

Case Study: Toyota

About Toyota

When most people think of Lean, Toyota is probably the first name that comes to mind, and for good reason. In the years following World War 2, Kiichiro Toyoda and Shigeo Shingo of Toyota took a careful look at their processes and made a series of simple innovations which was to become the foundation of modern Lean. Since that time, the history of Lean has been inextricably linked with the Toyota story, and Toyota is widely regarded as the home and centre of Lean manufacturing as we know it today.

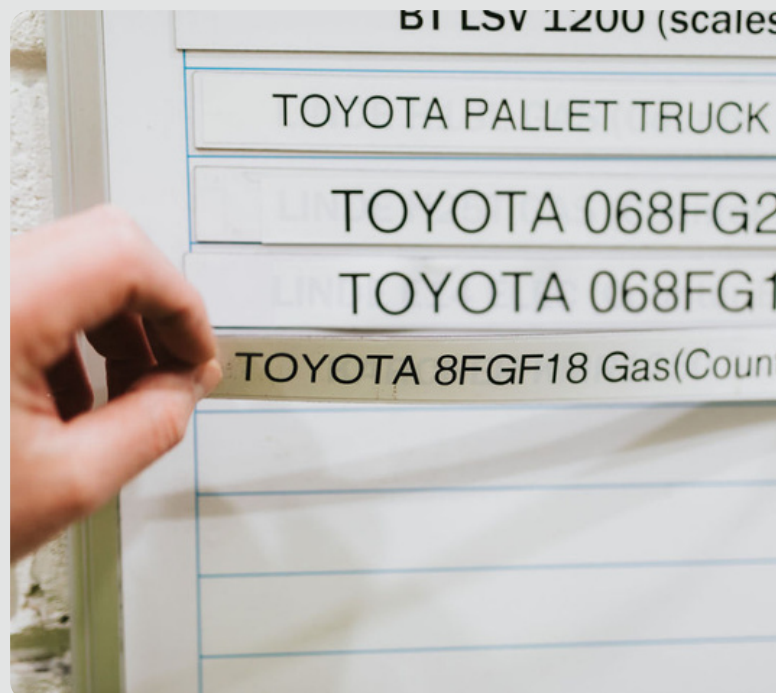
Toyota has two manufacturing plants in the UK – an engine manufacturing facility at Deeside, and a vehicle manufacturing plant at Burnaston, Derbyshire. As you would expect to visit them is a lesson in Lean itself!



Clarity Supporting Toyota's World-Class Lean Programme...

Our first involvement with Toyota was when the Deeside factory approached us about their 'lead time maps'. They had identified a need to make them easier for the team to use and make it simpler to show changes as they happened. Along with this, they wanted to improve the overall appearance of the boards.

The Toyota Team were also looking for a solution that could be easily and cost-effectively changed. It was of all importance that the visual management was dynamic and always reflected the absolutely up-to-date situation.





Our Approach

Clarity's magnetic overlays exactly fulfilled these needs. We visited the Toyota plant and produced an attractive, branded design which gave the information in a simplified, engaging manner. The previous paper versions were quickly replaced with smart printed boards in the new design and with the Toyota brand clearly on display. These could be changed at minimal cost and with little effort as soon as Continuous Improvement dictated a change was necessary.

This came at a very critical time in Toyota's story. The increasing demand for the hybrid engine meant that the engine plant was running at capacity, raising the question of whether support from Toyota's manufacturing facilities in Japan was going to be needed. This presented an urgent need to challenge cycle times within the plant so that Deeside could demonstrate their capability to build the engines themselves without support.

Toyota conducted a careful analysis of their systems and calculated that to make, the required volumes they needed to reduce their Takt time from 54 to 48 seconds.

Careful, laser-focused analysis of Toyota's processes took place, bottlenecks were identified, small but powerful engineering kaizens were made to ensure the system could cope with the faster line speed and the visual management was reviewed and upgraded.



The Results

The upgrade of visual management particularly involved focusing on the role of leaders and their teams. The need for a fully engaged team had never been so vital and, recognising the essential role of visual management in this employee engagement, Clarity was brought in to help.

The Lead Time Maps which Clarity supplied were a vital step in this process and worked excellently, but one thing was still lacking. The Toyota Production System requires that as soon as a kaizen is implemented, management want to know the results of these kaizens including the “before and after” measures.

We were asked to devise a way of displaying both before and after without confusing the information. Toyota was already using a paper flap which was applied with tape, but using this was time-consuming and inconvenient. Our production team experimented with ideas to improve this system and came up with a simple, jointed magnetic hinge device with a dry wipe surface for Toyota to try. This allowed the current results to be displayed on the board, with the earlier results available by simply lifting the magnetic flap

Toyota has been delighted with such a simple solution It has been a revealing lesson to all of us how even with pretty flawless methodology and precisely correct information, very simple visual tools can hold the key to an engaged workforce and an informed management team.



Thank You!

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