Queues - Waste or Tool?

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Work in progress queues are in common sight in many manufacturing companies. Queues are products waiting to be worked on and of course represent none value add time and waste. In fact, I often say that 'work in progress' is badly named because it should be called 'work not in progress'.

Many companies have focused upon Lean programmes to eliminate waste, reduce working capital and increase production throughput. These are very admirable objectives; however, queues have a purpose and should be planned. The basic purpose they have is to 'buffer' against a number of issues:

- Buffer against an unbalanced production flow
- Buffer against quality issues
- Buffer against long set-ups/change overs

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- Buffer against breakdowns
- Buffer against absenteeism
- Buffer against poor schedule adherence
- Buffer against poor supplier demand performance

There is also the issue of employee 'security'. Many production personnel look at the level of work in progress as a sign of how 'well the company is doing' and hence their level of job security and overtime potential. It is often believed that if work in progress levels are reduced then people will slow down and that high levels of work in progress will increase motivation and output. I completely agree that employees need to feel secure and motivated, but I don't believe that this approach is effective. I also completely agree with the objectives of Lean and none value adding waste reduction. However, the answer is not a unilateral reduction of work in progress levels, the answer is to focus upon the issues that queues are designed to buffer us against and systematically reduce the root causes:

- Unbalanced product flow - manufacturing cells and flow lines
- Quality - TQ tools and SPC
- Set-ups/changeover - SMED

- Breakdowns - Total preventative maintenance
- Absenteeism - Distributed secure based leadership
- Schedule adherence - MPS and demonstrated capacity planning
- Supplier delivery - Vendor scheduling and supplier partnerships

From a worker security perspective, if the work-centre work to lists also jobs coming to that work-centre this would represent an electronic queue and as long as systems and data accuracy is credible this would provide the security of knowing that future work will be available.

Until all these improvements have started to have an impact then the levels of queues should continue to be 'planned' at each work-centre that is affected by the above issues.

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