

Howden

vuforia® studio™



>> Howden Employs Scalable Mixed Reality Solutions to enhance their customers overall experience.

For over a century, Howden's global engineering business has focused on providing customers with industrial products and quality solutions that help multiple sectors improve their everyday processes; from mine ventilation and wastewater treatment to heating and cooling.

With 6000 employees in 26 countries and equipment installed in over 100 countries, Howden's mantra remains 'revolving around you', something that has underpinned the business since it was established in Scotland in 1854.

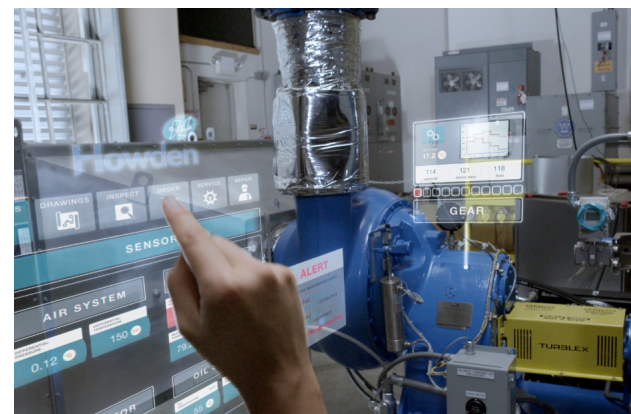
The Challenge

In today's rapidly changing and highly competitive marketplace, Howden has identified the urgent need to continually evolve its business and product strategies to stay relevant and achieve positive business outcomes. One of their key initiatives is its Data Driven Advantage (DDA), which focuses on leveraging innovative technologies to create new business opportunities and better meet the needs of their customers.

Howden's equipment typically operates as process critical in their customer's environment and any unplanned downtime is very costly, yet for the most part these blowers are unmonitored.

As a customer focused organization, Howden wanted to move from a reactive service approach to building a collaborative partnership with their customers that would improve after-market Long Term Service Agreements (LTSA) and help them achieve success.

To enable customers to optimize equipment performance and operational efficiencies, they needed to improve their service and maintenance processes by providing invaluable insight into their equipment in a visual and easily consumable way.



The Solution

Having already recognized the value in smart connected products, Howden astutely decided to empower their customers with an Augmented Reality (AR) solution that would easily provide insights from IoT to improve efficiencies.

They knew that the Microsoft HoloLens and Mixed Reality (MR) had huge potential for the company and that they wanted to use the immersive, hands-free capabilities to help customers easily visualize and understand this information.

But they needed an affordable, scalable solution for creating Mixed Reality content that incorporated IoT data and provided step-by-step instructions on how to solve problems.

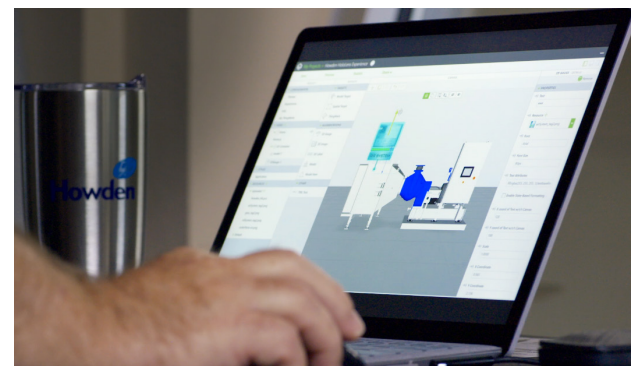
They chose PTC's Vuforia Studio Augmented Reality solution to create immersive Mixed Reality experiences for the HoloLens. With Vuforia Studio content creators can leverage the richness of their existing 3D models and easily incorporate IoT data to deliver compelling augmented reality experiences that help improve efficiencies, and enable safer, more productive workers.

This MR experience created in Vuforia Studio provides Howden's customers with an enhanced view of the equipment – including the ability to visualize what's going on inside the machine. Howden is pulling ThingWorx data operating on an Azure IoT Cloud and overlaying it on the physical product. This allows equipment operators to see the operating conditions and performance of the equipment, in context, to improve day-to-day operation. Predictive maintenance alerts, rapid parts identification and easy to follow repair sequences provide all the information relevant to resolving problems and keeping the equipment running as efficiently as possible to prevent failures and downtime.

With PTC and Microsoft, we were able to jumpstart our digital transformation journey. With technologies such as Vuforia Studio and Microsoft HoloLens, we found unique enablers that complement our digital twins and help us transform our customers' experience of owning Howden equipment.

Maria Wilson

*Ph.D., Global Leader Data Driven Advantage for
Howden*



>> The Outcome

Scalable Mixed Reality solutions from Microsoft and PTC allow Howden customers to prevent the challenges and costs associated with unplanned downtime and better-align overall maintenance strategies—which were previously based only on conjecture and after-the-fact analysis. These innovations ultimately save them a significant amount of time and associated cost.

Plant operators, who are not experts on compressors, now have 160 years of compressor knowledge at their fingertips through the easily-consumable Mixed Reality experiences on Microsoft HoloLens.

The in-depth, immersive MR experience provides a way of looking at Howden equipment that customers have never had before. It has completely changed the perception of owning Howden equipment.

From a Howden service perspective, a situation that previously would take a minimum of one to two hours to resolve and perhaps require the travel time and expense to send an expert technician can now be easily handled by the customer.



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