What is SIOP (Sales Inventory and Operations Planning)?

SIOP is enhanced coordination. If a company’s environment – product, processes, customer base, and so forth – is extremely simple and, if things hardly ever change, then they probably don’t need much in the way of a SIOP process. Seen many companies like that lately?

Let’s look at the mix/volume chart:

<table>
<thead>
<tr>
<th>Volume</th>
<th>Mix</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Volume</td>
<td></td>
</tr>
<tr>
<td>Low Mix</td>
<td></td>
</tr>
<tr>
<td>Low Volume</td>
<td></td>
</tr>
<tr>
<td>Low Mix</td>
<td></td>
</tr>
</tbody>
</table>

Where do you as a company fall into this chart? To run a business well, demand and supply must be in balance at both the volume and mix level. In reality this balance does not exist. Thus management must step up to understand this relationship. SIOP is a set of tools to balance demand and supply. SIOP operates at the volume level; it deals with rates of sales and production, and aggregate inventories and backlog. Then how does the mix come into play? The Master Scheduler’s task is to balance demand and supply at the mix level. It’s concern with which individual products to run first, second, third and which customer orders will ship when.

These words are saying that SIOP and Master Scheduling are not the same thing. They’re different tools for different purposes.

Now we must come to the two more fundamentals of the SIOP process and that is demand and supply. How are they represented in the SIOP process? Demand is represented by the Sales Forecast. Capacity Planning represents Supply. These tie in with mix and volume to give us the four components of SIOP. Their relationship looks like the following chart:
Thus SIOP is a monthly formal balancing of supply and demand through a six to twelve month planning horizon by aggregate product families. It generally includes incoming orders (bookings), backlog, shipments, forecast, finished goods inventory production and capacity projections as monthly time buckets. It is conducted in a very prescribed format by the top management team. This is a critical point: Top Management. Any company, which embraces this process, must engage the general manager and direct reports. Otherwise, there will be a disconnect between their wishes and the information on the formal SIOP document.

SIOP is not a scheduling tool! It is not an inventory replenishment tool! It is, however, a top level planning technique to provide overall rates of sales and production, and backlog and finished goods inventory positions. In a cellular or flow-line based operation, SIOP provides the daily run rates for these product families.

SIOP is the key business process that derives from the strategic plan, and from which scheduling, order promising, material, shop floor control, and many other processes derive.

How do we start this process? What are the keys to start-up? They are as follows:

- Define strategic initiatives and business metrics
- Define measurements for business metrics
- Define business plan
- Define planning families
- Define demand planning (sales forecast)
- Define capacity planning (rough or detail capacity planning)
- Define the format
- Prepare measurement data
- Prepare inventory data
- Determine who is accountable (who speaks to what)
- Preliminary SIOP
- Formal SIOP