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Too Much Transparency

Daniel T Jones

Dear Lean Community Member,

We are all naturally in favour of greater transparency. We think that if everyone could see the progress of production and levels of stock in the warehouse, as well as shipments and stocks in every warehouse along the supply chain, we should all be better off. We should be able to adjust our actions to changes elsewhere in real time. Add to this the Finance Director's dream of being able to control everything from a central point and you have the promise of RFID – radio tags on every product telling you where they are at any time.

But this dream could so easily turn into a nightmare. Just think what happens now. You have plenty of stock in your finished goods warehouse and yet you are always short of the one product the customer desperately needs. So you get on the phone to get production to change their plan and make some of this product in a hurry. Production time and efficiency is lost because you change the plan. People have to scurry round to chase materials and the production of other products is delayed. As a result you are short of those products and the cycle begins all over again.

In this situation it is easy to blame fickle customers for changing their minds. However there is a more insidious form of variation in orders that is encouraged by greater transparency. If your planners have visibility of all the stock in your finished goods warehouse what is their natural reaction to a run of demand for one product? They change their plan to try to restore stock levels, even if it does not breach the lower limit for stock of this product.

There is a natural human desire to try to adjust things to the average, even though the point of the warehouse is to absorb variations in demand so these waves do not flow upstream. Why do they do this? Because experience tells them that they never know exactly when production will make another batch of this product – it may not happen for another month or more if the plan gets changed and the next production run gets rescheduled, as it almost certainly will. So better change the plan now rather than wait until you are out of stock.

Transparency will not actually solve this situation, and could make it a lot worse. Part of the answer is to set the upper and lower stock levels to absorb the variation in demand and stick to them, so these fluctuations are not passed upstream. The other answer is to move away from batch thinking in planning and production and begin to relate the rhythm of production more closely to demand, moving from producing every product once a month to twice a month, and then to every week and maybe twice a week and eventually every day.

Levelled orders creates the stability that is necessary to start the traditional lean journey in production – improving the capability and

availability of each step so you can link them to create flow and then accelerate the rate of flow by improving the frequency. The end result is that production can actually make every product frequently and reliably.

But this is not the end of the story. Sorting out production alone is not enough – you must also sort out your planning logic and behaviour. Just as you eliminate big batches in production you must no longer batch information – it needs to be passed on without manipulation and released to production in small batches frequently. This probably means no longer using your MRP system for production and shipping instructions.

But it probably also means not letting your planners see the stock levels in the finished goods warehouse! We recently witnessed just such a situation – where planners were only alerted when stock levels breached the upper or lower limit. Even then they learnt not to react too quickly, as they knew that spikes and troughs in demand have a habit of going into reverse very quickly and production is anyhow going to replenish that product in the next period. Doing nothing proved to be the best course of action and eliminated most of the plan changes.

Imagine this story repeated at many points up the supply chain. Rapid replenishment turns out to be much more important in improving supply chain efficiency than transparency.

Yours sincerely
Daniel T Jones
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P.S. You might be interested in several new articles and talks on the web site www.leanuk.org. My talk for the ECR conference outlines the two revolutions that are about to transform consumer goods retailing. “The Magic of Levelled Scheduling” describes how pioneers are using Breaking Through to Flow to transform consumer goods production. You will shortly be able to download our new pamphlet “Lean Thinking for the NHS” as well as the presentations from the Second Lean Healthcare Forum on June 6th. (The Third Lean Healthcare Forum will be on October 2nd).