

Carrying out lean improvement brings immediate benefits to the world of construction and maintenance such as programme savings, more reliability, fewer defects and better communication

Advocating lean

The Highways Agency is one of the largest advocates of lean in the construction and maintenance industries. Under the leadership of lean director Derek Drysdale the Agency has been developing its supply chain's ability to garner efficiency savings of over £90 million since 2009 and since 2013 the Agency has been applying lean internally, focusing on its own processes and how these impact on the supply chain



Lean is a philosophy and a methodology for delivering value to the customer and driving out waste from work processes. Lean practices originated in Toyota after the Second World War, arising out of necessity because traditional mass production and storage of inventory would have been too costly. Key principles of lean include: delivering what the customer wants, smoothing the flow of work, removing waste from the process, and being relentless in the pursuit of continuous improvement.

There is a focus on looking at where there is a gap between current performance and desired performance. By examining the reasons behind the gap and working with staff to discover the underlying root causes, the business can then carry out structured problem solving to gradually eliminate these and thereby enhance performance.

There is another element of lean which is not just about the technicalities of work flow and work processes. The philosophy of lean regards staff as being highly knowledgeable about the work that they do every day and considers them the experts. Staff are encouraged to share what they know and the knowledge of all is combined to investigate the problems and to implement solutions. The values of openness, communication, group working and can do attitude which the philosophy fosters are what stimulates

the development of a 'continuous improvement culture'.

Using lean

The Agency has a dedicated lean team which has worked with suppliers to introduce lean to the work they do. Lean and continuous improvement are written into contracts and this is supported by a lean maturity assessment, against which the supply chain's ability to move towards becoming a continuous improvement culture can be measured.

Suppliers now have their own staff trained in lean who lead their own continuous improvement activities. Carrying out lean improvement brings immediate benefits to the world of construction and maintenance such as programme savings, more reliability, fewer defects and better communication leading to closer partnerships. Lean methods which have proved highly successful on both construction and maintenance schemes are 'collaborative planning', 'visual management' and 'DMAICT problem solving projects' (Define, Measure, Analyse, Improve, Control, Transfer).

Working in collaboration with its suppliers, the Agency has established a multi organisational lean group, made up of lean professionals from the Agency and from major projects contractors and consultants. Together, they lead lean activity on smart motorway projects, collaborating with one another in order to generate and multiply savings and other benefits across the programme.

Within maintenance the applicability of lean in all aspects of work has been made visible, including in programming, depot management and in design. The technique of carrying out lean collaborative programme planning is also being used to great effect as applying the tool on this higher level helps to maximise resources and save time through coordination and problem solving.

A lean strategy

Part of the Agency's lean strategy is that suppliers are expected to become self sufficient in developing themselves to become lean organisations. In other words, organisations which thoroughly understand how each step of the work they do delivers value to their customer, learn from their mistakes, and are capable of continuously improving and driving out waste from their processes.

Early in 2013 the lean division expanded its reach to include staff within the Highways Agency itself. With the full support of my chief executive Graham Dalton, lean is being introduced by using visual management meetings to assist teams in performance management and improvement; there has also been focus on cross cutting projects to find ways to streamline processes and foster closer working. Engaging people in improvement activities and moving towards a continuous improvement culture will help the Agency's transformation toward its change of status to becoming a government owned company in Spring 2015. ➔