

Lean, not mean

Lean thinking is not about making cuts and squeezing more out of what's left. The lean approach minimises activities that don't add to customer value, leaving more time for those that do.

Much of what we do at work that seems necessary, actually adds little to the value of products and services in the eyes of our customers. So it stands to reason that these activities could and should be minimised.

This is the basis of Lean thinking, an approach that allows businesses to change the way they operate in order to improve quality, reduce costs and deliver on time. The term *Lean thinking* was coined by Jim Womack and Dan Jones of Cardiff Business School when they were studying the success of the Japanese car industry. Jones says, 'It's a way to do more and more with less and less – less effort, less time and less space, whilst providing customers with exactly what they want.'

Too good to be true?

While this all sounds too good to be true at first, on reflection many of us would probably admit that we could be working more efficiently, if only we had time to get better organised.

So how is it done? Not with more training courses and process consultancy, or at least not in the traditional sense. The key to Lean thinking is that it works through direct intervention – a Lean Improvement Engineer helps a team from the company involved to make practical improvements. This is a crucial feature because it means that change is immediate, obvious to the people who will have to sustain it, measurable and directly related to the actual needs of the business.

Other keys to the success of Lean thinking include: working on clearly defined areas of operation, identifying a change team of 10–15 company people to work with, emphasising performance measurement, and ensuring that supplier companies and the project and company management are enthusiastic about what is going on.

Lean thinking hones working practices so that people, materials and resources operate in balance to eliminate waste – waste being anything that does not contribute to the value of the product and prevents a project running at optimum efficiency. But what Lean thinking is not about, is steamrolling in and stripping everything back to the bare essentials and then squeezing more out of what is left. The idea is to work smarter, not harder.

Lean thinking in the construction industry

Lean thinking was first applied, with considerable success, in the UK car industry. The Department of Trade and Industry (DTI) recognised that this success could be replicated elsewhere using a common approach. Today, 15 UK industry sectors have DTI supported lean programmes, including aerospace, ceramics, metals manufacturing, and other less obvious ones like hospitality and leisure, and red meat processing.

DTI now supports a lean scheme specifically for the construction industry, called the Construction Lean Improvement Programme (CLIP). CLIP is a strategic partnership between BRE and Constructing Excellence, and operates across the whole construction supply chain, from raw materials processors to clients.

The programme kicked off with a pilot scheme, involving seven construction companies, with very encouraging results. A year later, 35 companies had been through the programme, including main and specialist contractors, and manufacturers and distributors of construction products. Improvements achieved have been little short of astonishing and include:

- 20–40% productivity improvements in the targeted operations and processes
- leading to overall improvements of up to 15%
- pre-construction lead times halved
- refurbishment times for social housing projects halved
- one company has achieved annual cost savings of £220,000 in an activity of only £785,000 turnover.

How does it work?

The fact that CLIP is financially supported by DTI means that companies can implement lean thinking without paying commercial consultant rates.

All companies embarking on a CLIP programme work with a CLIP engineer who, working with a team from the company, devises practical improvements and provides training by example.

The CLIP activity begins with a detailed diagnosis that identifies the most inefficient areas of the business. The

knowledge gained from this stage is then put into action in a structured approach to devise and apply tools and evaluate progress. The process can be summarised as follows:

Pre-diagnostic – setting the aims and training the team in lean tools and techniques.

Diagnostic – practically applying the tools to analyse the situation.

Improvement activity – looking at the data for opportunities to improve processes.

Follow up – identifying barriers to success and setting improvement actions in place.

CLIP can be applied to any process in construction – specification, design, procurement, site operations and others. And it will work on a single construction project, in a single company, for several companies in a supply chain or for a cluster of companies working for a single customer.

The outcome

One of the companies to have been through a CLIP programme is J & S Seddon (Building) Ltd (see the case study, overleaf, for further details). 'Seddon is involved with a number of partnering contracts,' says Barry Thompson a Director at Seddon. 'We recognised that CLIP could help with the continuous improvement process, and become a real benefit to both our clients and the company.'

'Everyone involved in our projects, including the client, management team, workforce and sub-contractors, now understands and is involved in the process improvement objectives – they have a different mindset,' explains Thompson. 'Before we begin any new contract the first thing we do is ask ourselves, 'is there anything we have learned from the CLIP Masterclass that we can use to benefit this contract'.

For further information contact the CLIP programme manager Martin Watson 01923 664638
Email watsonm@bre.co.uk or visit www.constructingexcellence.org.uk/service/clip

CLIP at J & S Seddon (Building) Ltd

J & S Seddon (Building) Ltd is involved in a long-term partnership with Keele University, in which it is responsible for the refurbishment of Keele's student accommodation.

Seddon undertook a 15-day CLIP Masterclass to enhance the service it provides to Keele, and to provide a better system of working for its employees.

The aims set out during the pre-diagnostic stage were to:

- 1 generate a detailed programme of events covering planning, construction and the post-contract phase.
- 2 capture the best method of working that is flexible
- 3 improve communications on site and make it visible
- 4 include sub-contractors in the programme at an early stage
- 5 ensure a continuity of labour on site
- 6 generate team work between sub-contractors.

These expectations were reviewed at the end of the CLIP activity and ticked off as being achieved.

Various techniques and tools were identified, including:

- Pre-activity programme

Earlier refurbishment work had been delayed because asbestos had been found. The CLIP team put together a pre-activity programme that includes an asbestos assessment prior to starting on site – this will ensure such delays won't happen in the future. This pre-activity programme is now being applied to other projects.

- Refurbishment timing plan

Process mapping revealed a lull in work in the middle of the refurbishment, then a significant acceleration towards the end with the site operating seven days a week to finish the job. The team and sub-contractors worked together on a new approach which was also mapped. The new process map highlighted a potential reduction of 12% in the number of hours required to complete the refurbishment.

- Visual management

Seddon's team now meet all the trades on site once a week to communicate the next 4 weeks plan and discuss in detail the tasks for the week ahead. This ensures everyone on site knows what everyone else is doing. It also allows communication of any health and safety issues. This meeting is held around the visual management board in the site office.

- Delay and disruption log

The site now logs delays and disruptions. This, for example, allowed a claim back of approximately 450 hours from a window supplier.

The team at Seddons were quick to pick up and use the tools and techniques applied at Keele University. They are now applying these to other projects.

Snagging reduction

It was possible to compare the occurrence of snagging in the previous phase of the project with those following the CLIP Master class. Snagging was reduced by 69%.

The CLIP activity included an analysis of waste during floor laying using video footage of the process. This highlighted a variation in techniques which impacted on quality, together with health and safety issues that were dealt with immediately.

Floor related snagging was reduced by 80%.