

An Introduction to Lean Thinking

What is Lean Thinking?

The term 'lean' is becoming more prevalent in many industries but it is used in several senses. The word is sometimes used to describe an organisation that has been cut to the bone and is surviving with the minimum possible staff or resources, or less than the minimum - 'lean and mean'. However, that is not the sentiment or meaning behind Lean as used in 'Lean Thinking', the term coined by Dan Jones and James Womack to describe an exceptionally focused, efficient, agile and successful organisation.

The term *Lean* here is more akin to the athletic meaning. Consider two top athletes – a sprinter and a marathon runner. They are both well-developed, muscular and with little fat. Both push themselves and have a disciplined training regime so as to continuously improve at their sport, but neither could excel at each others'. Both are *lean* in their own way – fit for purpose and trained to deliver a peak performance in their own event.

This analogy applies to organisations. Each has its own purpose, its own strategy and priorities, its own customers, employees, suppliers, regulators, stakeholders, heritage and opportunities. Each must therefore strive to be the best that it can possibly be – whether determined by the level of efficiency, satisfaction, profit or the outcomes it creates in the communities it serves.

Lean Thinking embodies a set of design principles that guide an organisational to deliver its purpose more and more effectively; continuously improving service delivery, systematically reducing all forms of waste and ultimately contributing positively to society. With its roots in Deming's transformational system of management, this last point reflects the true context of the term *Lean*.

The Lean Journey

Any enterprise (private sector, public sector or not-for-profit) will be able to significantly improve its business using the framework of Lean Thinking. Organisations often obtain rapid benefits from starting the lean journey, but more importantly they gain much larger benefits over the long term. The Lean approach, when properly applied, would result in a uniquely optimised business. This leaves it in a strong position to focus on continuous learning and innovation and to be more easily responsive to customers' needs –or even those of shareholders, regulators or Ministers.

Pioneered in organisations around the world, but maybe most famously in Japan, Lean Thinking looks at each organisation as an inter-connected *system*. By providing a method for every department and person to work together to improve the quality of their work, and to eliminate everything that does not add value (termed *Waste* and including rework, delays, errors, breakdowns, bureaucracy etc), the enterprise can systematically improve its business with few of the peaks and troughs of performance that are so familiar.

The Five Lean Principles

When Jones and Womack analysed what leading companies were doing to manage their business successfully over long periods of time, they distilled what they saw into a series of Lean Principles. These were the five critical strategies that companies like Toyota used to design and manage their business. At this high level they translate perfectly into any human enterprise, although the tools and methods used to implement them will of course be different in each industry. The end result will be different for each organisation, each delivering the service required for its particular customers and stakeholders.

Firstly, identify **Value** – what the customer really wants and is prepared to pay for. This must be defined by the end consumer, typically in terms of the requirements of a service, product or experience, a channel or method of delivery, a schedule or an ideal lead time, a price and the benefits the consumer expects to achieve.

Then identify the **Value Streams** - the specific steps that are needed to create the value and put it into the hands of the consumer. Map out the specific steps as they happen in reality (warts and all - not as they appear in the ISO manual on the shelf). Work with every team member to monitor performance and eliminate all waste, mistakes, bureaucracy and superfluous steps.

Then smooth the **Flow** of work to avoid peaks and troughs in the speed of business processes. Design a continuous movement of services and information through the various transformations to the final customer (involving all organisations in the supply chain). Pro actively manage variation in order to reduce backlogs, delays, rework, stock and write offs.

Let the customer **Pull** the service or product - only do what the customer wants, when the customer needs you to. Pace the work in line with real paying-customer demand. Institute a simple, transparent and continuous process, ultimately meaning an end to batching, sorting and queuing of work. Sometimes known as a Just-In-Time system in manufacturing and construction, but the principle can be applied effectively (but very differently) in back office and front office service functions.

Finally, pursue **Perfection** in all of this. Work systematically to continuously improve every aspect of what is done, how it is done, who does it and what it is done with. It is the striving for a seemingly impossible level of performance that brings tremendous results and provides a stimulating place for people at every level of an organisation to work.

The simplicity of these principles belies the profound transformation that is required to apply them to any organisation and the challenges that will materialise for everyone involved, at all levels of the hierarchy.

Reducing Waste

Reduction of waste is a key part of a Lean journey. Waste is any activity that absorbs time or resources but creates nothing of value, as perceived by the customer. For example:

-
- Mistakes which require rectification
 - Work passed off to meet targets
 - Hand offs, escalations, boundary issues
 - Any work in progress - backlogs, call queues or inventories
 - Services or information which do not meet the needs of the customer
 - Any processing steps which are not valued by the end customer (manual or automated)
 - Missing, incomplete, inaccurate or unnecessary items or information
 - Movement of people or information from one place to another
 - Delays or poor decisions due to central or hierarchical control of people or processes
 - Unutilised space or assets
 - IT systems that do not operate in a lean way (the extra costs is apparent in the cost of purchase, the cost of support, the reliability and the user effort to operate the screens)
 - Groups of people standing around waiting because another activity has not delivered yet
 - Machines or process steps that run more quickly than the rest of the process, resulting in a backlog at the next step
 - People doing mindless work or inappropriate work for their skill set
 - Good ideas lost or not followed up
 - Time passing without the customer having what they want
 - Customer or staff dissatisfaction

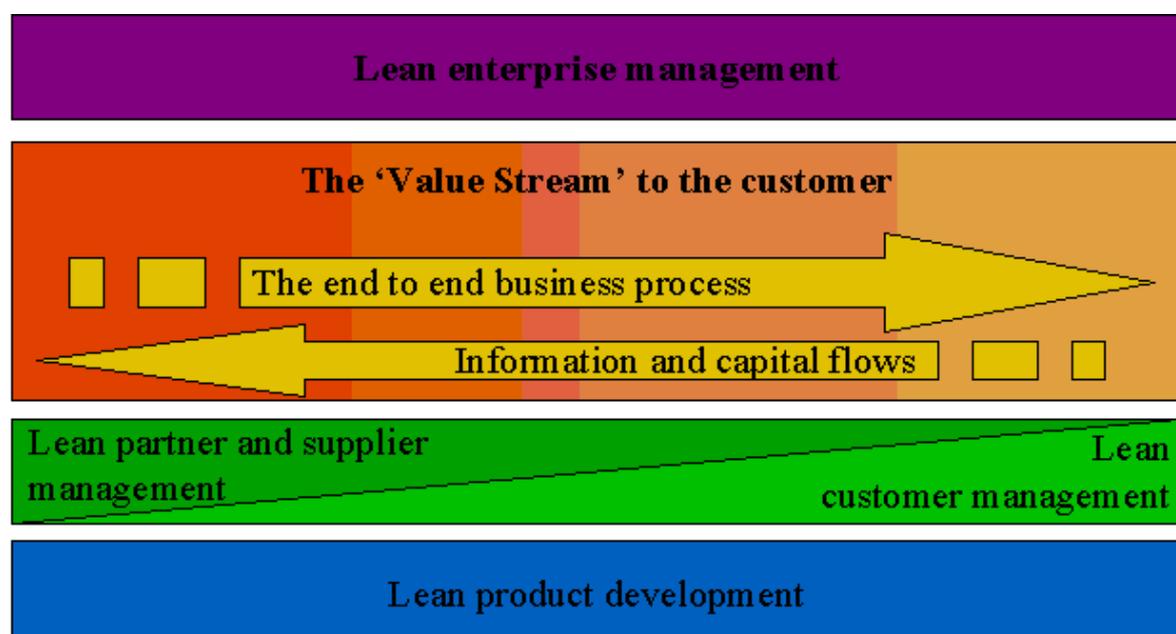
If these forms of waste are reduced using Lean techniques, you can expect the following to occur:

- Quality improves (with corresponding increases in productivity due to fewer mistakes, exceptions, complaints or escalations)
- Unnecessary process steps are eliminated and innovative alternatives found
- Overall costs decrease (total cost being more important than unit cost)
- Work in progress, inventory and backlogs reduce
- All services and information match more closely the needs of the customer - and are delivered more quickly
- Phone calls, work, product and information all need to move less from one place to another or one team to another
- Staff get only the information they need, just when they need it
- Customer and staff satisfaction increase
- Staff are empowered to make further improvements to their processes

You can appreciate how Lean thinking can have a dramatic effect on an organisation. However, it is not all plain sailing (otherwise it might be the norm everywhere). It does require a different way of leading and managing an organisation, and it does demand a new level of joined-up thinking and co-operation across an organisation. The challenges of good Business Change Management apply to Lean programmes as much as to any method of business improvement.

Implementing Lean Thinking

Jones and Womack's books develop the model further to look at the use of these principles, and the evolution of the enterprise on a long-term journey of customer satisfaction, business growth and increasing success. They point out that a Lean enterprise consists of five elements: a **product development** process, a **supplier management** process, a **customer management** process, an overarching **enterprise management** process, and a **production process** from order to fulfilment. Each of these processes is tailored for the organisation in question and is designed to perform in a consistent way despite the ups and downs of business or political life.



Interestingly Peter Coe, athlete Seb Coe's father and coach, states in his book that a middle distance runner should have between 5-10% body fat. Any less than this impedes the body's ability to manage its energy supplies and cope with peaks of intense activity. Any more, for many sports, and the body is hampered in its ability to perform.

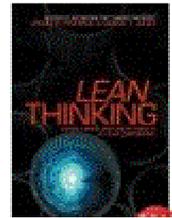
There are parallels here with organisations – each needs some spare capacity, or slack, so as to be able to cope with variations in demand, unexpected peaks of activity and crises, delivering service consistently even during these difficult periods. Staff should have sufficient time in their schedule to do the best possible job in an un-rushed way, and have time set aside to contribute ideas and energy to finding better ways to do business – week by week, month by month, quarter by quarter. A little pressure is generally good as it keeps people on their toes and forces them to prioritise what is most important, but sustained periods of stressful work is bad for motivation, morale and the health of the organisation. It also leads to too many mistakes and ultimately poor customer service.

Lean thinking can help you manage your cost base through these busy periods and minimise overheads during the slack periods – it is a philosophy and a design blueprint for matching ever more exactly the changing customer demands with the organisational capability. Hence it provides a framework for everyone in an organisation to work together for the benefit of all.

Another term commonly used in business is 'Just In Time' or JIT. It is used to describe something done at the last minute or as an after thought, sometimes as a panic reaction. This is almost the complete opposite of the expression as used in a Lean sense. JIT is actually a systematic approach to business that requires a great deal of planning and discipline. The design of its business processes and trading relationships are very different from usual practice. JIT delivers a responsive service that responds very quickly to fluctuations and changes in customer demand. It also delivers a much quicker supply chain and significant overall cost savings. However, JIT operators do not make it up as they go along – to deliver a service 'just in time' with close to 100% accuracy requires discipline, hard work and many rounds of problem solving and improvement.

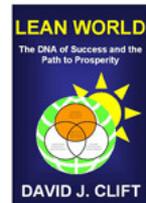
Further Information

There are many books on Lean Thinking, but the best starting points are the original texts by Jones & Womack. They initially studied the automotive industry to research how world-leading organisations managed their business. This led on to a wider analysis of other organisations in Japan, Europe and America and ultimately was distilled into some very powerful design principles for any organisation to use. Their book Lean Thinking is recommended (try to get a hard back version as the paperback font is quite small). The more recent book Lean Solutions concentrates on the customer interface and how a better understanding of the customer experience can drive improvements throughout an organisation and the whole supply chain.



Author John Bicheno has written an excellent summary of many business improvement methods, called The Lean Toolbox. It covers many of the tools and techniques that you may be familiar with and puts them into a common perspective that is designed to support a Lean journey.

David Clift has developed a straightforward and comprehensive management system that embodies Lean Thinking for the whole enterprise. His book, Lean World, provides a framework for any enterprise to think through what Lean means for their particular customers and stakeholders. It links strategic direction-setting to service/product development and service delivery to customer experience. Ultimately it explores what it takes to fundamentally transform an organisation and the steps on that journey.



James Crawford, December 2008.
Director, Touchpoint Change Consulting

Touchpoint Change Consulting specialises in helping its clients transform their businesses. Its main fields of expertise are in Lean Transformation, Customer Service/Contact Centre improvement and Business Change Management.

We can provide the above books for you or advise you which one might be most suitable for people in your organisation. Contact us to discuss your particular situation, without obligation.

See www.TouchpointChange.co.uk for more information or call 0845 1301 357.