

## **Digital Twin approche on batch process**

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The aim of this presentation is to present the under investigation approaches to create an empirical model of production line working on a batch process.

The site of Syngenta Monthey is composed of 17 building containing multiple asset. A part of theses asset operate in batch mode and are monitored by multiple sensors. All process and sensors data have been stored in structured database since few years and we are convinced that these data contain a lot of relevant process information.

The approach currently under study consist of automatic modelling of the production line using machine learning and/or deep learning algorithm directly applied to the historical data. The different part of the approach ranging from simple modelling of the chaining of the operations to more complex modelling for golden batch and dependency between parameters and cycle time will be exposed during these presentation.

As the work is in progress, the result will depend of the stage of the project.