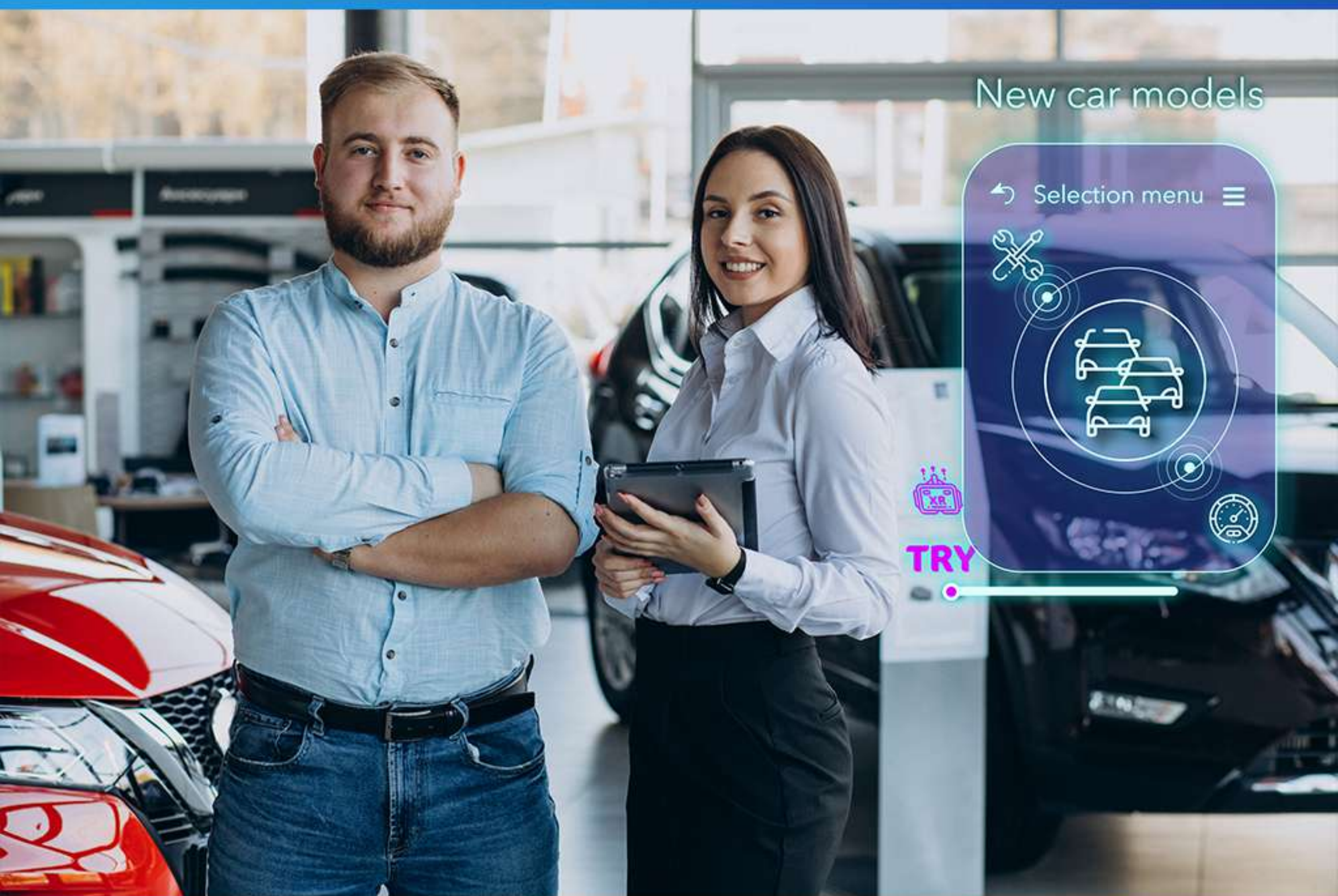


XR

in Automotive Industry Case



Business Case

XR for user experience, sales, and promotion in the automotive industry

Nowadays, there are various technological advancements and innovations that make the life of people easier and more interactive. **Extended Reality** (XR, occasionally referred to as cross reality) is a combination of technologies that change how we interact, communicate, buy things, learn, and progress in general.

Extended Reality can develop a lot of opportunities for businesses and enhance their bright future under any circumstances, especially in times of social restrictions that we experience now. XR technologies positively impact engagement and sales. For example, the case of Houzz's 3D product catalogue shows that customers are 11X more likely to purchase and spend 2.7X more. As an XR Software Development Company, we received a request from the Client with a task to develop a virtual salon for the automotive industry. The name of the Client is under the NDA, and we respect it.

Challenge

The Client reached our team during harsh social restrictions: the pandemic was in its bloom. According to the International Organization of Motor Vehicle Manufacturers, global car sales declined 12% in 2020, with some major markets down 20% or more. Car dealerships were closing due to COVID-19. In the U.S. alone, the total number of dealership employees had fallen from 1.1 million to 888,200.

However, the need for sales and the need for business to function remained. Despite the global decline in automotive sales and dealership shutdowns, something had to be done to help the Client in reaching out to their customers. Companies that produce or sell vehicles have to be incredibly creative. That is why XR technology suits best in terms of showcasing interiors and cars' configurations, providing showrooms, and conducting virtual test drives.

The challenge was to achieve a technical precision and dynamic solution for the Client that would be a substitution during social restrictions and a functional enhancement to the existing capacities. We were to do it ourselves practicing online team collaboration, as social restrictions were for everyone.

It was vital to provide a smart technological solution that makes a digital car salon visit close to a real-life experience. To achieve this, we needed a 100% accurate 3D representation of the Client's salon. The salon should have been photorealistic, as even minor details of a car's dashboard could influence customer decision-making.

So this is where Extended Reality could take its turn in **making online sales and promotion available for the audience**. Not only due to the reasons that people had not many other choices other than shop online but because it could enhance their experiences. Thus, we were to make it available for the Client operating in the automotive, where XR fits perfectly.



The Client's typical customers were spending their time shopping online. The idea was that we create a solution to receive a virtual experience in choosing a car entirely online. This virtual experience should be created with the help of WebXR technology – one of the most promising XR directions.

WebXR (or WebAR) allows opening 3D content inside a web browser. No need to download additional applications.

For that, the Client required us to create a unique WebXR solution so that **potential customers could spend their time exploring new car features remotely, online, and avoid live social interaction.** We had to represent vehicles in a way that allows people to receive dynamic experiences rather than just watching online videos.

The solution was targeted to:

- improve sales capacity for car dealers with XR/VR
- make an input in virtual car dealership development
- be able to provide car salon visits and vehicles observation experience
- be capable of enhancing overall User Experience (UX) for customers
- introduce new smart decisions on the market that work under any circumstances
- give a competitive advantage over car salons without XR

Working on solution requirements

XR/VR/Mixed reality solutions are ideal for businesses to achieve their goals creatively. We were to help our Client to work out exactly how to do it. The solution was to be developed under a Non-disclosure agreement.



Solution's key requirements

Solution for the Client had to contain the following features:

- make customer experience and simulation available with WebXR technology
- make realistic 3D car dealer salon experience reachable and functioning
- create an XR online showroom to demonstrate vehicles

Experience and perspective

After negotiating with the Client, we gathered technical requirements and set our targets.

We decided to:

- enhance the Client operating in the automotive industry with the capacities of Extended Reality and 3D to give an improved level in immersion and feeling of presence for users
- compose a team consisting of skilled engineers, 3D designers, and XR professionals that would add reality into models of vehicles to reach even better experiences
- begin with prototyping for a better design, quality, and results so that the Client would stay ahead, providing an improved User Experience for customers

As next steps, we:

- chose WebXR as a perfect solution
- developed several prototypes for the Client
- tested them several times to find out the most efficient

Our tools included WebGL, Unity, and more.

Finally

The last step was to obtain approval from the Client, which we received successfully.

Solution

The final XR solution to create a virtual salon in the automotive industry was developed for the leading Client in the field. The Client was under pressure due to the need to keep functioning under social restrictions and pandemics. The need for ROI, sales, and new experiences for customers remained usual.

We developed a Web Extended Reality solution that enhanced the promotion capacities. The solution allows **showcasing the vehicles available and their possible configurations in tiny realistic details, which were vigorously developed by our 3D team.** The solution is available online, without the need to download and install any apps.



The Client can now enjoy the solutions' quality and offer the best interactive and the most realistic experiences for prospective customers. This has made the Client more attractive for customers and improved their sales.

This way, Softengi has added an additional dimension not only for the solution but the industry overall. The industry per se has a considerable capacity to employ XR and similar technologies for its development, create and promote new products and features, improve UX, add visualization.

Lessons learned

Extended Reality is not entertainment. It is a complicated solution with a wide range of diverse and creative ways of usage. XR indeed has the potential to imply the automotive industry and make it more competitive for experience enhancement.

One has to bear in mind the target audience has to be ready to digest it. Therefore, it is more suitable for individuals that would enjoy digital car salon experiences far more than actual visits. It is a matter of time and readiness. That is why this solution suits best for those Clients that know their target audience's tastes. Or for the ones looking for a way to reduce the negative impact of pandemic-caused restrictions.

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