HAS THE LEAN ‘TRAIN’ ALREADY LEFT THE STATION?

Cynics have argued for years that Lean techniques, evolved from the Toyota Production System, are only relevant to the automotive and manufacturing industries and seldom fully realised outside of these industries. They claim the rail industry is radically different as it is predominantly involved in programme management, capital replacement, maintenance and scheduling – a million miles away from assembling cars or machining widgets.

However, the belief is changing and increasingly, over the last 10 or more years, Lean tools and techniques are being used to radically improve performance in diverse industry sectors such as banking, healthcare, construction and government. These sectors have discovered that Lean can not only help them become more productive and reduce costs, but can also address the mind-sets that so often prevent change in organisations.

In the rail infrastructure industry, areas such as operations, track maintenance, signalling, finance, HR and customer service can all benefit from the improvements that stem from adopting Lean principles.

What is Lean?

Lean is the relentless pursuit to eliminate ‘waste’ in a process or operation. ‘Waste’ is defined as any activity that does not directly add ‘value’ and ‘value’ is defined as anything that the end-user or customer is willing to pay for. It is not uncommon across many sectors to discover that up to 85% of activities can be categorised as non-value adding (NVA), so are a prime target for a Lean initiative. Note that Lean does not focus on making the value-add (VA) processes operate better or faster, but instead tackles the waste that has lay hidden for years or become accepted as ‘the way we do business’.

The relevance to rail

Lean is perfectly suited to the ‘project delivery’ process in the rail industry, with the principal aim of maximising value and minimising waste. It crosses traditional boundaries in the client-contractor relationship by eliminating wasteful practices like confrontational, zero-sum contracts, loading prices at every level with contingency and traditional ‘fastest is best’ programme management. Instead, gain-share contracting is adopted; flow control of feasibility, design, construction and commissioning is applied; whole project programming is enabled; business objectives are agreed and shared by all the stakeholders; and client-contractors’ relationships are positively engaged at all levels of the project to reach the jointly agreed targets.

What to look out for

The full adoption of Lean principles throughout an organisation requires a significant cultural change. Changing mind-sets, value systems or behaviours, which underpin Lean, takes a lot more than an internal memorandum - especially if the changes are to be sustained in the long term. Achieving these objectives requires a great many new skills and the alignment of every part of the
organisation’s management systems to drive the right behaviours.

This can be a bewildering, time-consuming and costly exercise, unless it’s approached with expertise, focus and commitment from the top team…but the benefits can be huge, and in the first instance relatively quick to realise.

**Changing the culture**

It is widely recognised that culture is a major factor in the successful introduction of Lean principles. The culture has to focus on sustaining change through leadership, empowerment and communication….in fact, managers have to move from ‘controlling’ the organisation, to ‘leadership’ in order to bring out the best in people.

A new Lean culture is established when the following is in place:

- A shared vision among all employees
- A participative leadership style
- Teamwork
- Open, two-way vertical and horizontal communications
- Collaboration
- Empowered employees
- Shared gains

**So why do it?**

The benefits of Lean are well documented, particularly in the process / manufacturing sectors, but in essence it enables an organisation to respond faster to market trends, deliver products and services faster, and at a far lower cost than competitors. Lean crosses all industry boundaries, addresses all organisational functions and impacts the entire supply chain from supplier to customer.

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**Box out: Lean in practice**

A major rail infrastructure maintenance business was frustrated by consistent poor asset performance coupled with weak failure response. The utilisation of the working window was down at 33%. An initial deployment of Lean and Six Sigma experts had not yielded any measurable impact despite focusing on what was perceived as particularly inefficient maintenance processes. Instead, taking an end to end approach to identify blockers to change, both cultural and technical, allowed all root causes to be addressed, increasing the utilisation of the working window to 75%.