

Developing a multiskilled factory

You would use this approach as part of your manufacturing strategy to understand the abilities of your existing workforce and identify areas for development.

Projected performance gains



Increased

- Staff development opportunities
- Employee flexibility to meet changing customer needs
- Job rotation to keep work interesting
- Labour planning



Reduced

- Reliance on a limited number of employees with key skills
- Overall labour costs

What investment is needed to understand the concept?

DIFFICULTY



Medium

Requires some reading around the subject and a structured approach

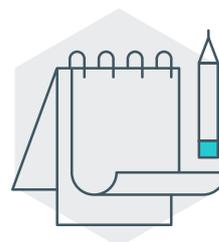
ACTIVITY



Team

Best results come from a team of managers and team leaders

EQUIPMENT



None

No equipment needed

Explanation of the concept

Robustness of the workforce is a corner stone of Lean Manufacturing. Relying on a limited number of people with key skills, makes your business vulnerable if you become overloaded, or have changes in the workforce. Multi-skilling prevents this. It does not mean training all people to do all things, as this would be wasteful. Following completion of this exercise, you should be confident that every job in the factory can be undertaken by at least three employees and that every employee can undertake three jobs (the rule of three).

In order to achieve this, you will need to gather together a group of your managers and team leaders to plot out all the jobs that must be (and should be) delivered in order to meet demand. You'll then need to perform a skills analysis to identify what skills you 'do' have within the business – you'll then see how well you're doing on the rule of three and can consider next steps to improve this. During this exercise be sure to consider the following:

1. It is important to differentiate between the current skills and roles a business already has and what it requires (e.g. what is or will be needed to run the factory and provide robust 3:1 1:3 cover)
2. Identify the critical skills of the business and ensure there are strategies in place to cover and/or replace these skills when required.

It may be necessary to upskill your existing workforce through training – which is a good way to retain the best people. For specialist skills you may need to consider recruiting new members of staff. The solution could also be in your processes. Cellular manufacturing, for example, is a way of organising the factory floor which means that team members can easily cover for each other and adapt to meet customer demand. More information on this can be found in our Lean Manufacturing factsheet (#2).

This process can be detailed and complex, and it also requires you to be realistic about the skills in your workforce. It can be helpful to bring in a third party and the Hub's manufacturing advisors can help you to do this.

3:1 - every task can be performed by three employees

1:3 - every employee can undertake three jobs

What action should I take?

1.



Gather together a team of managers and team leaders.

2.



Explain the concepts behind Multi Skilling.

3.



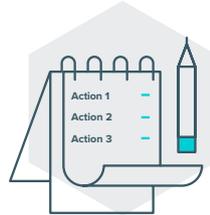
Using the template perform a skills matrix to draw up a plan of what a perfect workforce looks like.

4.



Plot the current workforce skills against the skills matrix to undertake a gap analysis.

5.



Consider if introduction of cellular manufacturing would be useful.

6.



Develop a plan to use training and development to support employee retention.

Recommended resources



Bicheno, J. (2004). The New Lean Toolbox. Picsie Books.
ISBN 0 9541 2441 3



[GC Business Growth Hub Factsheet 02: Lean Manufacturing](#)

[GC Business Growth Hub Factsheet 30: People Deployment](#)



Dummies - How to create a skills matrix:

<https://www.dummies.com/careers/project-management/how-to-create-a-skills-matrix/>

What is SixSigma.net - What's a Skills Matrix?:

<https://www.whatissixsigma.net/skills-matrix/>

Glossary

Cell Manufacturing: An approach whereby a number of machines or process steps are grouped together, often in a “horseshoe” shape, so that an operator can produce parts one at a time in “single-piece flow”. This replaces the “non-lean” idea of producing on individual machines in larger batches, and introducing large amounts of work in progress (WIP) and long lead-times to complete the process

The rule of three: Every job in the factory can be undertaken by at least three employees (3:1) and every employee can undertake three jobs (1:3)

Skills matrix: A chart which details the skills of your workforce.

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