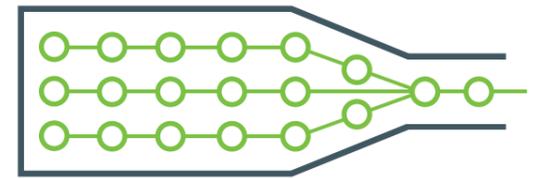


- Identify process bottlenecks in production and office processes
- Potential solutions to reduce or remove the effect of bottlenecks
- Reduce manufacturing leadtimes/improve flow
- Release capacity for more sales.



What should I look for?

It is usually easy to find the bottleneck that cannot keep up with the rate of customer demand. In a production area, the bottleneck will be surrounded by work in progress that is waiting to be worked on. Bottleneck 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

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 action should I take?

These are the four steps to take to understand your bottleneck problems.



1

Gather together a group of employees to form a team



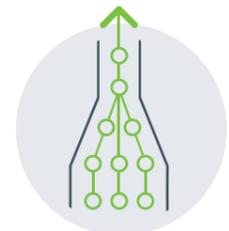
2

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.

What investment is needed to start the analysis?

DIFFICULTY



Medium

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

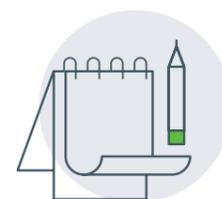
ACTIVITY



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

What type of solutions work?

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

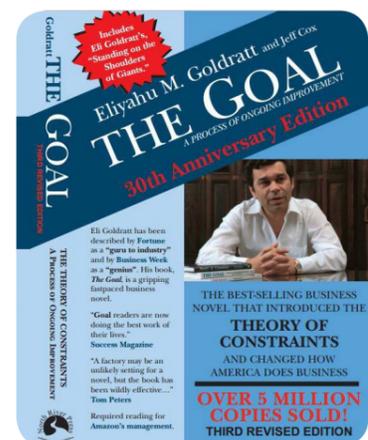
- Only make products at the bottleneck that are connected to real orders and meet immediate customer demands
- Focus the product plan around the area of the bottleneck as it is the most critical resource to optimise
- Buy additional equipment
- Aim to drive up production yield at the bottleneck to reduce 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
- Buy additional equipment

Recommended reading



“The Goal” – a book by Eli Goldratt, written as a short fictional story, that explores the concept of bottlenecks and how to manage them (ISBN 978-0-88427-178-9)

In Eli Goldratt’s 1984 book “The Goal”, he states that “a minute lost at the bottleneck, is a minute lost for the whole system”, or in other words, the bottleneck sets the pace for the whole process and should be the first thing that you try to improve to get the maximum benefit.



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