Capacity Planning

You would use this approach to enable you to understand the medium to long term capacity required for your business, in terms of people and machines.

Projected performance gains

Improved

- Understanding of people and machine capacity required to meet your customer's needs.
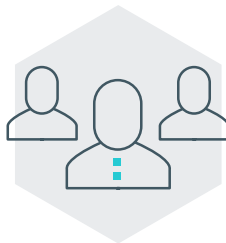
What investment is needed to understand the concept?

DIFFICULTY

Challenging

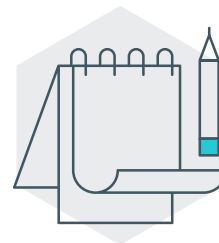Best results will be achieved by seeking expert support.

ACTIVITY

Team and Individual

The task can be completed by an individual, but it is useful to consider the views of your employees and customers.

EQUIPMENT

Computer

With Microsoft Excel software.

Explanation of the concept

The word Planning can have many meanings, but in the case of Capacity Planning, it means trying to understand how much capacity will be required in terms of people and equipment to meet future customer needs. It is planning for the future.

Several different strategies can be used in Capacity Planning including Lead strategy, Lag strategy and Match Strategy:

- **Lead strategy** – putting in place capacity in advance of forecast demand. This is a higher risk strategy, but you may be "ahead of the pack" and pick up the first new customers or achieve a higher profit margin.

- **Lag strategy** – waiting to put capacity in place until the real demand is present. This is a low risk strategy but you may be "following the pack" and miss out on new business.

- **Match Strategy** – adding small increments of capacity to keep pace with growing demand. This is a low risk, moderate strategy but this may restrict growth potential.

It should also be remembered that people and machine capacity are not the same, but sometimes companies do not make a distinction. However, in many cases, machines do not need constant supervision and can often be left to work once set up.

It is often possible for one person to run more than one machine at the same time without any issues. Machine capacity can expand without the need for more people.

In order to plan successfully, some basic data is required:

- How long it takes to make a product or deliver a service?
- The number of people and machines required to make a product or deliver a service (based on actual experience)
- How many of each product or service are typically delivered per month/year?
- An estimate on the likely growth or decline of sales by product or service
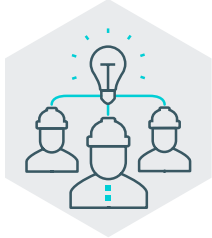
An example of a capacity planner

Using this data, it is possible to use a simple Excel spreadsheet model to look ahead and make predictions on machine and people in terms of gross capacity requirements. Different scenarios can be modelled and their effects understood. The objective is to make better decisions based on the analysis.
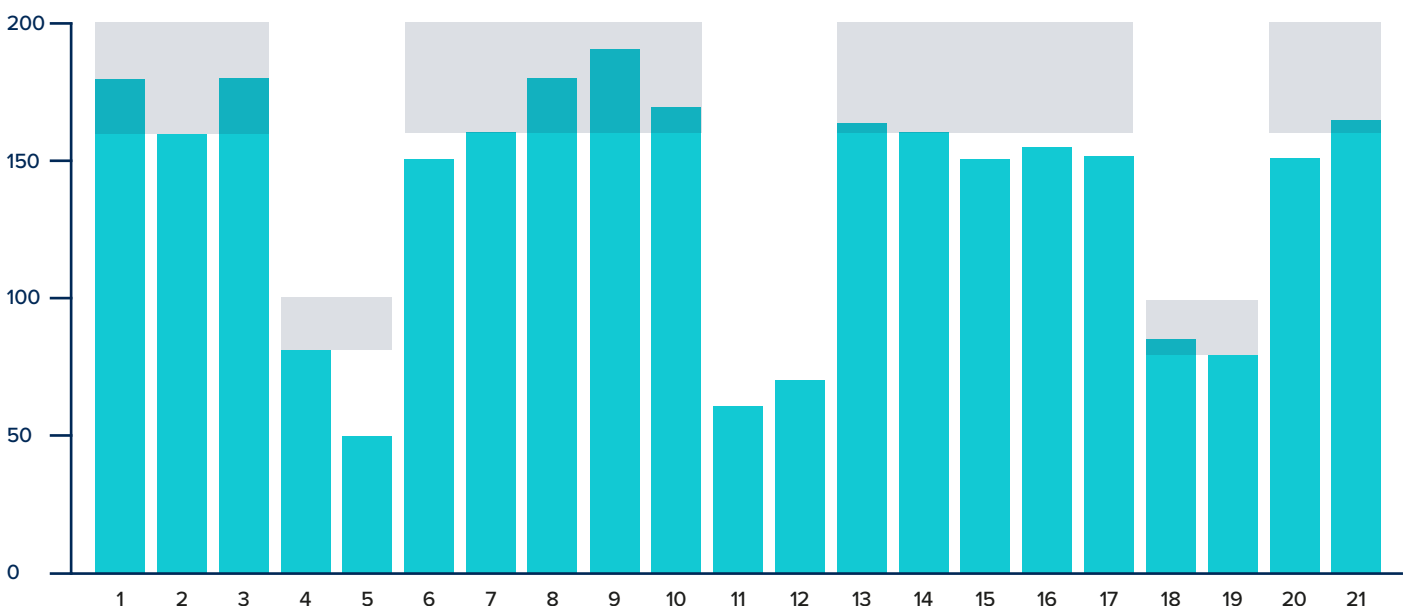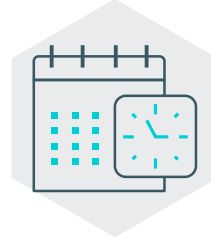
What action should I take?

1.

Download the Demand Analysis factsheet – this will provide you with the data required for capacity planning.

2.

Do some market research and write down your own views on how product/service demand might change in the medium term.
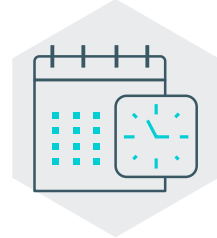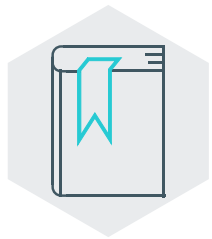
3.

Take input from your employees.

> **The Hub's Manufacturing Advisors can provide support to help you do this.**

4.

Use a simple Excel spreadsheet to model different scenarios.

Recommended resources

Correll. J.G. and Edson N.W., (1998) Gaining Control: Capacity Management and Scheduling, John Wiley and Sons.
ISBN: 978-0471291671

GC Business Growth Hub Factsheet 24: Demand Analysis

Glossary

Demand: The rate at which customers buy your product/services

Capacity: The maximum amount of work a resource (machine or person) can output in a given time period

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

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