

PRODUCTIVITY IMPROVEMENT: VERIFICATION & VALIDATION



Applied Nutrition is an exemplar SME based in the Liverpool City Region, achieving local success and national recognition with their sports nutrition products. The MTC was enlisted to help them expand and take their business to the next level.



Engagement with MTC has been timely to support how best to improve our blending and filling operations. As we look to upscale operations, their guidance has been invaluable in where to focus our resources towards.

Steven Granite, Director – Applied Nutrition



THE CHALLENGE

Applied Nutrition Ltd. in Knowsley are manufacturers of sports nutrition and supplements products, with a blending, filling, packing and warehouse operation.

The business has seen exponential growth in sales, and this has led to increased requirements for expanding operations in their current state. There is an opportunity to expand site manufacturing and warehouse space by taking over a neighbouring unit.

The company is looking to invest in a new type of blending system, as well as an automatic filling line following their own analysis of user requirements.

MTC'S SOLUTION

Following a line walk and subsequent discussion, MTC identified the need for analyses of current and future production data, run rates, blending times and fill line timings in more detail.

This will help sanitize the original site operations' user requirements to refine the Matcon system requirements.

Blending machinery requirements' suitability can be determined for both current and future state requirements, to improve speed of commissioning and avoiding any costly changes to spec requirements at a later date.

THE OUTCOME

- ▶ Analysis proved that the decoupling of the blender from the filling line allowed for greater utilisation of the production equipment
- ▶ Initial blending system proved to not be suitable for this particular application, as well as having a payback period of almost five years
- ▶ An intermediary hopper/container between these two stages of production would allow, for any given line, blending and filling to happen simultaneously on separate batches; greatly increasing utilisation
- ▶ Methods of conveying powder were researched, with vacuum transfer deemed the most effective

BENEFITS TO THE CLIENT

- ▶ Appraisal of future auto-filling line
- ▶ Strategy to achieve alignment of powder operations – blending, transfer, intermediary holding, filling – to maximise equipment utilisation
- ▶ Payback period options for liquid filling line
- ▶ Vacuum powder transfer system proposed
- ▶ Proposed changes projected to show an increase of over 100% in revenue per line per hour



It has been really rewarding working alongside Applied Nutrition as they look to grow operations so impressively.

Alex Head, Research Engineer, Transformation Team – The MTC



↑ 100+%

Projected increase in revenue
per line per hour

£292K

Avoiding investment deemed
sub-optimal for application

£1.3M

Projected productivity saving
from proposed improvements

