

Innovating a first-of-its-kind mixed reality solution for a global biopharmaceutical leader

A U.S.-based premier biopharmaceutical company wanted to accelerate and optimize daily operational processes at its manufacturing sites. Known for pushing the boundaries of innovation, the company sought more efficiency and higher-quality outcomes with a mixed reality (MR) platform. The desire was to create a purpose-oriented application of AR and VR that provided real-time operational insights to improve business outcomes.

The client, seeking a partner with robust expertise in Microsoft business applications and capabilities, chose HCLTech partner in this significant initiative. HCLTech helped the client optimize its operational processes, decision-making and training modules by proposing Dynamics 365 solutions using HoloLens 2 and a mixed reality (MR) platform.

The Challenge:

Identifying the right partner and streamlining operations across manufacturing sites while meeting GxP compliance

The U.S.-based pharma behemoth's approach to innovation is both proactive and preemptive, and it anchors most of its initiatives to focus on the world's future wellness needs. The company wanted to integrate MR into its innovation charter to enhance its manufacturing operations capabilities.

The client faced challenges in identifying service providers with the capabilities it required:

- Fluency in implementing innovative solutions
- Proven expertise in implementing Microsoft technologies
- Ability to help the client comply with generic good practices (GxP) guidelines, needed by all pharma companies in maintaining high-quality processes and avoiding regulatory fines
- Deployment of Dynamics 365 guides at manufacturing sites in complete compliance with total good manufacturing practice (GMP)



The right partner would help the client streamline and expedite critical decision-making, procurement of materials and document approvals. The partner would also provide the pharma's employees with immersive training to facilitate adoption.

The Objective:

Optimize operational efficiency using MR

The company knew it could optimize many of its processes by becoming an early adopter of the latest AR/VR technology. The company agreed with HCLTech's proposal for HoloLens 2 to:

- Optimize operational efficiency and production excellence at manufacturing sites
- Expedite decision-making, materials procurement and documents approval
- Achieve total GMP compliance in deploying Dynamics 365 guides at manufacturing sites
- Enhance remote maintenance of various sites
- Build employee expertise with immersive training



The Solution:

Leveraging Dynamics 365 and PowerObjects to achieve faster outcomes

HCLTech had partnered with the company for many years and was the natural choice to collaborate to lead this endeavour.

HCLTech worked closely with the client and leveraged its robust partnership ecosystem with Microsoft and other players to assess the

technology, remediate it to make it GxP compliant, perform a feasibility study and chart a roadmap for deployment across all platforms and devices.

PowerObjects, HCLTech's dedicated business line for the Microsoft ecosystem, was a critical differentiator for the client.

In phase one of the project, HCLTech:

- Provided a holistic blueprint for adopting HoloLens 2 with Dynamics 365 in compliance with GxP
- Implemented a lockout-tagout (LOTO) solution during the COVID 19 pandemic to enable strong CX capabilities for secure remote operations at manufacturing sites
- Provided custom-managed solutions (custom Dynamics 365 model-driven apps, entities, forms, business rules, plugins, views and more)

- Validated Dynamics 365 through third-party audits for quality management
- Implemented L2 DaaS, which encompassed device procurement, application services and device life cycle management to maximize value
- Delivered immersive learning and training modules for employees
- Shifted the workload from on-premises to cloud
- Implemented a VR platform to reduce site visit navigation, optimize layout and generate real-time insights into the health of manufacturing sites
- Provided ready-to-deploy assets in terms of frameworks, SOPs and processes
- Delivered an end-to-end GxP-compliant solution covering remediation, implementation and content creation
- Future roadmap proposes Dataverse and Power Platform for managing Dynamics 365 to comply with GxP





The impact:

Optimized manufacturing operations for enhanced scalability

HCLTech accelerated the client's progress by taking full ownership as the single point of contact for this MR initiative, ensuring that the initiative took all relevant stakeholders' perspectives into account.

As a result, the client experienced the following benefits:

- Enhanced scalability via migration to Microsoft cloud
- Flexibility to accommodate Microsoft updates to HoloLens 2 and Dynamics 365
- Simplified decision-making in the design process through virtual models
- More efficient, accurate and secure data and digital systems, with dynamic accessibility
- A reduction in vendor assessment cycle time with ready-to-deploy assets for supplier qualification
- Shorter time to value due to HCLTech's Dynamics 365 expertise
- Remote manufacturing capabilities
- Zero downtime
- Timely technical assistance through strategic, third-party partnerships

By partnering with a GxP specialist like HCLTech, the company achieved positive outcomes that are tangible, sustainable and scalable. These dynamic outcomes are helping the client significantly move the needle on its growth, innovation and efficiency agendas.

The client and HCLTech anticipate that phases two and three of this project will bring even more success – so stay tuned for other case studies on this ground-breaking pharma industry MR solution.