RNLI tests the waters of mixed reality with Microsoft HoloLens 2

The Royal National Lifeboat Institution (RNLI), a UK and Ireland-wide charity that saves lives at sea and on inland waterways, wanted to explore the ways that immersive technology could help support engineering teams, working in remote locations. Insight conducted a Microsoft HoloLens 2 and Remote Assist 'Proof of Value' pilot study to highlight the challenges and opportunities.

The Challenge

The RNLI provides essential lifesaving services through its search and rescue fleets, beach lifeguards and flood rescue teams. In 2020, RNLI lifeguards and lifeboats aided more than 30,000 people who had found themselves in difficulty.

To ensure the safety of RNLI volunteers, all lifesaving equipment – including boats – must be maintained to safe standards. However, many RNLI crews work in very remote locations, and expert support staff often have to travel long distances to help with maintenance of critical equipment.

When the pandemic hit, it became even more difficult to get expert staff to remote locations to maintain equipment. As a result, the RNLI was looking for a way to enable technical support staff to virtually attend a site.

The RNLI is funded by members of the public through donations so it must carefully consider any investment of its supporters' money. It therefore wanted to fully test any new solution before proceeding, and determine whether it would deliver significant cost reductions, as well as reducing the time spent travelling to fix equipment. The RNLI also wanted to identify any challenges it might face and use these findings to inform its digital transformation roadmap.

"The pilot study helped us explore the possibility of using Microsoft HoloLens 2 and Remote Assist to provide expertise at remote locations, without us having to invest in expensive technology.

"Insight's Proof of Value approach went beyond loaning and setting up the technology, to include gathering and analysing feedback, helping us to fully evaluate the solution and determine the next best steps for our charity in our plans for digital transformation."

Christian Flux, Digital Workplace Manager RNLI

Quick Overview

The RNLI is a UK and Ireland-wide charity that saves lives at sea and on inland waterways. Insight conducted a Microsoft HoloLens 2 and Remote Assist 'Proof of Value' pilot study for the RNLI, enabling it to evaluate the benefits of Microsoft HoloLens 2 hardware and Remote Assist software, with no risk, and no commitment.

The mixed reality pilot study showed the RNLI how it could use mixed reality (MR) to provide sharing of technical expertise across the UK, while highlighting the challenges it would face in implementing a full solution.

The Solution

The idea of using Microsoft HoloLens 2 and Remote Assist to provide expertise at remote locations arose during discussions between the RNLI and Microsoft's philanthropy division. Microsoft offered to fund the pilot study and recommended Insight as the best partner to implement it.

As part of the pilot study, Insight and Microsoft loaned the RNLI five HoloLens devices to use at its Lifeboat Stations on the south coast. The Insight team helped the RNLI to set up user accounts, assign roles and connect securely to its network – assisting the team at every step, from the unboxing, to making RNLI's first Remote Assist calls with HoloLens 2.

Setting up the solution was just the first step in Insight's three-part plan to deliver a mixed reality 'Proof of Value' engagement:

1. Deliver a mixed reality pilot solution for a select number of RNLI users and use cases.
2. Gather feedback on the experiences gained in a very practical and hands-on environment.
3. Apply the feedback to determine the opportunities for the charity.

The engagement was also designed to show how the solution could meet RNLI's immediate challenge, identify any blockers it might face, and realise any further benefits that the technology could bring.

During the pilot, one major issue was network reliability, particularly in difficult to reach locations, such as below deck on boats and in engine rooms. Insight helped the RNLI overcome this issue by loaning NETGEAR mobile internet routers.

The Benefits

The RNLI gained some valuable learnings from the pilot including:

- Mixed Reality tools such as HoloLens and Remote Assist could help experts to cut down on travel, saving both time and money getting to remote locations.
- Mixed Reality tools could potentially provide further benefits, such as training new volunteers.
- A successful solution would need to work well in noisy and unstable locations.
- The RNLI was able to identify key network improvements that would be required before successful adoption of a scaled Remote Assist deployment across its locations.

The study enabled the RNLI to try out a highly sophisticated solution without financial risk. The RNLI was then able to map out a plan for digital transformation, make the best use of its funds, and identify the best solution going forwards.

The Results Highlights

The RNLI successfully trialled the use of HoloLens 2 and Remote Assist without upfront investment or financial risk.

The pilot proved that it was possible to provide expertise at remote locations without the need to travel – highlighting potential cost savings.

The study highlighted the areas that the RNLI would need to improve before implementing a Mixed Reality solution.

The RNLI was able to fully assess the suitability of HoloLens 2 and Remote Assist for use at its Lifeboat Stations.