IMPaLA

The production of **polymer-based products** is getting more complex due to the increase of restrictive specifications imposed by the major manufacturing industries. Therefore, plastic manufacturers need to face the difficulty of quickly designing and producing products while maintaining high and. **constant quality and optimising costs and productivity.** It becomes essential **to address key elements** such as **quality criteria, less tolerance for post-production wastes**, usage of recycled materials, and many others during the production process.

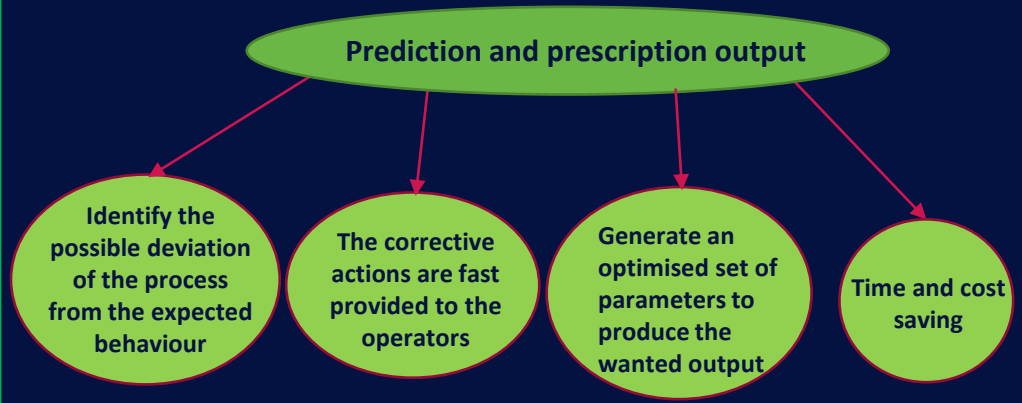
In a world facing a transformation towards data-driven processes, the importance of **producing data is a key factor** for innovation and improvement. Through the **usage of AI technologies**, production processes can improve by monitoring machines' sensors as well as optimising machine parameters, **improving the productivity and overall final quality**.

IMPALA SOLUTION:

The IMPaLA solution addresses the need to optimise the plastic production process by analysing process data and providing key information to the final users.

physical/chemical modelling is too complex to be derived and adopted in a model-based optimisation algorithm. therefore, experimental trials are required to acquire useful data to pursue the target objectives. For this purpose, Bayesian optimisation is employed. It represents an algorithm capable of performing exploration (to investigate the input-output correlation) and exploitation (to optimise the target objective) during the optimisation procedure.

RESULTS



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Co-funded by the European Union

BRUNELLA MERANTE

PROJECT MANAGER @ GVS SPA

www.gvs.com

https://www.linkedin.com/in/brunella-merante-9ba71288