Experts for Continuous Processing...

From development to manufacturing

System Integrator

CRO

The combination of process knowledge and engineering & plants competence makes Microinnova unique. We are a service provider for chemical and pharmaceutical producers as well as for contract manufacturers. We support your commercial production with our flow chemistry competence.

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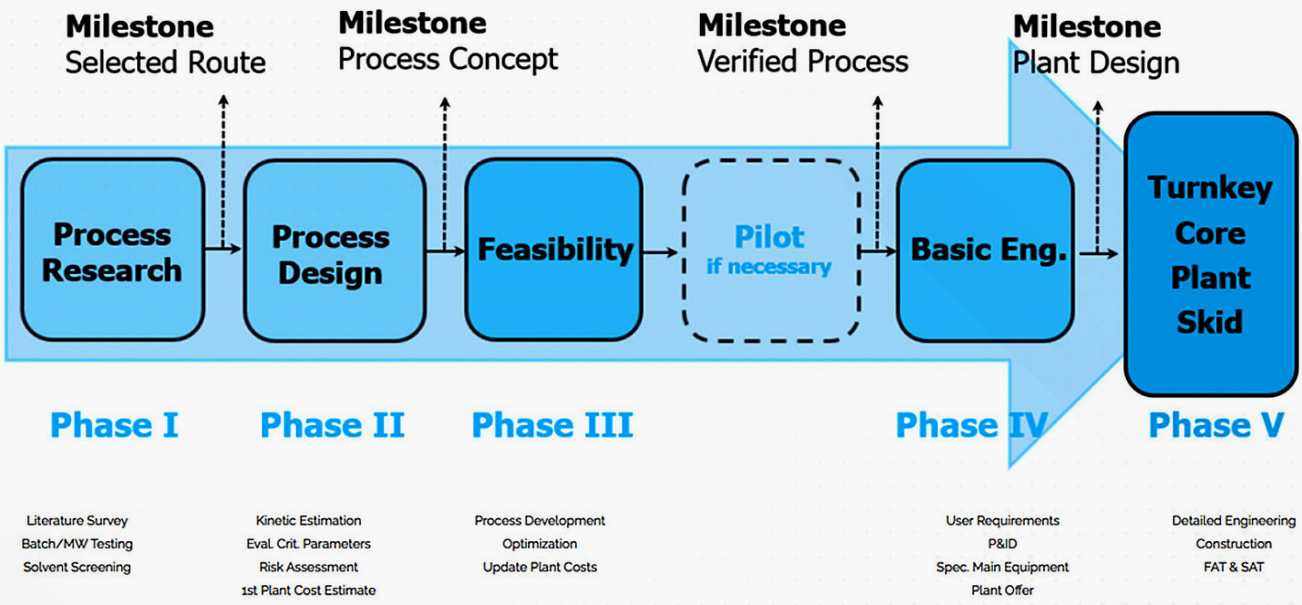
www.microinnova.com

One Stop Shop
for Flow Chemistry

Using experience from over 200 projects, we have developed our own proven methodology for intensifying processes using flow chemistry. The unique interaction between our engineering and process development teams means Microinnova delivers a truly boutique-style experience for maximizing your process efficiency.



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Phase 1:
Process Research

Comprising of 2 main parts, the first part involves route scouting during which we work on finding a chemical production route. The second part involves developing the process concept in which optimize the chemical route to use as few unit operations and solvents as possible and develop clever strategies for potential by-products.

Phase 2:
Process Design

We identify critical parameters for a process on the basis of a methodology we call "MIC Fish", in order to understand the process needs from the chemistry and the chemical engineering perspective. A block flow diagram places focus on the plant realization, including risk assessment and a first plant cost estimation.

Phase 3:
Feasibility

The chemical feasibility phase is where a continuous process is developed and optimized. The technology selection responds to the identified critical parameters. The second step, the technical feasibility phase, is when we perform process verification on scalable equipment and generate data for basic engineering.

Phase 4:
Basic Engineering

Based on the user requirement specification (URS) of the plant, we specify the main equipment and incorporate our generated process knowledge into the plant design and provide an offer for the plant. Advanced features like PAT, model predictive control and advanced protocols like MTP can be integrated.

Phase 5:
Turnkey Plant

Detailed engineering ends with the design release (Design Qualification DQ), after which the plant will be assembled. The design and assembling is verified by a Factory Acceptance Test (FAT) and ends with a Site Acceptance Test (SAT) at the client's site. Qualification (IQ, OQ, PQ) can be executed by Microinnova on request.

You plan to implement a flow process into your production?

We are your **partner on that!**

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8 Differentiators
That Make Microinnova Unique

Microinnova serves its customers as a one stop shop for continuous manufacturing in the field of chemical processing, from development to manufacturing plants. This contains process research process design, process development, pilot plants & amp; pilot testing, basic engineering and skid-based plants. The following eight differentiators make Microinnova unique and our solutions indispensable.

Our interactive team's experience is highlighted by more than 200 completed projects in the last 20 years. Pilot and manufacturing solutions are often realized by means of modular continuous plants which enable flexibility for continuous manufacturing and a quick time to market.

We focus on end-to-end continuous manufacturing, dealing with processes in the areas of synthesis, workup and formulation.

Working with a wide range of different process intensification technologies, we select the best technology for each process.

We enable uniform process conditions for each molecule and are used to working in regulated environments. Microinnova is ISO certified and can build plants according to GMP and ATEX standards.

Our team has successfully completed more than 200 projects, satisfying numerous clients along the way and forging promising business relationships.

We handle materials of various conditions. Processing highly viscous materials like melts, suspensions, precipitates, and solids impact or trickle beds is not new to us.

The strong interaction between our chemists and our engineers makes us unique, as the combined competencies enable better processes, especially when hazardous materials are involved.

We upgrade continuous plants in the lab, and we engineer and scale them to the tons-per-hour scale.

We have specialized in designing and building modular continuous plants.

GET IN TOUCH

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