

IPT Lab Automation

Five building blocks for successful laboratory automation



Reproducible, automated, costeffective and efficient production of cells, organoids and other biological or medical products.



We support and train you with our automation management tools to unlock the full potential of your production in terms of optimization with «Industrie 4.0» technologies.

IPT Lab Automation Consulting

Five building blocks for successful laboratory automation



Total effort of Fraunhofer IPT: 23 days + 2 days per SOP









Block 1 (optional) Experience Day (Onsite at IPT)



Goal



Gain deep insight into the current state of the art of **automated stem cell production**, and downstream metrology.



Approach

A **live demonstration** of our platform technology as well as the review of historical data and current video material lead to a deep understanding of the automation technology and the control software behind it.

Deliverables

- Getting familiar with the fully automated processes as well as the control system behind them
- Insights into the current state of the technology & generation of practical of practical knowledge based on concrete implementation examples

Your Expected Efforts



• On-site time at IPT: 1 PD

Block 2 Quick Scan & Partner's Vision





Goal

Understanding **your** needs, goals and challenges, in order to derive the audit's direction and focus.



Approach

Gathering of information needed for & identification of opportunities from a tailor-made audit.

Deliverables



• SOP analysis of the considered process

Automation feasibility assessment

Your Expected Efforts



• On-site time at your company: 0,5 PD per considered process

Additional efforts: Completing of questionnaires

Block 3 Current State Analysis



510:



Goal

Technological and economical analysis of the current automation level & setting up objectives for a detailed audit.



Approach

In-depth analysis of selected processes using dedicated tools and assessment based on expert knowledge.

Deliverables

- Economic modeling of the current situation
- Overview of automation-level of systems and processes
- Overview of automation-competences

Your Expected Efforts

- On-site time at your company: 0,5 PD
 - Additional efforts: Provision of existing (documented) information (e.g. process overviews)





Block 4 Potential & Gap Analysis



Goal

The potential for automated production is derived from the economic key figures and the necessary steps for automation are outlined.

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The results from the SOP analysis are used to develop automatable process solutions and to derive a feasibility study.

Deliverables

• Overview of the economic benefits of process automation

• Overview of your company's gaps





• On-site time at your company: 0,5 PD

Additional efforts: Completing of questionnaires

Block 5 Roadmapping & Implementation Strategy





Goal

Strategic plan of next steps (including milestones) to reach the company's Lab Automation vision.



Approach

Derivation of a company-specific roadmap to reach the envisioned Lab Automation level and execution of an economic analysis of the derived actions.

Deliverables



- Tailor-made implementation and action plan
- Business case analysis

Your Expected Efforts

- On-site time at your company: 0,5 PD
- Additional efforts: -

Outcome from the IPT Lab Automation Consulting

Engineering

You are provided with a scaled 2D layout of the designed production plant including a parts list of all modules. This forms the technical basis for starting the final developement of a fully automated plant.

Economics

Our cost-efficiency analysis comparing the manual and automated production process provides you with well-founded data that prove the lucrativeness of an automation investment.

Strategy

At the end of our consulting, we develop a detailed roadmap for you, which recommends the next steps to be taken in order to lead your production into full automation.





Contact





Laura Herbst, M. Sc. Research Fellow Automation in Life Sciences Tel. +49 241 8904 - 560 laura.herbst@ipt.fraunhofer.de

Fraunhofer IPT Steinbachstraße 17 52074 Aachen www.ipt.fraunhofer.de



Kai Janning, M. Sc. Business Unit Manager Life Sciences Engineering Tel. +49 241 8904 - 302 kai.janning@ipt.fraunhofer.de



Bastian Nießing, M. Sc. Group Manager Automation in Life Sciences Tel. +49 241 8904 - 142 bastian.niessing@ipt.fraunhofer.de