Technische Universität München – TUM School of Engineering – Bioseparation Engineering Group

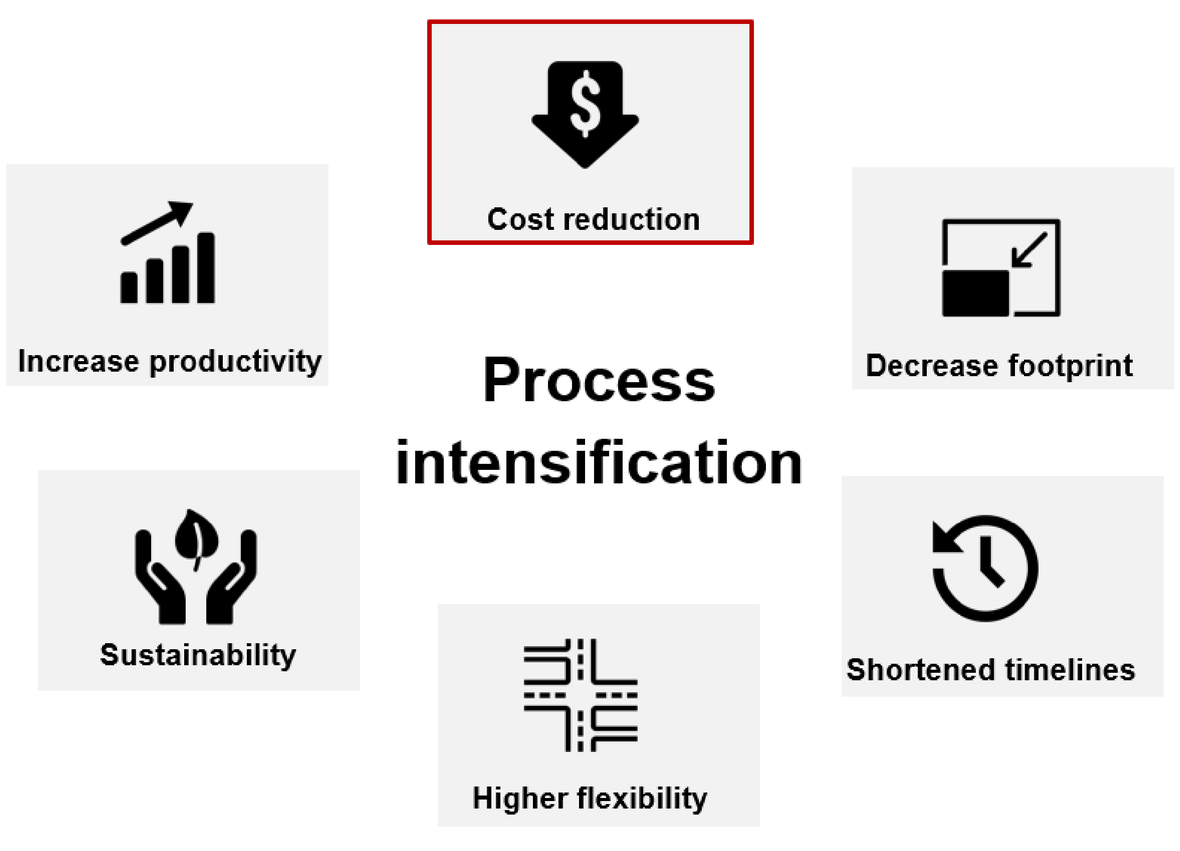
Master thesis/Internship

Design and Development of a PI Decision Support Tool: A Literature-Based Approach with Prototype Implementation

Project Description

Process intensification (PI) in the biopharmaceutical industry aims for the improvement of productivity and flexibility while simultaneously decreasing cost and process footprint. This can be realized through establishing and applying innovative equipment, methods, and modes during the development of integrated upstream and downstream processes.

This thesis aims to design a decision support tool for process intensification in the biotechnology industry by systematically analyzing and discussing relevant literature. The focus lies on identifying key criteria, methods, and decision-making frameworks used in PI applications. Insights from the literature will be used for the conceptual design of a decision tool.



Your Profile

- Independent and structured way of working
- Experience with programming beneficial
- Student in the field of biotechnology, biochemical engineering chemistry or similar

Contact

Start: From now/Flexible
Language: German/English

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Your Tasks/Methods

- Extensive literature research
- Identification of key PI elements
- Prototype development of the decision tool