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# *Optimiser*
## The Machine Learning Optimisation Application for BioSolve *Process*™

Part of our new BioSolve *Analytics* package, *Optimiser* is a proprietary tool that employs Bayesian inference statistical methods to automate the daunting task of multi-variable and multi-objective bioprocess modelling.

| 40 | 10 | 95% | <90 min |
|---|---|---|---|
| DECISION VARIABLES | MINUTES TO SET UP | REDUCTION OF MANUAL OPERATION | TO ACHIEVE RESULTS* |

*based on 150 iteration runs

## Using BioSolve *Process*™ with *Optimiser*

**1**

**SET OBJECTIVES**

E.g., max. yield, lowest capital investment, or smallest carbon footprint

**2**

**DEFINE VARIABLES**

Set Decision Variables:
operational parameters such as cell culture method, titre, or no. of column cycles

Optionally Set Constraints:
lower & upper limits such as max no. of Protein A column cycles

**3**

**RUN THE *OPTIMISER***

Generate the optimal process configuration that resolves competing objectives

## Make the Impossible **Possible**

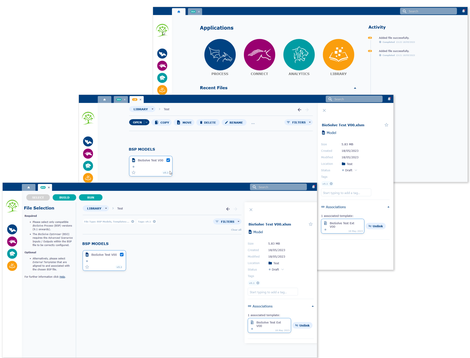
Manually creating process simulations is time-consuming and not feasible when you have multiple objectives and dozens of decisions to consider in your design space.

*Optimiser* solves this matter by unwinding complex, intractable issues to generate optimal solutions that solve multiple objectives—all within tens of minutes.

## What Are Your Objectives?

**UP TO 3 OBJECTIVES CAN BE SELECTED DURING OPTIMISATION**

- Process Cost
- Capital
- Labour
- Process Performance
- Sustainability
- Time




## Who Should Use ***Optimiser***?

- Engineers
- Operators
- Supply Chain
- MSAT Leads

## What Is **BioSolve *Analytics*?**

BioSolve *Analytics* is a new suite of tools to enhance the BioSolve *Process*™ user experience.

Our first BioSolve *Analytics* module is the *Optimiser*. Additional BioSolve *Analytics* module, including *Visualiser*, a new visualisation tool, are coming soon.

**Unleash the Power of BioSolve *Process*™**
By actively learning the problem space, *Optimiser* automatically finds solutions to complex bioprocess optimisation targets.

Learn more at **biopharmservices.com**

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