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# PROCESS OPTIMISATION IN THE FOOD INDUSTRY

## Using photonic-based process monitoring to optimise the process in a chocolate production line

Use Case in the Food Industry

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MULTIPLE is implementing its technologies to improve the quality control in a chocolate production line. The whole process optimization system will be run with different labels of chocolate and measure things like the sugar content, grain size of the sugar and other quality product characteristics such as glossiness and texture. Chemometrics models will be used for the prediction of chocolate fat content, adulteration, composition, viscosity and crystallinity. The most suitable approach, or combination, will be selected for implementation and embedded in the software, so product quality can be checked and validated. With this data, deep classification models will be retrained and validated using cloud services. This technology aims to develop a control strategy capable to revise the destination (i.e. the final chocolate label) of the current subproducts even in intermediate close-to-final stages, depending on the compliance with quality requirements and characteristics of different chocolate types and labels.

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