

GKN Aerospace Case Study

Total Productive Maintenance
(TPM) Programme

CLIENT

GKN Aerospace is the world's leading multi-technology aerospace supplier. They develop, build, and supply advanced aerospace systems, components, and technologies for use in all kinds of aircraft equipment, from business jets and wide-body aircraft to military aircraft and the world's first all-electric passenger aeroplane.

GKN Aerospace has 38 manufacturing locations in 12 countries, employs over 15,000 people and has an annual turnover of more than £2.5 billion.

BACKGROUND

GKN Aerospace had embarked upon a Lean based Continuous Improvement (CI) programme – the Lean Operating Model. As part of the programme, there was a requirement to improve the performance and reliability of their manufacturing assets.

After a thorough health assessment that involved and engaged the senior team and their shopfloor members, the analysis culminated in developing a robust modular approach to increasing reliability through TPM.

SCOPE

In 2019, GKN Aerospace contacted Henkan to support them with a Total Productive Maintenance (TPM) programme as an element of their Lean Operating Model (LOM).

Henkan tailored the approach and delivered an asset care programme across their manufacturing site in the USA and Europe.



AIMS

The main goal of this TPM programme was to improve and sustain equipment reliability in the most cost-efficient manner.

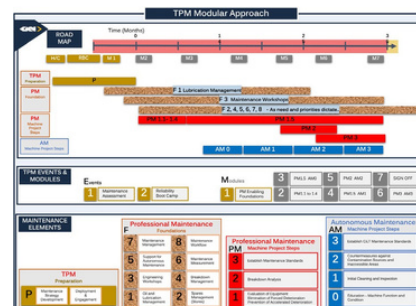
To do so, GKN Aerospace staff were trained in TPM application at "Pilot" sites, showcasing its impact on culture change and equipment reliability in Manufacturing Operations.

Employees were trained to lead future TPM rollouts independently, without external support. Subsequently, they extended the system to various areas within their operation.

This case study outlines the utilisation of the TPM toolkit on a model line at the Western Approach manufacturing facility in Bristol, UK.

APPROACH

- ▶ NDT (Non-Destructive Testing) equipment was selected as the pilot machine, not only due to it being a piece of equipment that had regular stoppages but also as an ideal machine to demonstrate the application of Professional Maintenance (PM) and Autonomous Maintenance (AM).
- ▶ The maintenance team were trained and coached on how to apply PM and, in doing so, created a deeper understanding of the machine's basic functions.
- ▶ This knowledge enabled them to develop highly effective maintenance strategies and an ability to identify and eliminate the root causes of breakdowns as part of the goal of creating a zero-breakdown machine. Furthermore, the PM team were able to educate the operators in AM, whereby they developed the competency and ownership to maintain the basic condition of the machine.
- ▶ The Programme was based on a 7-Phase modular approach, which systematically increased the team's awareness of asset care and supported them in specific techniques to understand and improve the current situation. The team could then use these practical learnings to increase the availability of the equipment.



The machine performance and the team's understanding of the method were measured to guarantee that the required benefits were realised.

In addition, a clear plan of the next step's activities was developed at the end of each module. This ensured the programme delivered the right results at the pace required by GKN Aerospace.



COMMENTS FROM THE CLIENT

At the end of the pilot programme with Henkan, we've seen some great results, 500% increase in mean time between failures, an 88% reduction in breakdowns, and to support the self-sufficiency goal, we've trained 11 practitioners, started building an army of problem solvers, who can now launch this programme in other areas of the site or even on other sites outside of WA! Credit to Henkan.

They really immersed themselves in the business, understood the business from the bottom up, and they understood how they could apply this tool to help us take the business forward. Hats off, I really recommend the programme to anybody thinking of taking it up.

Rob Bullock

GKN Western Approach Site Director

[Watch the Full Video Testimonial](#)

GKN Aerospace Western Approach fully embraced the TPM programme. As a result, the world-leading supplier enjoyed great benefits such as:

+500% Increase in Mean Time Between Failures (MTBF)

+88% Reduction in Machine Breakdowns

100% Of all planned activities were completed On Time In Full (OTIF)

11 Practitioners trained to lead the TPM Deployment across other business areas without external support

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