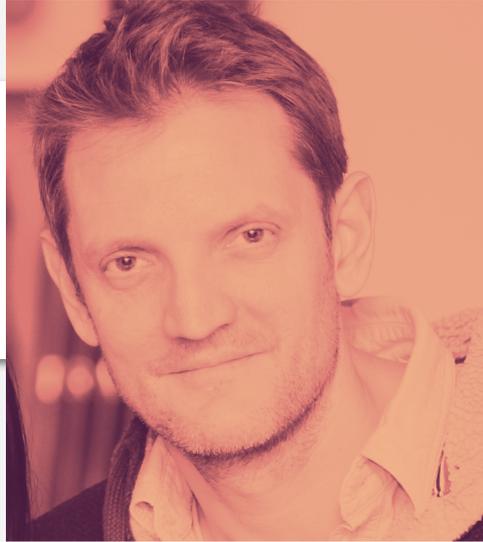


**How to increase
the factory
throughput by
10% with no new
equipment?**

Automated Manufacturing Processes: Bring Tangible Benefits Quickly with AI Applications

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Unit8™



Business case: what is slowing the factory down?



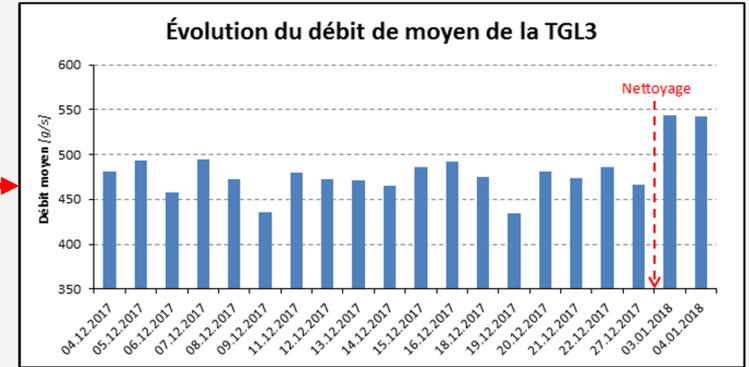
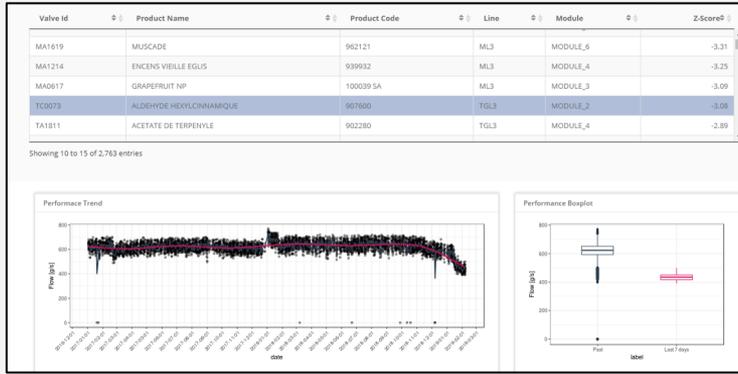
Over one fourth of the Perfumery production worldwide delivered.

The automated internal logistic platform can involve more than 2000 different ingredients on 6 production lines performing over 10000 automated weights.

In 2017 compounding reached almost 90% automation.

Are we sure we get everyday the best possible performance for this automate?

Solution: predictive maintenance



Process: we analyzed in-depth logs to spot some phenomenon we could not see on the production line: the valves crystallization which was leading to smooth and invisible degradation of weight debit over time.

Result: data analytics solution with ML-based alerting to spot major performance reductions.



Business case: how to reduce dependencies in production to increase throughput?



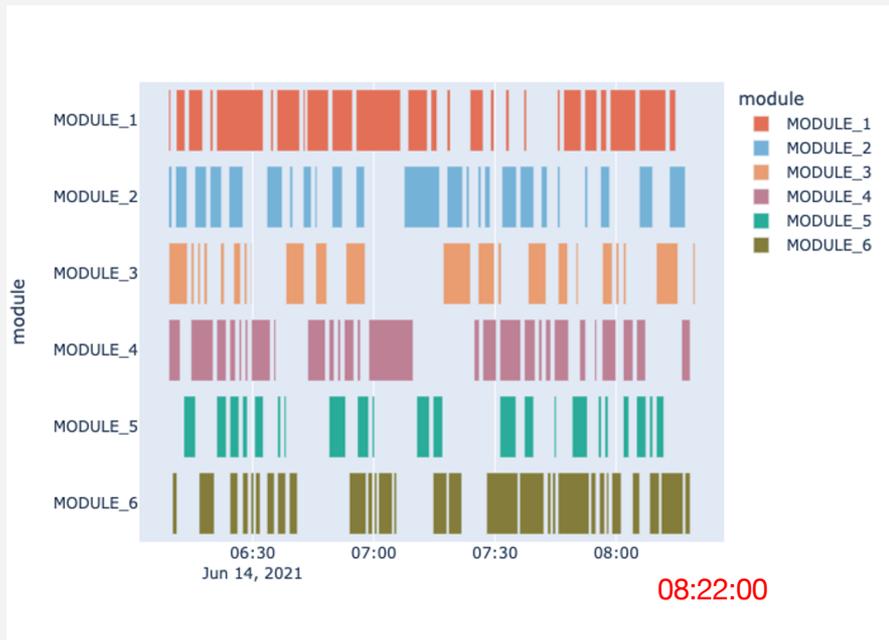
The order of the process orders (items to be compounded) matter!

Which one to do first? And which one after that? What if there is a rework?



Solution: Digital Twin and nonlinear optimization

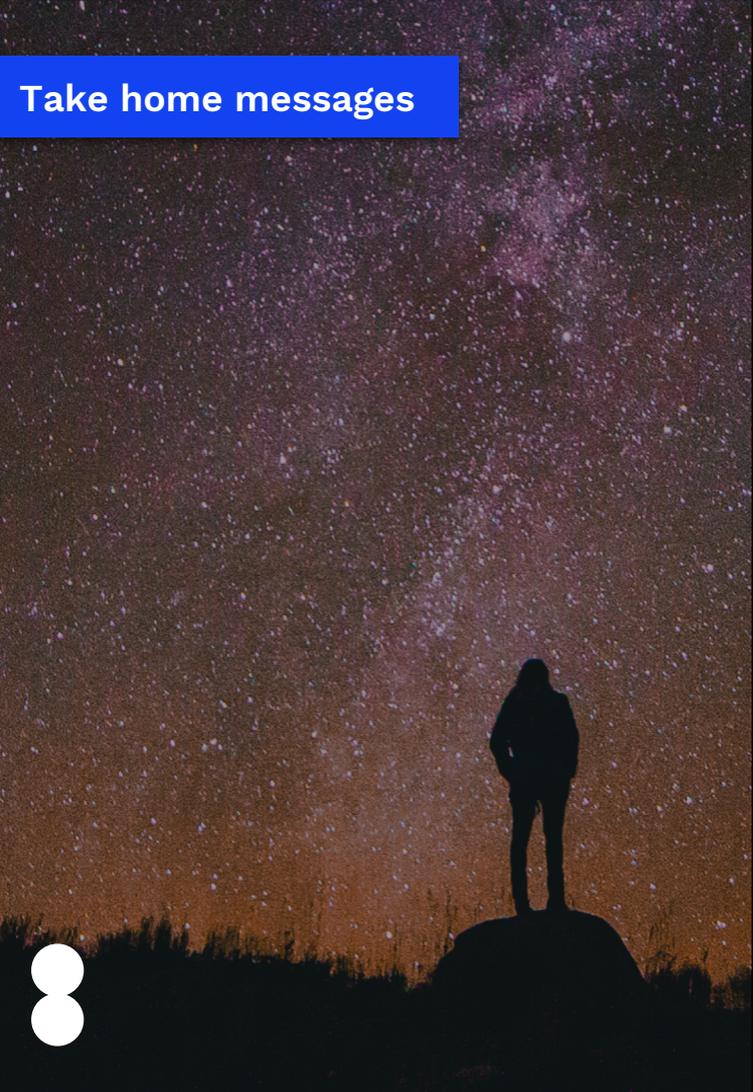
Default Order



Optimized



Optimized is about 10% faster



Take home messages

Find your pain-points and see if you have data about them to start a conversation

You do not need to wait for the perfect solution/equipements/sensors, you can launch immediately and improve the setup meantime

Stay humble and make incremental improvements

Look for potential in repetitive processes

Maturity of factory enables us to be fast and successful

The process is much more agile when it is analytics-driven

Spot the things which humans do not spot

Take into account the constraints



Q&A

Do you use AI/ML/DS in manufacturing?

Did you already gain benefits in manufacturing using AI?

Have you ever stopped at PoC and did not reach benefits?