Animation 13.1

Lean Production ensures that all unnecessary waste is removed from each process stage thereby giving customers true value. One method which can be used to determine value from the customer's perspective is Value Stream Mapping.

Many manufacturing operations however have a number of sequential processes which can be very inefficient and therefore wasteful in terms of time and money. One example is shown here.

Here are the operations in a shaped fabric reinforced engineering product which needs to be cut to size and then printed with some customer information before being assembled, inspected and despatched. Each of the process times is shown in the corresponding box.

However due to the nature of the production, which is mainly large batch production, the process flow is irregular and there are many areas where Work in Process builds up. Here we can see many situations where material is not moving, for periods of up to 72 hours.

This has a negative effect on the throughput time which works out at a total of 2 weeks. However the Value Added time (when work is actually taking place on the product to manufacture it) is only 5.6 hours, or 1.67% of the total throughput time.

In this example the customer has to wait 2 weeks for their delivery and pays for this inefficiency in both time and money.

© Oxford University Press, 2020. All rights reserved.