



MicroFactory Assembly Line for Medical Devices

TOBIAS GERBRACHT
CHRISTOPHER ESSERT

RAYA 2025 Finalist Event

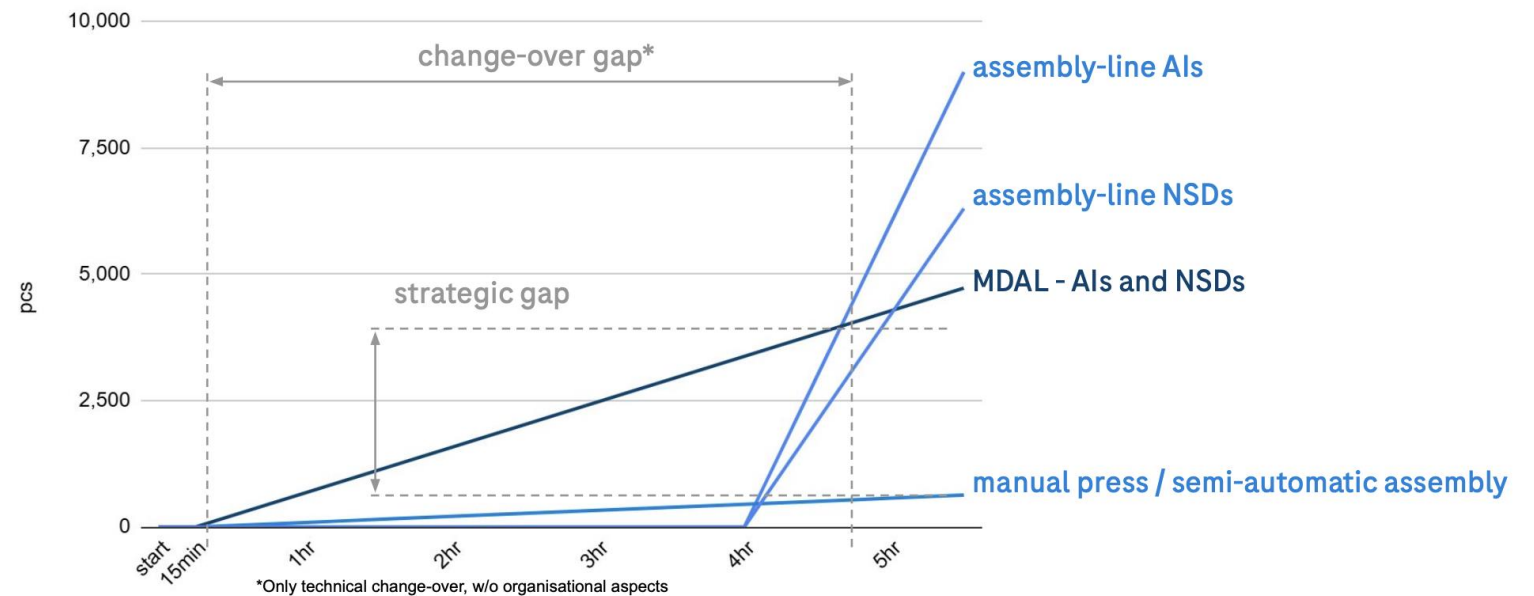


Why Change Was Needed

- Growing product diversity & shrinking batch sizes
- Manual work → ergonomic strain & contamination risk
- Legacy automation too rigid for fast changeovers
- 24/7 uptime | zero-touch handling

Modular Device Assembly

Closing the gap - order size and fast change over

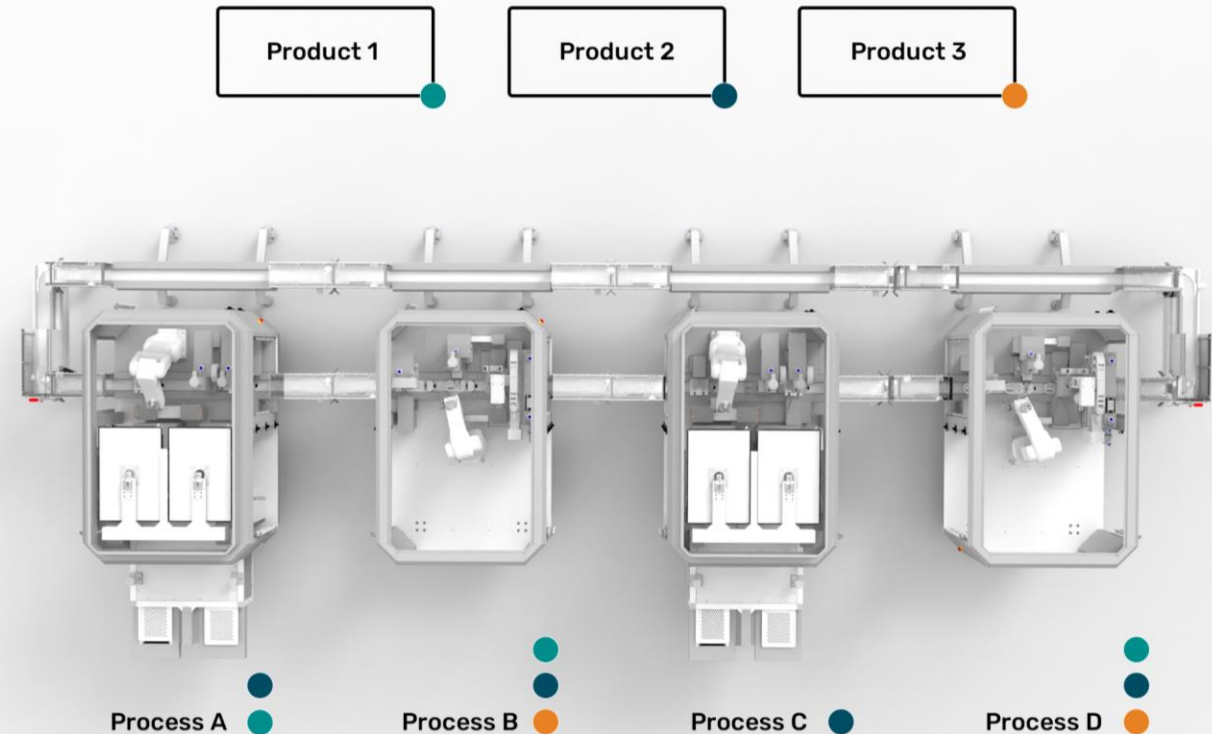


Think different

Not sure where your product pipeline is heading?

No problem, our automation platform is process oriented, not product oriented.

Different life science products share similar manufacturing processes. Use one MicroFactory process module for multiple products and save time and money.

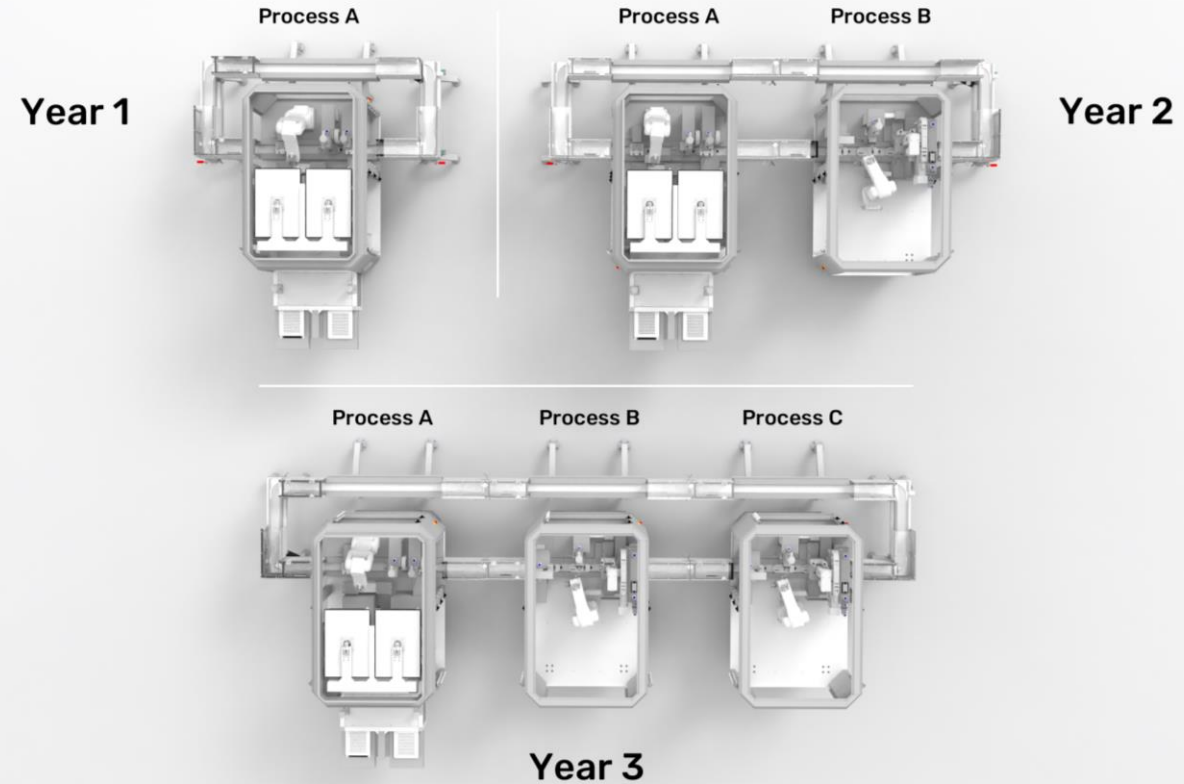


Automate step-by-step

Not ready to invest in an entire production line?

Start with one process module for a specific good manufacturing process. Gradually add automation to your production as needed.

The ability to expand your production line over time, including modular documentation and qualification of individual process modules, opens up a new world of endless possibilities

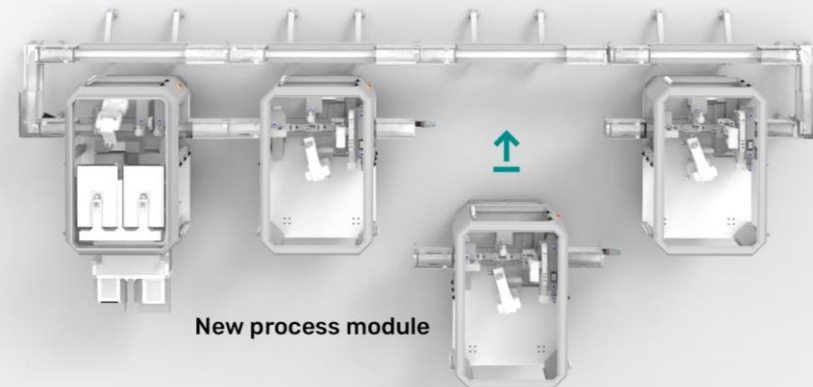
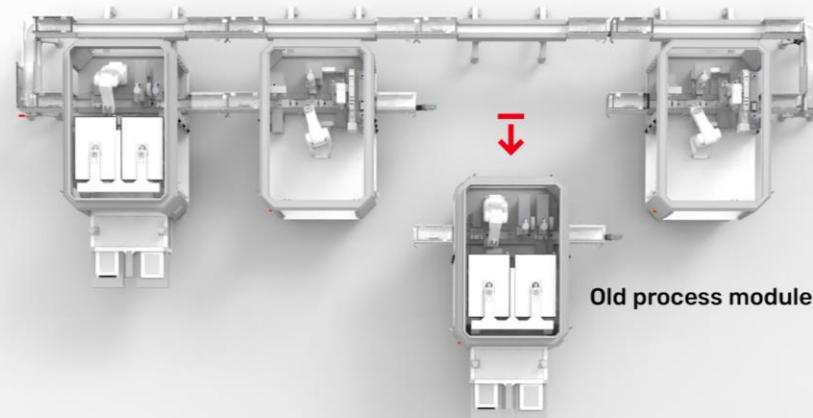


Modular by default

Wouldn't it be great to be able to adapt your production processes in the future?

The modular architecture of the MicroFactory platform allows for seamless reconfiguration at any time. Simply replace individual process modules with new ones to meet changing production needs. Process modules already in place remain fully validated.

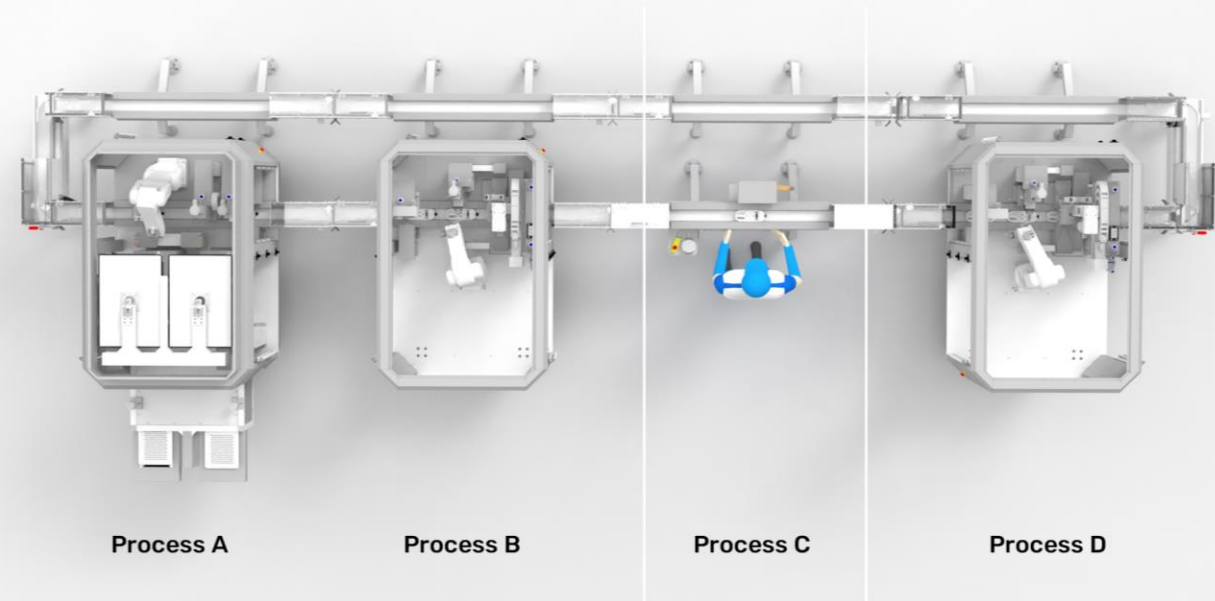
Just plug & produce!



Stay **human** sometimes

We can help you keep your employees involved in certain production processes!

It's never been easier to integrate manual workstations into a Life Science automation line! If required, our individual MicroFactory modules are also 100% cooperative.



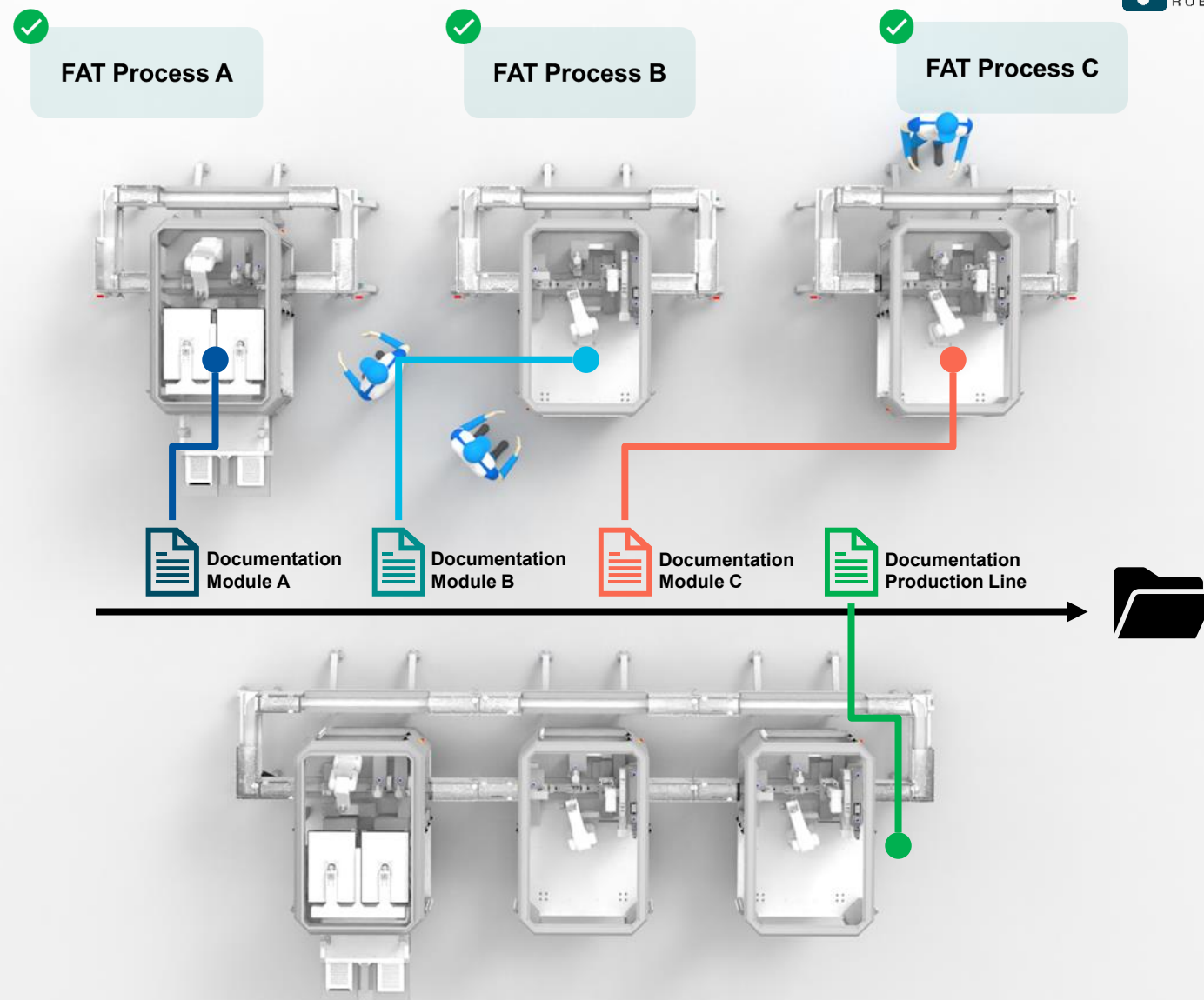
Modular qualification

Built for Compliance

Modular qualification concept: each process module is individually tested and accepted before integration.

Standardized documentation & interfaces drastically reduce validation effort.

Pre-tested, qualified modules accelerate installation and minimize on-site effort.



Change-Over in Minutes

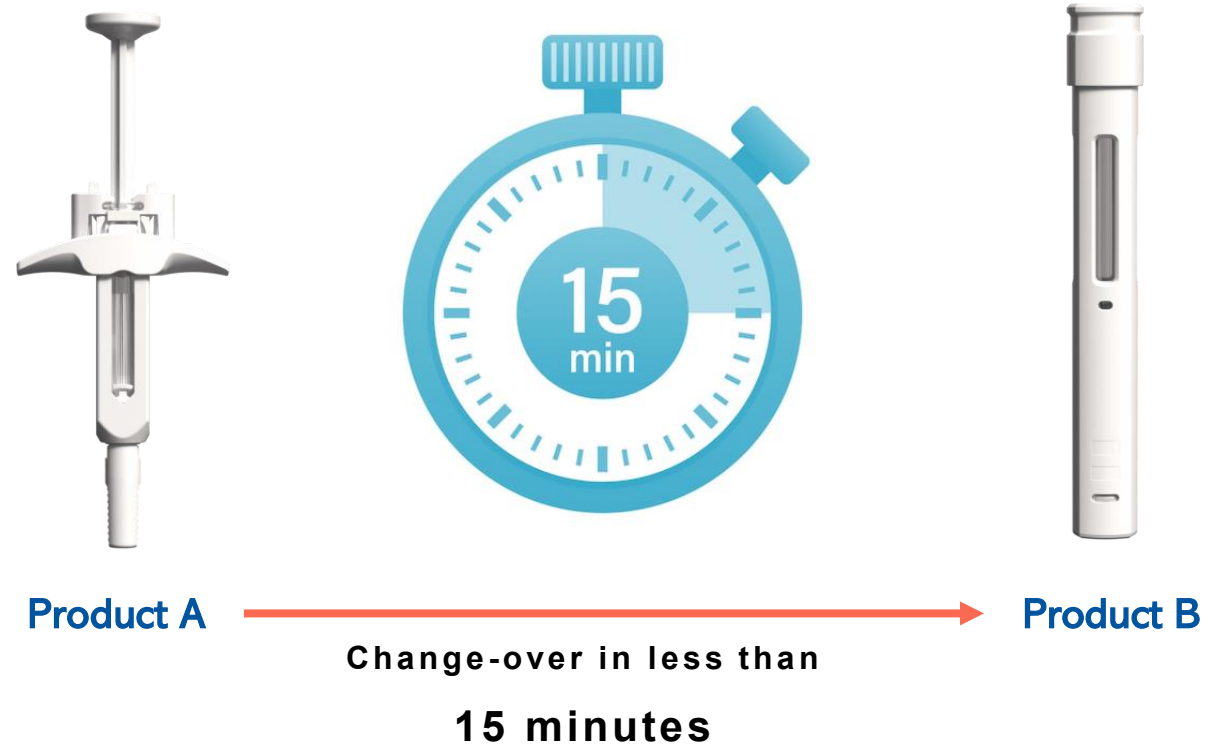
The MicroFactory Magic

Software-driven product changeovers
completed fully automatically in just minutes.

Operator only clears the line and reloads materials: no manual adjustments keep downtime close to zero.

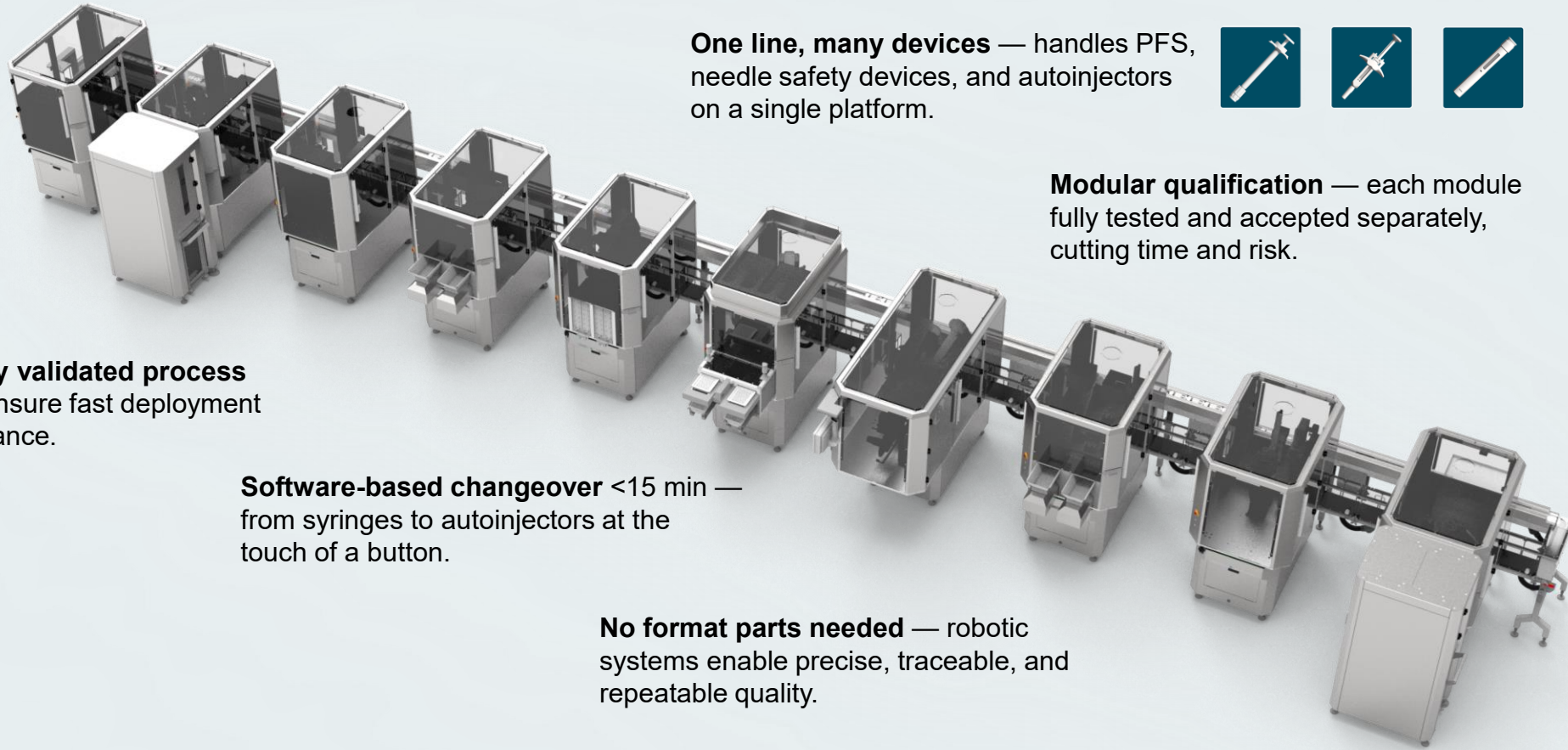
Plug & produce modules that can be swapped, upgraded, or reconfigured anytime.

No format parts required: eliminates mechanical changeovers entirely.



MicroFactory **Assembly Line**

Modular, Flexible, GMP-compliant & Future-ready



One line, many devices — handles PFS, needle safety devices, and autoinjectors on a single platform.



Modular qualification — each module fully tested and accepted separately, cutting time and risk.

Individually validated process modules ensure fast deployment and compliance.

Software-based changeover <15 min — from syringes to autoinjectors at the touch of a button.

No format parts needed — robotic systems enable precise, traceable, and repeatable quality.

Syringe & Pen Assembly Examples



Vote for the Future

MicroFactory: The Future of Device Assembly



Proven at Kaiseraugst: installed, qualified, and production-ready.

Massive efficiency gains: Automates tasks equivalent to ~10 FTE, +30% OEE, 24/7 uptime, zero-touch handling.

Broad device coverage: pre-filled syringes, needle safety devices, autoinjectors, pens.

Ideal for HMLV production: agile, scalable, and easily reconfigurable.

True modular qualification: each module fully accepted before line integration.

A new paradigm for Medical Device Assembly

Vote for Agility · Vote for the Future · Vote MicroFactory



RAYA

**Audience Award
2025**