



Industry: Healthcare Ecosystem

Augmented First: NextGen Customer Service Solution for Point-of-care and Decentralized Diagnostic Instruments



Key benefits



Reduce onsite technician visits – get closer to the vision of zero field service visits



Determine, find, ship, or drop replacement parts faster



Last hurdle support - start with digital-first self-help and insert agent when blocked during later stages, minimizing duration and steps to resolve an issue for agents



Reduce instrument downtime due to simple malfunctions or breaks



More monetization gains for your digital-twin/IoT data



Drastically cut time to understand the problem for both lab personnel and service agents

Industry trend

In working with 10+ customers across payers, providers, distributors, and manufacturers in the insurance, healthcare, and life sciences industry – Mastech InfoTrellis sees getting closer to the patient has become the obvious no.1 goal for all. While continuous on-patient monitoring of all possible diagnostics is unrealistic with current scientific knowledge and privacy regulations, point-of-care diagnostics is as close as we can get to the patient for now.



Use case

Deploying equipment at point-of-care locations achieves decentralization but also increases nodes to service exponentially. The service overhead alone makes this model cost prohibitive for the majority of diagnostic products, especially those that have thrived in large centralized labs.

Compelling event

The adoption of QR codes during the pandemic in the food service industry has provided just enough penetration in user behavior that it is now considered a mainstream form of customer engagement. People now value not touching more than necessary surfaces -- like menus -- and minimal visits from the service staff at the table.

Taking advantage of this behavior and applying this to diagnostic equipment by combining QR codes and mobile augmented reality, we can create a contextual self-service, virtual-first model.

Our approach to launching a pilot project

Testing a pilot either in a controlled environment or in the field will indicate the best chances of a program like this finding utility and adoption for your business

01

Pick a product

Identify a product that has enough complexity, historically has had higher than usual maintenance issues, and would be lower in the business risk exposure. In other words, we would not recommend picking a flagship product for the pilot. But if the pilot is successful, then we can evaluate where this investment would make a significant business impact.



02

Create AR assets

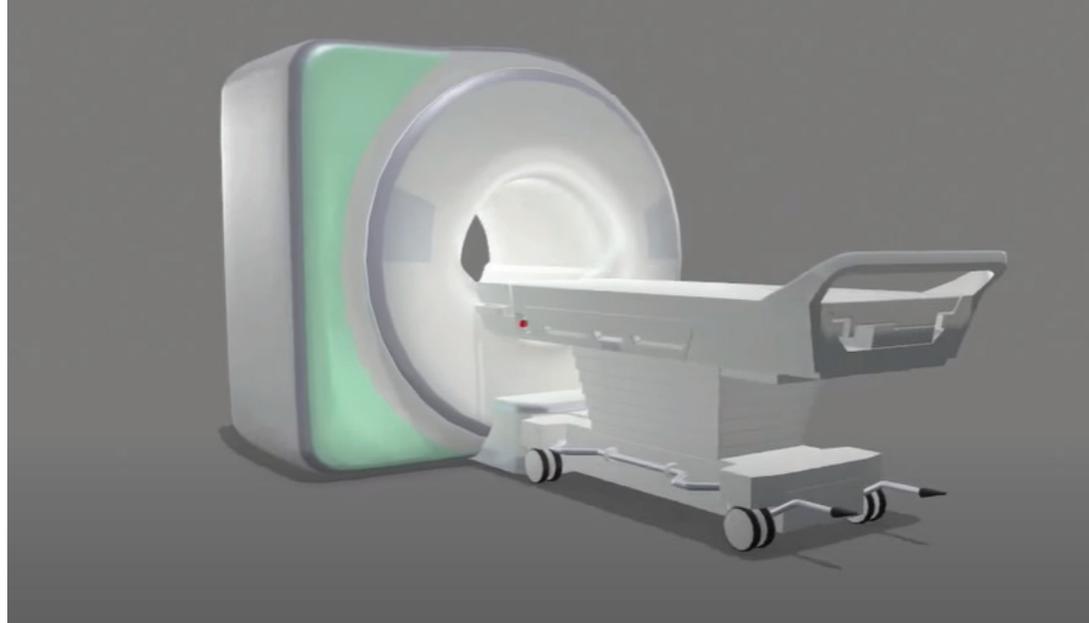
Leverage existing 3D models and drawings to create lightweight and bare minimum assets that will be easier to load over the network. Create a level-down and level-up model viewing sequence, so the 3D model only shows what's necessary when looking at the external shell vs. when viewing a compartment buried in the heart of the machine.



03

Create service animation

Based on service tickets, identify the top 10 mechanical issues and create step-by-step 3D animations on how to fix the parts. These are interactive 3D renderings rather than video recordings. The user would be able to use controls on the phone to navigate the 3D model.



04

Install QR codes

Depending on the size of the equipment and the number of compartments, decide how many QR codes will provide appropriate contextual information. Configure QR codes to launch 3D models of the compartment.



Design the mobile experience

It's possible to use both native apps or the web to redirect users from the QR code. Opening the link with the launch of a basic 3D model of the component tied to the QR code and a user guide will help the user locate the suspected component with an issue, either leveraging IoT data or through the description of the problem. Users can perform a sequence of steps to rule out problems and narrow down to the root cause. Using the 3D model in AR view – the user can look at the fix sequence or call an agent to provide oversight while fixing the problem. The agent can now also view the AR model and virtually provide instructions on how to handle the parts with a 3D model.



Once this technical service infrastructure is in place, the possibilities are endless, and predictive maintenance data can be overlaid with the 3D augmented-reality assets to provide an immersive service experience. These models can further be taken into a VR environment, and service procedures can be reenacted for training new field-service engineers.

About Mastech InfoTrellis

Mastech InfoTrellis partners with enterprises to help them achieve connected business intelligence. Leveraging the power of qualitative and quantitative data, we derive deep, analytical insights about enterprises' customers, business performance, and their operations. We accelerate business velocity, minimize costs, and drastically improve corporate resiliency through personalized, process-oriented programs. Our holistic approach integrates data, analytics, product engineering, and user experience design that enables stakeholders across the value chain. Part of the NYSE-listed, \$193.6M, IT services company, Mastech Digital; we drive businesses forward around the world, with offices spread across the US, Canada, India, Singapore, UK, and Ireland.

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Nipun is a trailblazer in the field of human-computer interface (HCI) and design thinking, having authored over 60 patents. Nipun comes with over 17 years of product innovation experience focused on delivering business advantage to organizations and taking their full potential to market through strategy, design, research, benchmarking, and implementation of end-to-end digital transformation initiatives.

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