

Creating a culture of continuous improvement – lessons from motorsport

Many companies say they want to create a “culture of continuous improvement”. The behaviour of elite motorsports teams provides a good model of continuous improvement that can be adapted to manufacturing and other businesses, writes Tim McLean, Managing Director of TXM.

Some companies that approach TXM tell us that Continuous Improvement and Lean manufacturing are two different things. So what is a “culture of continuous improvement”, what does it mean, and how does it differ from Lean manufacturing?

McKinsey consultant Marvin Bower once described culture as “the way we do things around here”. Therefore a continuous improvement culture is one where improving continuously is “the way we do things around here”. It is a mindset, rather than a set of tools or a methodology. I believe the best examples of continuous improvement culture are to be found in elite sport.

Formula One motor racing is a great example of this. The best teams, such as Red Bull, Ferrari or McLaren, do not win every race, but they learn from every race and are systematic and rigorous in applying those learnings to ensure that they perform better in the next race. They also never stop improving. Even when they are world champions, their cars are the fastest, their pit crews the slickest, and their drivers the best, they still analyse every aspect of every performance to find an extra edge so they can stay in front.

They do this based on data, not gut feeling; they apply scientific methods to ensure that they check that changes lead to the desired improvements, and then lock the successful changes in to their designs and methods. This process of improvement is not just the job of the chief engineer, but instead is the role of every single individual on the team, from the drivers to the pit crew members.

A great motorsport example is the pit-stop. Think about how long it takes you to change a tyre on your car. It will be measured in minutes (hopefully not hours) and most of us would struggle to do it in less than 15 minutes. Now watch Formula One or the Bathurst 1000. The commentators will complain that a wheel change is SLOW if it takes more than a few seconds. The improvements in wheel change-over times in motor-racing have taken years. Many small improvements in the design of the wheel, the equipment used to jack the car, tools to tighten the wheel on the car, the training of the pit crews and the driver, have all led to a massive improvement over time.

Racing teams have used what we call the “Plan-Do-Check-Act” cycle to apply a scientific approach to improvement. They analyse performance to identify opportunities for improvement; then they



PLAN a solution to improve performance, DO by implementing the solution, CHECK that the solution leads to an improvement, then ACT to lock in the improvement by updating specifications, procedures and training. Then they start again and look for the next opportunity for improvement.

Now think about changeovers in your own factory. If you do any analysis of set-ups at all, in most factories it is likely to be a spasmodic or one-off exercise, and usually in reaction to a crisis. If improvements are implemented, it is unlikely to be checked to see if it leads to improved performance. Even if it gets checked, many companies will do little to document and lock in the change, so that when personnel change or forget the procedure the improvement gets lost and the business has to re-learn the improvement.

Therefore, we can learn from sport several elements of what makes up a continuous improvement culture:

- A relentless focus on improvement in every aspect of the enterprise.
- A determination to keep getting better even when you are already the best.
- A willingness to learn from every performance good or bad.
- The use of scientific methods to solve problems – known in Lean Manufacturing terms as the “Plan-Do-Check-Act” approach.
- The involvement of every team member in solving problems and continuously improving their own and the team’s performance.

The improvement culture transcends individual team members or leaders and is simply part of the way the team always approaches things. In other words, it is part of the culture of the team or organisation.

So what about Lean manufacturing?

Lean manufacturing is a system of management based on the Toyota Production System. It is a means of achieving a continuous improvement culture. In fact achieving such a culture in the organisation is the ultimate objective of Lean manufacturing. In our experience companies only sustain and consolidate the success of their Lean production system when they get into the habit of always striving to improve the system.

Lean manufacturing will teach you how to find and eliminate waste in your process, how to create flow, how to see and solve problems. Lean leads to a culture of continuous improvement wherein the organisation then looks to further improve the gains that have already been made, when the future state value stream map becomes the new current state map, and when the best set-up time or overall equipment effectiveness (OEE) you have achieved becomes the new baseline for improvement.

We are often surprised when companies tell us that they “did Lean last year”. This betrays a fundamental misunderstanding of what Lean and Continuous Improvement are all about. Just like Red Bull Racing are always looking to find ways to improve their performance, a lean company by definition is continuously looking for ways to cut lead times, eliminate waste and improve productivity.

A culture of continuous improvement is one where an organisation looks to improve every aspect of its performance every day at every level. Lean manufacturing is a system of management that is highly effective in developing this culture. Improvement is a journey, not a destination.

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