Sustainable processes: Efficient and effective practices
6th May 2021

Insights from our ‘Sustainable Production Innovation Network’ (SPIN) series of events.

**Session 1: Embracing sustainable practices**

On 6th May 2021, Helena Simmonds, Innovation Manager at WMG’s SME Group, welcomed delegates to the third Sustainable Production Innovation Network (SPIN) event, themed around sustainable processes: efficient and effective manufacturing. Setting the tone for the event, Helena asked the group to consider how Lean tools can generate the greatest benefit to sustainable manufacturing practices.

Alastair Barnett, Director and Senior Engineer at Composite Braiding, outlined his approach to efficient manufacturing. He explained that the process of braiding composites produces less waste than traditional composites manufacture. They can create the exact amount they need leaving little to no waste, and the whole process is highly automated and repeatable. This efficient production makes it a prime candidate for high-volume manufacture. Composite Braiding worked with WMG to demonstrate that they could rapidly process large parts, by producing the frame of a rail carriage as a demonstrator for the Coventry Very Light Rail (VLR) project. Alastair and the team were able to bring the processing power down from 96KwH to 9.6KwH – a 90% saving and demonstrating its potential for high-volume manufacture.

Composite Braiding are working towards becoming zero waste and are targeting particular areas of their production. For example, they are developing a mould with lower mass, meaning less energy is required to heat the part. They are also looking at ways to reuse waste materials in non-structural components and support components and are working with WMG internship to look at this. End-of-life is an interesting theme in composites, and Alastair explained that there is a lack of infrastructure for recycling of plastics and not enough research into this area.

‘Hot shot’ presenter, Sarah Connolly, Innovation Technologist at UK Research & Innovation (UKRI), gave a short update on grant funding opportunities specifically aimed at sustainability in the Foundation Industries. This was followed by Brigette Amoruso, Energy and Climate Lead at Make UK, who described the range of events, networking opportunities and seminars as part of their green campaign to transition to a more sustainable economy.

**Session 2: Breakout sessions**

Dividing into small groups, the breakout sessions were tasked with several discussion topics:

- How can lean practices benefit sustainability in your business?
- How could you assess the efficiency of your production processes?
- Do all production efforts add value to your products?
- Are there times when Lean and Green are trading off against each other?

One of the biggest themes that emerged from discussions was that of the importance and value of people. Be that understanding the existing skills in your business, to obtaining staff buy in to implement Lean principles, the value of people and culture to embed Lean in the organisation was considered critical. Other themes that emerged addressed operational considerations, for example,
the challenge of creating a process to track and audit sustainable practices based on data, where a process is highly manual or uses legacy machines with no digital capability. Finally, the group agreed that considering a materials’ entire lifecycle opened up opportunities to reduce waste or recycle.

Session 3: Applying Lean principles

The final presentation of the day was given by Alan Thompson, Operations Director at Lanemark. He outlined a recent project with WMG to increase production efficiency. Triggered by the Covid-19 pandemic, Alan and the management team at Lanemark sought to increase efficiency by reducing time spent moving pallets around, reducing external storage costs and creating more useable floor space.

WMG reviewed their high-level processes and carried out an end-to-end value stream assessment, from raw materials to finished goods. The project looked at the main bottlenecks and identified quick wins for maximum benefit to the business. Lanemark implemented several of WMG’s recommendations, including reconfiguring the stores layout and introducing multi-functional benches giving staff ownership of their own space. Alan explained that the outcome has been improved material flow, improved health and safety from clear gangways and stairwells, and 25% efficiency gains in labour hours with a net result of £50k per year saving.

Find out more

Our next SPIN event is: Industrial decarbonisation: Net zero manufacturing, on 14th July 2021, 3.30pm-4.30pm

The UK has committed to net zero emissions by 2050 but how are manufacturers planning to achieve this? Demand-driven sustainability is becoming a reality for small businesses, how can emissions be reduced in your business?

Join us at our next Sustainable Production Innovation Network (SPIN) event. This interactive online event will look at the road to net-zero for manufacturing SMEs. Industrial guest speakers will present case studies and interactive break-out sessions will give you the opportunity to explore the topic with like-minded businesses.

You will leave the event with a greater understanding of supply chain demands and opportunities for technical support to reduce emissions in the industry.

Registration is now open!

Interested in embracing sustainable manufacturing? Join our SPIN programme and become part of a cohort of SMEs and big business to share knowledge, implement change and grow.

Contact Helena Simmonds for more information on how we can help at:
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