



TPM (Total Productive Maintenance) helps producers overcome different challenges



TPM (Total Productive Maintenance) is a maintenance methodology that helps food and beverage producers eradicate losses and overcome the specific challenges they face at their plants. Typically, companies find that TPM helps increase employee engagement, improve performance and reduce costs.

Andrea Sereni, Plant Optimisation Delivery Manager, E&CA, explains that Tetra Pak helps each customer adapt TPM to its needs: "Customers who face market constraints cannot sell more, even if they produce more. They want to become more cost competitive. On the other hand, customers with capacity constraints can sell more if they increase production, so they focus on productivity."

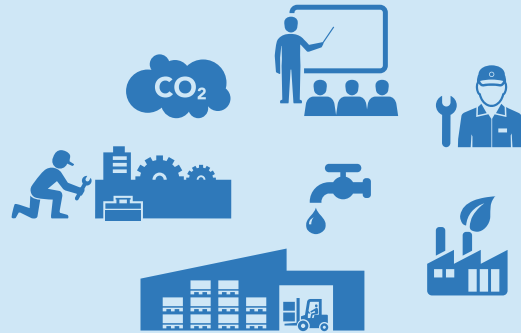
Identifying these needs starts with a workshop at each factory. **Gary Whitehead**, Director Solutions Deployment, explains: "First we understand the factory's strategy and challenges – in other words, what they want to drive. The process we follow is measure, benchmark (against their own factories or external best-in-class) and improve."

"Customers may not always be fully aware of what they need, so if we can formulate the problem for them, they are half of the way there," Andrea adds.

Eliminating losses in a repeated and sustainable way

Once the TPM journey begins, the aim is to achieve 'quick wins' to create enthusiasm – even though the truly important results appear after one and a half to two years. TPM achieves consistent results by working through eight pillars:

- Autonomous maintenance
- Quality maintenance
- Focused improvement
- Planned maintenance
- Educational and training
- Early management
- Safety, health and environment
- Office and supply chain



Improving quality and becoming more sustainable

Today customers are increasingly turning to TPM to make improvements in two areas: **quality** and **environmental sustainability**.

TPM uses a structured and systematic identification of failure modes during production – by understanding how errors happen, a factory can then eradicate them. **Alessandro Izzo**, WCM Manager, Rubiera converting factory, says: "TPM does not allow us to produce outside of our standards, and it aims to prevent issues as much as possible. This is a way of working that supports quality."

When it comes to the environment the biggest objective is usually to reduce the consumption of resources like energy and water. **Hu Xiang Yin**, Factory Director, Hohhot converting factory, says: "By carrying out a full analysis of the factory TPM has helped us reduce energy consumption, water use and waste." For example, between 2010 and 2015, tonnes of water per MSP (million standard packs) decreased by 81.2%. (1) Electricity consumption has decreased at a steady rate, for a total reduction of 30.9% between 2010 and 2019. (2)

In Rubiera, **Luca Farioli**, QA Packaging Material Manager, says it is difficult to separate the effect of TPM from recent investments. However, he emphasises that each TPM initiative adds up, and gives two examples. In 2014 a New losses investigation programme identified and resolved potential energy losses representing 3.6% of total consumption. These were eliminated, achieving cost savings and a reduction in carbon emissions of 2.2%. In 2017 the factory started a project to reduce waste water due to ink, and achieved a saving of 11.1% which has been maintained. (3)

Gary summarises his experience with TPM and the various challenges it helps producers meet. "I've found that different customers can be helped by the methodology. In fact, very few customers are not suitable for TPM. Moreover, there is no right or wrong time for TPM if you start right away."

- 1** Between 2010 and 2015, tonnes of water per MSP (million standard packs) fell from 55.2 to 10.4
– a decrease of 81.2%.



- 2** Electricity consumption decreased from 23.90 MWh/MSP (megawatt hours per million standard packs) in 2010 to 16.52 MWh/MSP in 2019
– a decrease of 30.9%.



- 3** Between December 2017 and December 2018 waste water from ink **decreased 11.1%,** from 297 kg to 264 kg per MSP. This saving has been maintained.



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