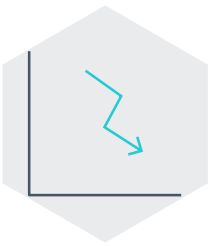


Bottleneck Analysis

You would use this approach to identify bottlenecks that stop or slow down production or business performance, and implement solutions to reduce or remove the effect of bottlenecks.

Projected performance gains



Reduced

- Manufacturing leadtimes



Increased

- Capacity



Improved

- Production flow

Projected performance gains

DIFFICULTY



Medium

You will need the expertise to understand and audit the current process

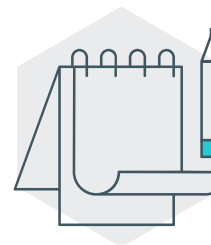
ACTIVITY



Team

It will be more productive to conduct the analysis with the right team members

EQUIPMENT



None

The Bottleneck Analysis phase should not require any equipment

Explanation of the concept

In a production area, the bottleneck will be surrounded by work in progress that is waiting to be worked on. Bottlenecks can be caused by the following issues:

Factory Problems

- Lack of machine capacity to process the work in the time available
- Lack of people/skills
- The machine has a poor yield and has to cope with a significant amount of rework
- Change-over/set-up times that are too long
- The machine is a shared process, i.e. many product routings use the machine
- Machine unreliability/downtime

Office Problems

Gather together a group of employees to form a team Walk In an office/support process, bottlenecks are more difficult to see, but can be caused by:

- Lack of people/skills
- Over-complex processes
- Unreliable IT systems.

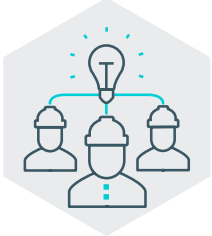
What type of solutions work?

There are a number ways you can solve the issue of a bottleneck. These are the most common:

- Only make products at the bottleneck that are connected to real orders and meet immediate customer demands
- Focus the product plan around the area of the bottleneck as it is the most critical resource to optimise
- Buy additional equipment
- Aim to drive up production yield at the bottleneck to reduce capacity required to rework
- Run longer hours at the bottleneck by covering breaks, increasing overtime hours or adding more shifts
- Simplify processes
- Reduce change-over time, reduce set-up times and consider using SMED thinking
- Increase machine reliability through focused maintenance
- Train up additional skills where there are shortfalls

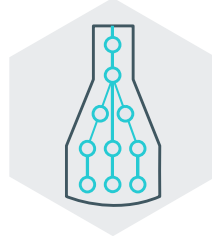
What action should I take?

1.



Gather together a group of employees to form a team

2.



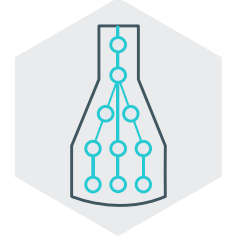
Walk the process to look for physical signs of the bottleneck

3.



Use data to understand the true capacity at the bottleneck

4.



Decide on the best approach to release additional capacity

Glossary

SMED: Single Minute Exchange of Dies, a concept used to reduce change-over/set-up times created by Shigeo Shingo at the Toyota Motor Company.

For more advice, case studies and additional factsheets visit: www.businessgrowthhub.com/manufacturing