# An Introduction to Lean for Manufacturers

Practical Workplace Training in Continuous Improvement

Available in one or two-day formats

reduce waste ◆ increase throughput ◆ improve quality



# **Program Overview**

# Introduction

Manufacturing is a challenging and highly competitive sector, and it has never been more important to understand how the fundamentals of lean manufacturing apply across all manufacturing businesses processes. When properly understood and applied, lean thinking has the power to significantly boost your productivity, quality and profitability by increasing throughput and reducing defects. This engaging, interactive and highly practical workshop provides the participants with a fundamental knowledge of lean concepts and how to apply them in a practical way within a bespoke manufacturing environment.

As with all our training workshops, the content is tailored to suit the context of your business and is facilitated by a trainer with significant experience in applying lean within small to medium manufacturing enterprises. Short theory sessions alternate with practical exercises and simulations throughout the workshop to help develop the concepts using a variety of learning styles, making the program very accessible to all participants regardless of their background.

The simulation exercise included in the two-day version of the program involves participants conducting a manufacturing process while measuring their output and quality. This is a key part of the workshop, helping to make the theory real. It shows just how much benefit can be realised from just a few simple changes in approach and creates buy-in and enthusiasm for change amongst your team. At the conclusion of the workshop, participants have a framework that they can apply to get real results, especially when supported by ongoing coaching from our highly experience lean practitioners as your team embeds the learning in the real world.

# Learning Objectives

Having completed this course, participants will understand:

- · How to focus their thinking when examining a process by observing delivery and quality
- · The concept of Waste versus Value Adding Work
- How to create an ordered and structured workplace using the principles of 5S
- A model for a lean organisation
- · Why it is important to standardise your processes
- · How to map processes using Value Stream Mapping and why that is important
- The Workcell Rectangle How to ensure a workcell stays productive
- · How to create flow
- The Theory of Constraints
- · The importance of quality and how to reduce defects
- How to run or participate in a kaizen event
- How to run daily toolbox meetings using visual boards

# Who Should Attend

This program has been specifically designed for employees working within a manufacturing environment, and is for you if:

- You are a manager or team member working as part of a manufacturing team where you are accountable for completing manufacturing work on time to a certain quality.
- You are part of a team supporting manufacturing activities, including:
  - · assembly and manufacturing operations
  - inventory management, warehousing and procurement
  - · engineering design and drafting
  - · planning and scheduling
  - management of ERP/MRP systems



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# Training Agenda and Structure

# Module 1: Lean Fundamentals

#### Overview

The first module introduces the participants to the origins and fundamental concepts of Lean Thinking. The core of this module is to provide a simple structure for thinking about what is value adding work and what is waste, helping participants to see waste for what it is, so that they can challenge existing processes in their work environments and see ways to improve them.

The workcell rectangle concept further expands on this by showing how the workplace can be divided into 'cells' that have four basic requirements that apply for all manufacturing businesses. Using this concept empowers participants to quickly identify improvement opportunities. The simulation exercise begins in this module and services to show how badly productivity can be impacted when typical wastes

#### Agenda

- · Overview and origins of Lean
- The Goal: What all organisations are trying to achieve
- The 5 Lean Principles
- Value Added Work vs Waste
- The 7 Wastes of Operations
- The Workcell Rectangle

#### Exercise (included in the 2-day version)

Part 1 of a simulation exercise using a bespoke manufacturing process to highlight the typical problems that exist and the impact they have on productivity.

## Module 2: A Model for the Lean Business

#### Overview

Module 2 breaks down the key tools, activities and behaviours that support a high performing organisation. These are compiled into a model comprising a foundation and pillars that support a roof of delivery in full on time of the required quality done at the lowest cost. While there are many lean tools and concepts available, the model we introduce here contains the fundamental components that typically provide the most benefit.

Of particular benefit to manufacturers is the workflow and pull systems pillar, which explores how high performing manufacturers use single piece flow, kanban, sub-assembly supermarkets and waterspiders to ensure that workcells remain productive across each shift.

The simulation exercise continues as changes (improvements) are layered into the process, showing how each improvement lifts productivity significantly. This hands-on activity provides important learning for the participants as they recognise the real opportunity that exists within their workplace, building engagement and enthusiasm for change.

#### Agenda

#### **Lean Foundations**

- · Visualisation of Purpose
- 5S Overview
- Process & Value Stream Mapping

#### **Lean Pillars**

- Standardisation
  - SOPS
  - · Standardising the Non-Standard
- Flexibility & Skills Management
- Workflow and Pull Systems
  - · Batch vs One Piece Flow
  - Kanban, Supermarkets & Water Spiders
- The Pursuit of Perfect Quality
- Daily Lean Management

#### Exercise (included in the 2-day version)

The simulation exercise continues, layering in changes to show how they enhance productivity

# Module 3: A Framework for Business Transformation

#### Overview

The final module shows how teams work together to apply their lean knowledge in the real world to improve their processes. Using DMAIC as a structure for planning and tracking projects, participants learn how to define projects, identify what they need to learn and research, measure progress and outcomes and, importantly, how to avoid the pitfalls that can derail projects or cause them to progress slowly.

At the conclusion of the workshop, the simulation exercise has shown just how much improvement can be gained through the application of these principles and tools.

The hidden factory has been revealed and your team is ready to give your productivity a massive boost!

#### Agenda

- Kaizen
- Prioritising projects
- Using DMAIC to plan projects
- A3 reporting
- How to get the most out of your improvement projects

#### Exercise (included in the 2-day version)

The simulation exercise concludes, showing a major improvement in throughput and quality.

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# **Kallista Consulting**



Kallista Consulting was founded in 2006 with a vision to help organisations achieve their goals by improving their leadership capability, team culture and process performance. We do this through developing and facilitating practical training and business transformation programs that provide a measurable return on investment. Our programs are designed by experienced professionals who have strong leadership and operational experience, are excellent communicators capable of building strong relationships at all levels and who can translate their knowledge into easy-to-understand frameworks and tools.

Now, more than 17 years later, we boast an enviable client base, and our business advisory team includes some of the most experienced productivity and leadership experts in Australia, with experience across many sectors, both public and private. Our outstanding track record of delivering a strong return on investment for our clients speaks for itself, and we have many ongoing clients with whom we work very closely with engagements running over several years.

Our key areas of expertise are:

#### Leadership Development (from frontline to executive level)

- · Leadership Fundamentals Training
- Leadership Development Programs consisting of training and practical activities to develop and adapt the skills to the workplace
- Training, coaching and mentoring for business leaders

#### Business Fundamentals Training

- Inventory & Warehouse Management
- · Outstanding Customer Service
- Time Management

#### Process Improvement

- Training in all aspects of continuous improvement (lean – six sigma principles) and their practical application, including green and yellow belt certification
- Business process mapping and performance analysis
- Business process transformation

#### · Project Management Training

- Traditional Project Management (PMBOK / Prince 2)
- Agile Project Management

## A few of our client partners























## And why they keep coming back



practical & engaging exercises that help translate the learning directly to the real world



Quality materials, printed in colour on heavy paper, that are comprehensive guides in themselves



experienced facilitators with engaging styles, who command credibility with their audiences



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