

Executive Summary

More productive companies typically generate higher margins and more profit. This can be reinvested in the company to support long-term growth. For processing SMEs, Equipment Productivity (the physical capital) is one of the most important metrics to master, as it determines:

- Whether you are operating efficiently and potentially your competitiveness in the marketplace, e.g. product unit costs;
- Consistency in production quality, balancing optimised output and cycle times, while minimising rejects;
- The amount you could be losing in wasted time (incl. equipment downtime), labour, processing errors, material and energy use;
- If your equipment has the capacity, flexibility and processing reliability to meet future demands;
- The best time to plan further equipment investments and purchasing decisions;
- More accurate business forecasts;
- Your people culture, health and safety and if you can afford to pay higher wages to attract and retain better skilled staff.

We have reached the tipping point in processing equipment where the significant productivity gains that were previously only available to heavily-capitalised plastics manufacturers, are now being utilised by SMEs.

For a country, productivity is closely linked with living standards. For a business, it is directly tied to performance – reduced costs, increased capacity, less waste and higher profit margins.

This guidance document explores the importance of having a watertight equipment investment and maintenance strategy. It also features productivity case studies in section 8, as well as highlighting some of the quick wins and some impartial machine selection advice, including the pros and cons of each respective technology. This information can help you to decide when to upgrade plant versus when investment in newer technologies may be warranted.

Taking this holistic approach could lead to significant productivity enhancements, even for profitable processors. For example:

- 20% higher output by optimising existing plant (*case study 8.1*);
- 40% reduction in heating energy from machine enhancements (*section 3.6.2 barrel insulation*);
- Address the factors that could lead to an 85%+ OEE score;
- 10-15% improvement in dry cycle times without altering the process, just more stability (*see section 3.5*);
- Achieving up to 85% energy savings, leading to increased profits and well as supporting Net Zero manufacturing targets;
- The most transformative digitalisation and automation tools that can increase efficiency and production capacity (*see section 3.8*);
- How a recommended equipment maintenance schedule can lower operational and maintenance costs and increase OEE by 20% (*see section 3.7*).