

Automated Assembly in the Cleanroom for Curium Pharmaceuticals

RAYA 2024 Finalist Event

Alex Valkering / Vincent Beijman
Total Productivity



Introduction to Application

In this presentation, we will outline how Total Productivity automated a highly complex manual assembly process for Curium Pharmaceuticals, a global leader in nuclear medicine, under strict cleanroom conditions. Our solution improved efficiency, reduced manual labor, and maintained Curium's high-quality standards.

- Client: Curium Pharmaceuticals - Petten The Netherlands –
- Product: Ultra-TechneKow FM
- Challenge: Manual assembly in a confined cleanroom space
- Solution: Automated assembly with robots in place of four manual operators



Attractivity Explanation of Drivers

This project addressed key business drivers for Curium, improving ergonomics, process quality, and efficiency. The automation of such a complex task, especially with a 'frozen' product design, demonstrates how advanced robotics can revolutionize cleanroom operations.

- Improved Process Quality: Consistent assembly quality, with sensors for step verification
- Efficiency: Reducing from four to one operator and two robots



Cost Effectiveness – Explanation of ROI

The automation not only increased production efficiency but also significantly reduced labor costs. With fewer operators required and higher throughput, the return on investment is projected within three years.

- ROI < 3 years
- Labor cost savings
- Increased production throughput
- Reduced waste and rework



Area of Application

The automated assembly process is wide applicable in pharmaceutical manufacturing, especially in cleanroom environments where precision, cleanliness, and contamination control are paramount. This solution is adaptable for various pharmaceutical products.

- Cleanroom environments
- Complex assembly operations
- Contamination-sensitive products
- Applicable across pharmaceutical and biotech industries



Flexibility of the solution

The automated assembly machine for Curium Pharmaceuticals is highly adaptable, designed to handle different product specifications while maintaining cleanroom standards. Key flexibility features ensure seamless product adjustments and efficient operation in a confined space.

- Quick adjustments for different product specifications
- Utilizes cleanroom-certified components
- Engineered to fit within the limited cleanroom space,



Easyness to integrate

This system requires low-level modifications and can be integrated into other cleanroom settings with ease. Its design ensures flexibility in configuration and space adaptation, making it accessible for various pharmaceutical manufacturing sites.

- Modular, customizable design
- Adaptable to cleanroom environments
- Support for different product configurations



Why your application should get the Audience Award today

Our project exemplifies the potential of robotic automation to transform pharmaceutical manufacturing. By improving ergonomics, efficiency, and product quality, while ensuring strict adherence to cleanroom standards, this project represents an innovative leap forward in automated assembly.

- Innovative robotic integration in a critical cleanroom environment
- Proven impact on efficiency, cost-effectiveness, and safety
- Basic modifications needed to make it applicable across multiple pharmaceutical use cases.
- A compelling case for advancing automation in the industry



Why your application should get the Audience Award today (start impression video)

