TITAN CONSULTING

BURGERS, BULLWHIPS, AND BEERS!

Taking Inventory and Costs Out of Your Supply Chain with SAP IBP!

We're always looking for a good reason to have a cook out! We invited some friends over for a backyard bar-b-que a few weeks ago to celebrate. A few of our friends have kids, so we needed to know how many burgers, buns, and beverages to get for the big cookout.

We planned for 18 burgers to generously feed everyone. We love Bubba's Grass Fed burgers and they are sold in packages of 6 burgers; we bought 3 packages. Our favorite rolls are the Kaiser rolls – scrumptious, big, fluffy rolls, great for burgers. They are sold in packages of 8 - all burgers were sold in packages of 6, and rolls were sold in packages of 8, how odd! We had to buy 3 packs of rolls. It seemed like such a waste and some of the rolls would eventually get thrown away.

This phenomenon is not limited to burgers and rolls and happens in a variety of ways across the supply chain. After doing some research, this is known as the Bullwhip Effect.

The Bullwhip Effect is a distribution channel phenomenon in which forecasts yield supply chain inefficiencies. It refers to increasing swings in inventory in response to shifts in customer demand as one moves further up the supply chain. Typically, this is a bi-directional issue; demand signal distortion up the chain, or supply chain integration down the chain.

At MIT, all incoming students play the Beer Game. The Beer Game simulates the complexities, assumptions, and inefficiencies that occur in a typical supply chain. This game has been played since the '60's, and it continues to frustrate the smartest of these students. MIT also hosts the game for Fortune 500 companies with similar results.

How is the Beer Game played? Sorry, not with real beer!

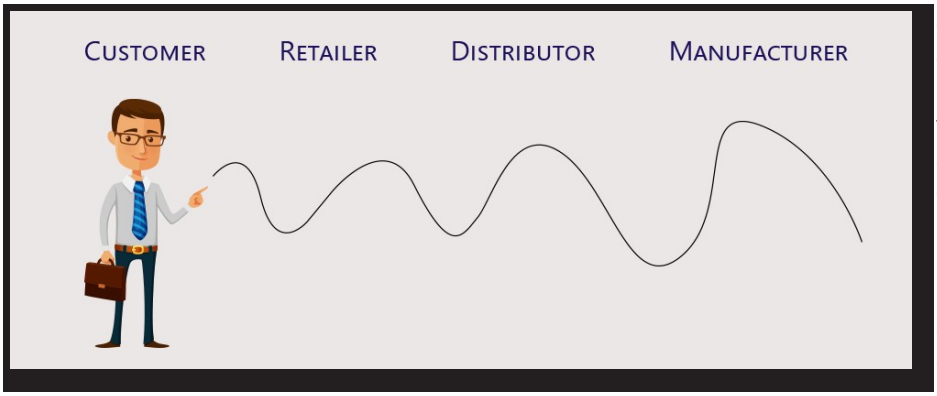
Each team in the Beer Game consists of people at four stations, representing a beer retailer, a wholesaler, a distributor and a brewery. The team starts off with some chips on the table, representing cases of beer. Each round, up to 50 rounds, the retailer draws a number indicating weekly customer demand; players at the other stations write their expected demand on slips. The team circulates the slips and moves chips through the supply chain, but the teammates cannot communicate directly.

The goal is to run the supply chain as efficiently as possible. Each team's four stations are penalized for an accumulation of inventory (50 cents per case of beer, per week), and for unfilled backorders ($1 per case of beer, per week). The team with the lowest score over 50 weeks is the winner.

Why are some of the smartest students and most admired companies frustrated by this game? They continue to use planning and forecasting principles put in place in the '50's and '60's.

SAP IBP helps to reimagine the forecasting, inventory, and supply chain processes to reflect today's reality. Today's reality

reflects global supply chain networks utilizing outsourced partners i.e. contract manufacturers (CMO's/3PL/s). This places tremendous burden and dependency that everything will run smoothly.



Let's face facts, inventory levels will never be a perfect match of supply and demand. The goal is to minimize the stock outs and maximize customer satisfaction.

How can SAP IBP achieve these ambitious goals?

IBP leverages some key concepts in the DDMPR – Demand Driven MRP initiative that is the driving force behind a new approach to supply chain planning. You can read more about this approach and buy the book here https://www.demanddriveninstitute.com/ddmrp

Some of the benefits from using SAP IBP are:

- Improved Customer Service
- Reduced Lead Times
- Near Right Sizing Inventory
- Lower Supply Chain Costs

Two key concepts IBP uses from the DDMRP methodology is Decoupling and Buffer Profiles and Levels. Traditional MRP is sequential and changes at either end of the chain creates additional disturbances and distortions in the supply chain; the classic bullwhip effect in action. For example, if there is a change to an existing order or inventory level, MRP wants to fix it and will create additional orders, causing additional inventory.

DDMPR, by contrast is an independent model and it decouples supply and demand to minimize or block the bullwhip effect. This allows inventory levels to smooth out and recalibrate back to a normal range of supporting your metrics of customer satisfaction and working capital.

The second concept that IBP leverages is Buffer Profiles and Levels. IBP recalibrates the necessary inventory levels throughout the supply chain to guide the appropriate inventory levels. The stop light model guides the planners on the course of action. The action taken presents the various buckets related to order frequency and size, primary coverage, and safety stock.

Where are you in your digital supply chain journey? Do you need help digitizing and automating what you do best? Or do you need thought leadership on how to map your path to a digital supply chain?

Contact Kent Lamb, kent@titanconsulting.net, or call him at 214-632-5621; or contact your Titan Consulting Director. You can also see additional information on Titan Consulting at www.titanconsulting.net.