Learning to See Demand

Just how old is the information you are acting on today? How many days ago was the order triggered that you are now producing? And how many days ago did the customer ring up about the problem you are now fixing?

I recently come across two striking examples where the delays in passing the information upstream were substantially longer than the time it took to make and ship the product or to solve the customers' problem. As we streamline our physical processes so we expose the many problems in our information processes.

Even with today's pervasive data processing and communications the information process is as gummed up as it has ever been. Mapping your information flow will reveal a spaghetti diagram far worse than the shop floor! And one thing we know about information is that the older it is the less useful and even misleading it becomes.

What we do not see as clearly is that these delays cost money and really frustrate our customers. We (and they) are paying for the extra buffer stocks and the excess capacity you have to keep, for the time your managers and staff spend expediting and chasing and for the lost sales and discounts to clear unwanted products.

What we also do not recognise is that it obscures our view of true customer demand and is the biggest obstacle to dropping the gains from lean to the bottom line. We kid ourselves that we can make progress with lean while ignoring the need to redesign the information flow from our customers and within our own organisation.

The knee jerk reaction is to buy a new IT system. Many who have been through the pain of installing a new ERP system know this is not necessarily the answer! Lean thinkers start by asking some fundamental questions about the current process before deciding what IT support is needed.

A good starting point is to really understand your demand – to learn to distinguish between "actual" demand, "created" demand and "failure" demand (which we will return to in the future). At each link in the chain towards your final customer you ought to be able to identify what they actually needed to solve their problem or to fulfil orders from their customers. Compare this with the orders they sent upstream to you and you will see big discrepancy – the signal clearly contains a lot more noise than the pure "actual" demand signal.

Toyota calls this “created” demand and it has many causes. Some of it might be caused by your customer using up spare cash at the end of a budgeting period and some may be caused by your marketing staff offering discounts to make their numbers. But most of the noise is created by all the batching, delays and handoffs in the information flow between the customers’ point of use and your point of production. This will be amplified by pervasive errors in your data and the just-in-case factors built into the algorithms in your software. And the noise is even worse if your product passes through several warehouses before reaching your customer.

In other words this noise is mostly due to the way the information system works and not because customer use of your product is inherently volatile. In other words it is something we can do something about - we do not have to take chaotic demand signals for granted! But we have to remember that it is a shared process extending from your customers’ point of use to your point of production. To really eliminate the noise and produce to customer demand we need to work together with our customers to reconfigure this shared information process.

The lean thinkers answer is not big centralised systems designed to optimise each activity in isolation – production, transport, distribution etc. Instead they separate production and shipping instructions from materials and capacity planning. They cut the number of decision points to one shared decision point and replenish exactly what was used or sold frequently and often. This removes most of the signal noise and optimises the flow of the whole system rather than each operation. And it is simple and foolproof and any deviations can be spotted and responded to as they happen.

This is exactly what Toyota does all the way up their parts distribution system. After many years work Tesco and some of their suppliers are also close to triggering production and shipping in response to continuous, real time data from their sales tills.

I hope you have a good summer.
Yours sincerely

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