse the data. You tend to find the aggregate demand for your business and transform that into a plan for supply chain and operations.

Stephen Drummond: This is a pivotal role within the business. It's good practice to build forecasts in the short, medium and long-term horizons, as these serve different purposes. Short-term forecasts will help companies prioritise growth (ph 15.34) production. Medium-term forecasts identify capacity mismatches with the remedial action to meet upcoming demands, such as resource levels, shift patterns and part supply. Long-term forecasts allow companies to look at their strategic position across labour, capital investment and where the market's going, in order to manage production and supply risks. For example, sustainability and the green economy, the use of fossil fuels and the requirement to reduce emissions may need to be factored into your plan. This is a very simplified model of how a forecast could be developed. Things you need to be clear on when developing a forecast is what are-, what are we trying to forecast, what is the time frame, short, medium and long-term form of forecast? The usual starting point in predicts-, predicting the future is to look at what happened in the past. The timescale is important when looking at historic data. Does it show seasonal or other variation patterns that can be discerned and overall trends that can be extrapolated? The most predictable demand is the company's order book. While never 100%, orders can change, it's the most reliable piece of data. Sales enquiries and other sales activity, over and above orders in place, are a reasonably reliable indicator of future demand. Finally, the forecast based on all available information discussed earlier fills the other areas of the forecast. A couple of things to note, a forecast is typically a range, high to low estimate based on how much confidence can be placed in the information. The further out the time horizon you move, the wider the gap becomes between high and low confidence, and less reliable the forecast becomes. For these reasons, forecasting should be done as often as is practical to maintain credibility. Remember, forecasts are built on the information available. Available information changes with time, and so your forecast will also likely change with time. As you can see, qualitative data, such as firm sales, can be seen as more reliable than qualitative data or subjective input, such as sales teams' future projections. The final point of the forecasting, in some markets forecasting cannot be done without a degree of accuracy. Fast moving industries, like technology, with high levels of innovation and change are very difficult to forecast over any medium to long term. These types of companies use our strategies to make business objectives, like very short lead times within a supply base or, or, or agile supply chain practices.

Mark Cahill: So, that was demand planning. The next step, supply and capacity planning. This is-, this assesses the organisation's production and operational capacities, including supply chain resilience, manufacturing capabilities, labour resources and machinery availability. The goal here is, is to determine whether current capacity can meet the forecasted demand. If there's a mismatch then decisions must be made about how to adjust, whether through increasing capacity, optimising existing resources or managing demand and we'll see that later when we look at the demand and supply balancing part of the process. If we think about what's needed to carry out production then we immediately look at space, machinery utilisation and labour and then from a supply chain perspective the parts and services that are procured to ensure line side delivery. Logistics is also critical. The, the movement of parts inbound line side through WIP, work in progress, and then from final goods to the customer are all part of that capacity plan. So, some key considerations for supply and capacity planning include lead times, production cycle times, the flexibility of production processes to adapt the fluctuations in demand, master data accuracy and inventory levels. They're all internal factors that are within a business's control and factors that you should have visibility of. The, the external factors that you won't necessarily be aware of need to be considered also and, and they will have some effect. Additionally, capacity planning looks at the long term horizons identifying when and where investments in new capacity might be necessary, either in machinery efficiency or, or, or external investment. Again, with that focus on supply chain, we can't forget that we have a tier one and tier two supply base and they will have a major effect on the supply of goods and services. You should have an effective supplier management programme in place and you should know your supply base.

A consideration of having this as an embedded supplier relationship management process is recommended especially for your, your key and critical supplies. And let's look at this in more detail. There are four key stages that will support an effective supply chain. Develop your supplier profile. There are many tools to do this and, and help you develop this. Kraljic is, is a good example. And you can assess the supply base capability fully. And this will provide you with a focus area of your supply base where there's most likely to be risk to your supply. Stage two in this is to audit your critical suppliers and identify your risks. I've included external factors like commodity, trends and, and macroeconomics of the source. The third part of this is to mitigate those risks with relevant actions and that could be a change of source or, or a Make v Buy decision. And then, insert controls around the process to maintain the expected standards, measure performance, negotiate a SLA or a contract where you feel that's required and work with supplier quality on an audit plan. This all should be a continuous process and, and should be part of supply chain standard work. It's, it's part of the day job. That supply base evaluation that looks at risk should look like this. You'll have input throughout from non-supply chain sources, whether that's utilising AI or machine learning or that's input from other stakeholders in your business who, who experience the impact of the supply of goods and services. So, it's important that this is not completed in isolation. You, you need more departments involved in this. So, from left to right, as, as the risk assessment takes place with the key and critical suppliers being identified, their performance monitored and their risks exposed, there'll be a narrowing of, of the number of suppliers that this entails where, where mitigating actions are required.

But by following this method the supply chain can, can really positively impact the supply and capacity planning element of the S&OP process.

Stephen Drummond: Thanks, Mark. The next section, having looked at demand and supply analysis, we consider how to balance the equation. In order to balance supply capacity and demand, it's normal practice to overlay both profiles as shown here. The graph shows where the focus should be to offset or minimise any gaps between demand and capacity. It's usual for a company to adjust capacity first to maintain customer satisfaction and maximise sales, but this is not always possible. Demand and supply balancing involves a process, usually a series of sit-down meetings at a working level, with the-, with the active participants of both sales and operations teams, and making the projected demand and the supply profile align. Give and take is needed to develop a plan of action to align-, to align the supply and demand, and the teams may have to make adjustments to their respective plans. The output from this process is a harmonised plan or a series of options that can be submitted to the senior management team for approval (audio distorts 24.20) . This slide shows some of the, the options available to material planners and sales teams to effect demand in the short and medium term. Material planners can smooth short term peaks and troughs. The sales teams can manage customers by negotiating appropriate delivery schedules depending on the nature of the business. Companies often have more options to manage supply, as shown here, including building up upper stock (ph 24.48) and inventory. Supply chain can actively manage their suppliers, accelerate or slow influence of material (ph 24.55) . Also, internal and external capacity can be adjusted by outsourcing or repatriating work. Various actions can be taken to increase or cutback output, moving staff to different roles, scheduling training and maintenance to coincide with more demand or introducing automation to increase capacity. These options are generally well understood and most companies use them.

The benefit of S&OP is to give the organisation advance notice of when they will be needed. The next step in the process is the executive review on the proposed S&OP plan. The executive review is an important step. As well as confirming and approving the S&OP plan the senior team can look at alignment with the overall business strategy, such as introducing new products and phasing out old products, examining proposals and investment related to marketing supplies and ensuring annual operation plans and company KPIs are in-sync. Generally, this process is led by the CEO, with the company's senior leadership team, to ensure all departments buy into and agree the plan. It, it also promotes collaboration across functions and collective ownership of the plan. S&OP is not a static process. The factors affecting supply, demand and capacity will change, as we've all seen in the past few years, and the process needs to be dynamic in order to keep up. The principles of Plan-Do-Check-Act apply here, as they do in most processes. We're going to have a quick look at how S&OP fits within, within the overall company operating system and what happens if it's not effective. This slide shows how S&OP should balance supply and demand over the medium to long term, taking out the big peaks and troughs between demand and supply. The balancing of supply and demand enables most efficient use of available resources, allowing those resources to operate at their optimum level. Short term scheduling is usually done by material planning or a dedicated scheduling function depending on the organisation's structure. The scheduling function manages short term demand. This involves scheduling firm orders to production and smoothing the remaining peaks and troughs. The demand (inaudible 27.47) , which generates detailed orders for supply chain and production. Without a formal S&OP demand over the medium to long term is not managed.

This means that the variation in demand reaching the scheduler is much more lumpy, large peaks and troughs, making the scheduler's job much more difficult and resulting in short term reactive planning. The knock-on effect is demand has much greater levels of variation, which results in higher supply chain and production disruption. A small company's capacity can be managed at the production level but as they grow and find they need a better process to manage production they will look to introduce an MRP system. As growth continues and the order in which work is carried out is solely in the hands of production this leads to the supply chain not getting timely information on the information needed and will not operate correctly, resulting in shortages. The inventory (inaudible 28.58) and this drives up cost. If businesses find they're getting into this position, it's a good time to look at recalibrating the process and introducing an S&OP process and effective scheduling.

Mark Cahill: Thanks, Stephen. So, let's look at the implementation of the S&OP process and what the considerations are for success. Three essential components of S&OP, cross-department communication is critical to success. When we consider the goal of S&OP is to enable executives to make better informed decisions, if, if we look at S&OP from a people, process and technology perspective, we'll see that, without the people, we have alienated the teams involved and they don't feel that they have a say. Without the technology, there's frustration about the analyses and the speed of delivery. And then, without process, there's chaos around implementation and the-, and this, sort of, 'Computer says no,' mentality. That's why all three of these components are essential. There's significant risk of failure without each of these being given equal status. On the implementation challenges, there are a few surveys out there and, and they all have a common theme. This particular one is from supply chain insights and it's clear that the challenges are people focused. So, over 50% of the respondents highlighting that this is an issue. And if you think about that competing priorities, lack of understanding, no support, lack of clarity, none of these are anything to do with the process or the technology that supports it. It's all people-orientated. The S&OP process works, and it's proven to work, but without the buy-in and support from the senior team, and, and the departments being given the time to management, the attempt will inevitably fail. It's a process that needs the appropriate effort to manage and the time to succeed, without knee-jerk changes in, in direction at, at the first hurdle. Our experiences with this is that, when companies don't see immediate success or, or feel that the process is too cumbersome, they immediately change course and they try to correct and, generally, that's to serve a loud or angry customer. But it has the opposite effect, because that-, the actions that they take are not sustainable. So, that's food for thought. And let's take a quick look at some examples of, of metrics and KPIs that are a measure of, of S&OP effectiveness. You'll note, when you read through these, that they're typical business KPIs and, and they're split across multiple departments. This is only a sample, but they should be recognisable and potentially already in a business measure within the organisation. So, hopefully, nothing new needs to be created. The S&OP process really just collates existing data and provides a higher level business metric rather than a department one. And there will be others. All companies-, as with all companies, most departments will measure a number of KPIs and then they will fade into a select few that will measure how the overall business is, is performing. But if you limit these five, simple measures, they actually provide us with insight into how well you're predicting your sales targets, the efficiency of the production process, details of inventory turnover, level of customer satisfaction, and the performance level of your supplier. So, that-, that's a really strong indicator of the overall performance of the end-to-end operation within any business. And it can built on, if required, but this will need to be what's relevant to you in your business and what you see as success.

So, in summary, the S&OP process, it's a team process, and it is successful, because it aligns planning across functions in order to meet company objectives and to improve the performance. It's a synchronised effort. It needs executive support and participation, and the most important, vital sign within this is, is whether your executive stakeholder is directly involved in the process. Leadership and decision-making is required in every S&OP meeting. By its very nature, S&OP produces disagreement and so that should be expected. It's a process of developing the, the tactical plans necessary to achieve your strategy. Functional heads are certain to have different opinions about what the best approach is. The team needs to be able to have that candid and constructive discussion about the issues and challenges that they're facing. Otherwise, the tactical plans that are the output from this won't align with the strategy. Compromise is key. Compromise and flexibility is often required between functional areas. The S&OP meeting provides that forum for a routine decision-making process, where the executive leader considers the team recommendations and then decides on what the course of action is. When an executive leader is not committed to this decision-making forum, functional leaders will, will always find other ways to resolve their issues, and the result will be friction, confusion and probably underperformance. So, broad agreement is the target with the chair or the leader making the final decision based on that input. Just as the competitiveness of an eight-person rowing crew would be compromised by an empty seat, the absence of any functional area from your S&OP process handicaps the ability to deliver customer value and financial performance. If you check your S&OP process and it reveals an empty seat in that team, you've likely found an opportunity to improve the S&OP performance. Consequences of that empty seat shows up in many ways, depending on your seat's owner, and can result in, in poor coordination on new product and productions, unexpected sales, unexpected promotions. All nice problems to have, but very difficult to manage. You may have material constraints or capacity constraints.

Basically, the result is a mismatched product volume, mixed location or timing, all of which negatively affect your company's performance. So, if you consider implementing or improving your S&OP process, start with checking for the empty seats, and secure-, and secure the buy-in from the entire team. That concludes the webinar for this morning.

Mark Cahill: Okay, thank you very much. We'll move onto the, the Q&A with a couple of questions, two quite similar. So, one was suggesting how to improve efficiency and maybe automate repetitive steps. And another, very similar, which was how do I measure maturity of the process, and maybe identify gaps before improving and automating. And this last one says before improving or following on with AI, for example. So, I think, firstly, AI or machine learning can certainly help, but more as an aid. It's a very people-focused process, as we-, as we, we heard. We certainly use AI or machine learning to mimic maybe the planning process, and, and that'll help increase productivity. But looking at the maturity, how to improve efficiency, I suppose, if we look at how do you evaluate that first. How we look at the process is, well, is your overall process integrated? So, how well is it-, is your departments working together as finance and manufacturing, procurement supply chain? Excuse me. Are they all involved in the-, in the monthly S&OP review? I would also look at master data. Is your master data inputs accurate? And are your-, is your-, are your demand forecasts-, are they accurate and reliable? So, that's a-, we noted that in the webinar, that the demand planners are a very critical part of this, and that, that those forecasts are feeding into all elements of the business. To ensure that that-, that that maturity is there, we revert back to the KPIs. Measure the, the accuracy of your-, of your demand forecast against your sales. Monitor your inventory turnover turns and inventory on hand. Track your supplier all the time in full. Have you-, have you looked at your supply base? Have you selected your key, critical suppliers? Are you engaged fully to make sure they, they deliver on time, in full? And I would look outward as well, self-policing (mw 37.58) , to try and track what you're doing for your customer base as well. And then, I suppose, finally, is, is assess how well you're, you're adhering to the, the plans. So, every month, you're looking at a three, six, nine, eighteen-month plan, and you're agreeing on that as, as several departments and that's getting exec sign-off. And, therefore, there's no point in, in having that meeting if you're not going to agree on the plan.

And then look at any issues. 'Are there any issues that are driving (ph 38.30) actions?' and making sure they're addressed. So, hopefully, that, that answered that. Next question was, 'What technologies and systems are needed?' I don't think there's a, an S&OP-, a single tool. As we've said, it's a-, it's a-, it's a people-orientated process. There's certainly systems out there that, that are-, that will collate lots and lots of data, and there's platforms there that are very overarching and they'll suck up all the data and, and gives you a good indicator of, of what's going on. And there's, there's very detailed machine learning analytics. But I think I would take a step down from the S&OP process and look at the departments within your company. So, you've got inventory management software, there's scenario-planning tools out there, which are quite good because you can mirror your-, you can mirror your business on, on, on a, sort of, cloud and fail in the cloud, rather than fail within, within your business. And then you could put it on various parameters and just see, are you going to be fit for purpose within, within that scenario? Demand-planning tools. And then obviously, your ERP and MRP. I think the key thing is to try and create some parity with, with all the departments. You could have a great sales-forecasting tool, a good inventory management optimisation in place, and some capacity management. All that's great, but if your demand planner's working off a spreadsheet, that's, that's gonna be your point of failure. So, I think what I would do is assess all the various departments that feed into the process. And, as I say, whoever needs anything brought up to that level, that standard, if they need (ph 40.20) investment technology, that's really where, where I would look. That's that question. Stephen, do you wanna pick up on, on the next question?

Stephen Drummond: Yes, I'll come on then, here, (ph 40.31) Mark, thank you. 'How often should an S&OP process executive meeting be held for a small to medium-sized business?' It kind of depends on, on, on the business. I think that, that maybe one way to approach this is looking at the, the-, your, sort of, governance processes that you have within your business. So, if you're doing a-, an operational review or, or a (mw 40.55) review on a monthly or quarterly basis, then it makes sense to, to align your S&OP process with it, so that you know those things are, you know-, if you're making decisions at the S&OP that need to be implemented at, at, at probably a finance meeting or, or an operations meetings or, or a production meeting then it, it makes sense to, to have those things meshing in together. But, again, depending on, on the volatility within your business-, you know, if, if it's highly volatile then, then your S&OP probably needs to happen more, more often. And if it's a fairly stable, sort of, demand platform, then probably less often. So, it really depends on the business.

Mark Cahill: Yeah.

Stephen Drummond: So, the next question-, any more that can be (ph 41.41) added to that? Or-,

Mark Cahill: No. No. That was very clear. Yes.

Stephen Drummond: Okay. The next one is, 'Any tips for managing conflict between sales and operations?' I think the, the, the, the, the, the main conflict that occurs because those two, two parts of the business have different, different needs and different priorities. Okay? So, operations are looking for a stable environment, you know, a predictable level of demand where they can work most efficiently. Sales, on the other hand, are looking for, you know, instant supply, basically meeting the customers' needs or, or exceeding the customers' needs by giving them exactly what they want, when they want it, which, kind of-, so, so that's where the conflict starts. And I think what, what, what needs to happen is to make a good, good, good sense of that organisation. (inaudible 42.37) the other departments needs and, and goals or-, you know. And the, the thing as well is the, the companies often set this up where operations are, are, are managed on a particular set of metrics, sales are managed on a particular set of metrics and the two things are, are, are in conflict with each other. So, you know, the, the, the-, a lot of this comes down to the senior management and making sure the organisation is coordinated in such a way that they're working towards the same goals but I think the, the key to it is, is, you know, communication, making sure both groups understand the other's needs and trying to get them to work closer together.

Mark Cahill: Yeah. I think just, Stephen-, and it, sort of, links back to the previous question as well, it's why you have the meetings, it's why there's a pre exec meeting, so all the departments can air what they feel the, the direction is and it's why you have an, an executive oversight and, and adjudicator within that. So, you know, ultimately, everyone needs to come out of that meeting with an agreed plan, you know, and so all that conflict disappears and that's, that's the purpose of the-, that tail end of that process, is to-, is to take all that conflict and then agree on a plan and then move forward and stick to the plan. Don't deviate.

Stephen Drummond: 'Can Invest Northern Ireland help with our S&OP process or with implementing one?' So, a couple of things here. If you're currently an Invest Northern Ireland client, with all these things, all the support that's centred (ph 44.19), you have that conversation with your client executive and there's, there's a couple of areas specifically-, well, probably more than a couple within Invest Northern Ireland where, where, where the, the, the support offered, you know, we'd help you go through it ourselves. There's the (ph 44.36) supply chain team, also there's, there's, there's an operational excellence team will, will help with the operational side. And there's, there's, there's-, people on the IT side and, and on then environmental side are are able to, to offer support with this, and so there's a wide range of support there. I would say that the first point is, is to go through your client executive. If you're engaged already with the supply chain team then we, we, we do, sort of, like, an expanded version of, of this webinar and, and a one day workshop and we get into a bit more detail, a bit more hands on with the process. So, again, if you're working with a, a, a, a, a, a client executive or, or a supply chain advisor, then have a chat with them about that and see if you can-, see if that course would be suitable for some members of your staff.

Mark Cahill: Yeah.

Stephen Drummond: I think-, I think that's it, Mark, for me. Have you anything that you want to add to that?

Mark Cahill: (talking over each other 45.33). No. There's, there's nothing more to add to that. And we do run those, those workshops, sort of, twice a year, so, yeah, there should be-, should be plenty of opportunity to attend those if you can. Yeah. No, I think that's us for today. I'll just thank, thank yourself, Stephen and everyone for attending.

Stephen Drummond: (inaudible 45.52). Thanks a lot.

Mark Cahill: Thanks very much. Goodbye.