



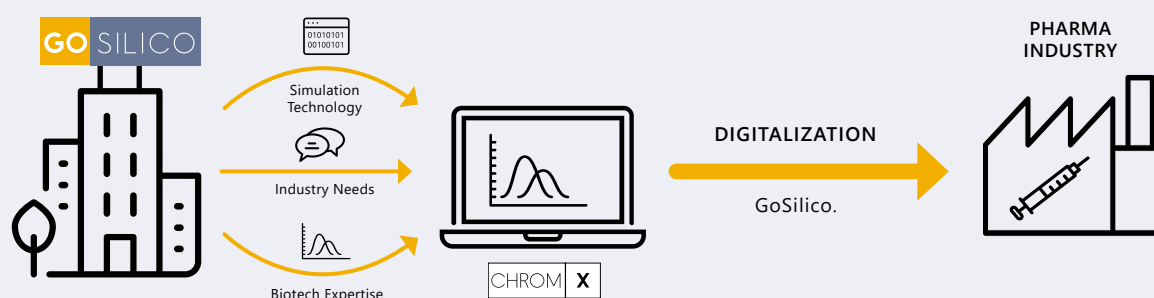
# Stop Experimenting. GoSilico.

Software and Methods for Computer-Aided Bioprocess Development

## IN-SILICO PROCESS DEVELOPMENT

Our ChromX simulation software allows you to take your liquid chromatography experiments from the laboratory to the computer. As a company, it is our passion to drive sustainable innovation in life sciences. Because of this, ChromX does more than just utilizing our profound expertise in simulation and biotechnology. While developing, it was also important for us to incorporate the needs of the industry. This allowed us to create a software tool that is easy to use, robust, fast and versatile all at the same time. **Digitalize your process development and GoSilico.**

**i** "in-silico":  
performed on a computer  
or via computer simulation



## Gain Insight into ChromX' Functionalities

### MODEL BUILDING

ChromX simulates any single and multi-column processes in all relevant modes of chromatography. Various state-of the art models are built in (IEX, HIC, AC, MMC, ...). To begin, you merely need to import few experimental UV signals for model calibration. Once calibrated, ChromX can predict all further experiments in-silico.



### IN-SILICO OPTIMIZATION

Let the computer find the optimal process conditions regarding purity, yield, or any other optimization goal. Furthermore, with ChromX' estimation routines, it is quick and easy to screen the whole design space to ensure product quality and process robustness.



## Contact Us for More Details



**Dr. Thiemo Huuk, CEO**  
Sales and Finances



**Dr. Tobias Hahn, CEO**  
Technology and Service



**Dr. Teresa Baumann, COO**  
Marketing and Quality Management

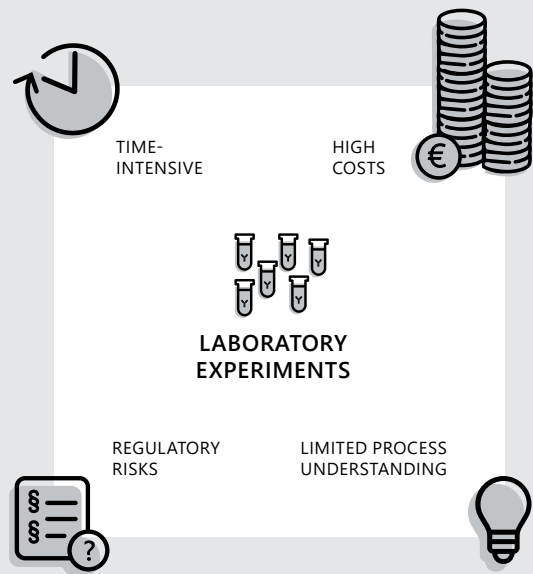
### We are committed to your success!

GoSilico is your professional and reliable partner on the path from experimental to in-silico process development. Get your ChromX license today and benefit from our additional service of ers in the form of consultancy, training and contract modelling.

CURRENT PROCESS DEVELOPMENT: LABORATORY EXPERIMENTS.

CHALLENGES AND LIMITATIONS

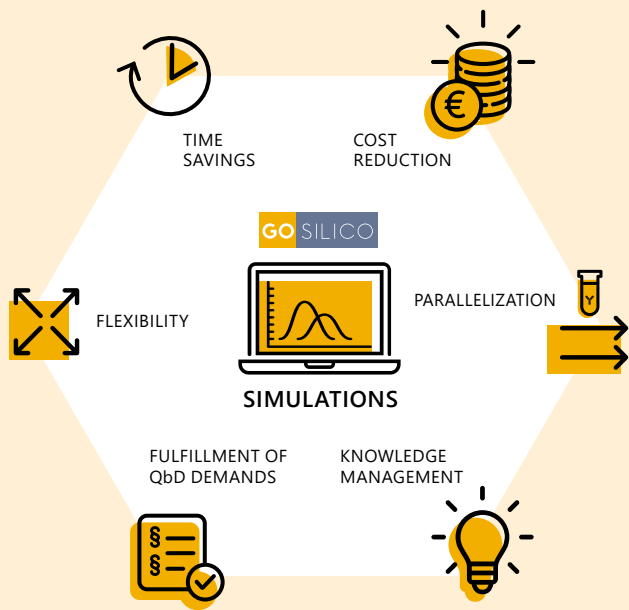
The biopharmaceutical industry has always been driven by innovation and disruption. The development of purification processes is still relying on time-consuming and expensive laboratory experiments. Over the past few years, Design-of-Experiments (DoE) was heavily used to reduce the number of experiments, to lower costs and reduce time. But success has been limited. Given the recent demands on Quality-by-Design, the experimental approach is now also challenged by evolving regulatory expectations. Regulatory authorities advise you to prove a mechanistic process understanding. This is expensive and difficult to prove in a fully experimental fashion, but cheap, quick and easy when based on computer simulations.



NEXT GENERATION PROCESS DEVELOPMENT: COMPUTER SIMULATION.

THE BENEFITS OF CHROMX

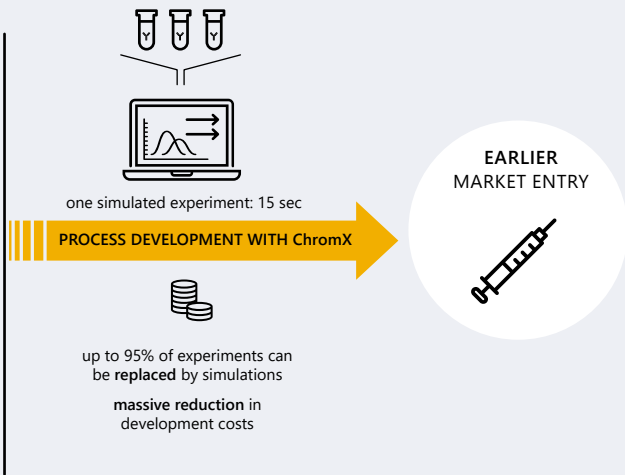
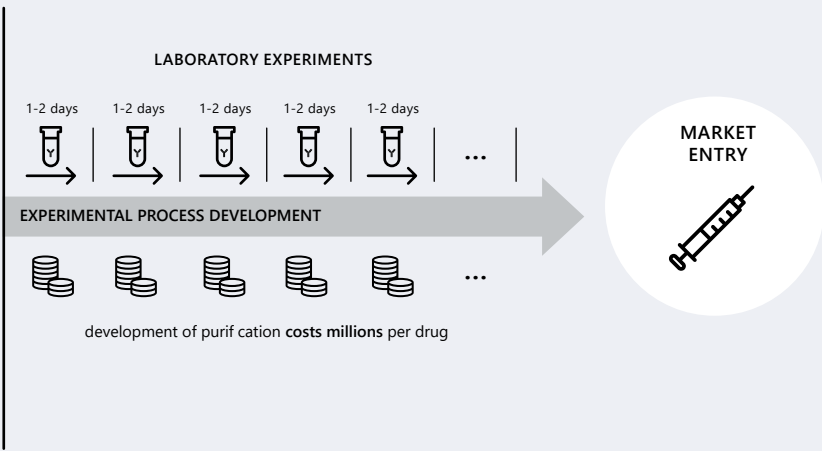
ChromX is a cutting-edge software tool for simulating your preparative liquid chromatography processes. Laboratory experiments can now be replaced by inexpensive and fast computer simulations, lowering time and reducing costs significantly. ChromX allows you to simulate process scale-up within seconds, enabling fast and flexible process transfers between different sites. Until now, handling complex product pipelines has been an unmet challenge. Low costs and fast simulation time enable the parallelization of your development activities. Since ChromX is based on the numerical simulation of mechanistic models, fulfilling regulatory demands on process understanding comes for free. The process knowledge of your computer model thereby improves from early to later development phases. With ChromX, you can easily share and manage this expanding knowledge.



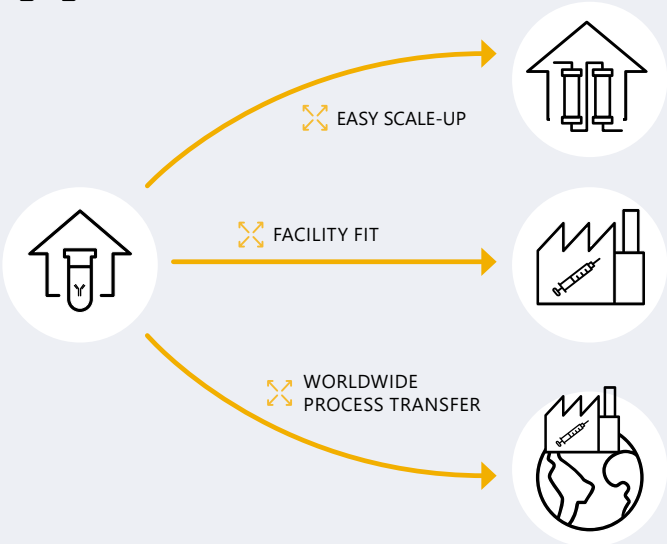
THE BENEFITS OF CHROMX



BENEFIT: Time and Cost Reduction



BENEFIT: Flexibility



BENEFIT: Knowledge Management

