

**tsukat**



CASE STUDY

**INTERACTIVE VIRTUAL  
WORLDS FOR TREADMILL  
APP OCTONIC**

Octonic smart VR software consists of a proprietary VR Motion Engine and a VR Content Library with various worlds/tracks and is available now on Meta AppLab and SideQuest.

Instead of looking at the gym's wall, users can connect a headset with software to a treadmill and jog through the canyon, explore uninhabited planets, or compete in the futuristic arena. With Octonic VR, users can transform their ordinary fitness workout into an exciting VR fitness adventure.



Our client, Octonic, is a US-based software development company working in the VR sector. They offer an innovative VR fitness solution that aims to change the perception and attitude of sports and exercise by combining physical activity with virtual reality.



## 01 Crafting new virtual maps

The customer required new virtual maps for their existing VR application to offer end-users a wider variety of exercise playgrounds. The **tsukat** team proposed concepts for new worlds, potential level design, and a central theme which the client enthusiastically accepted, initiating our collaboration.



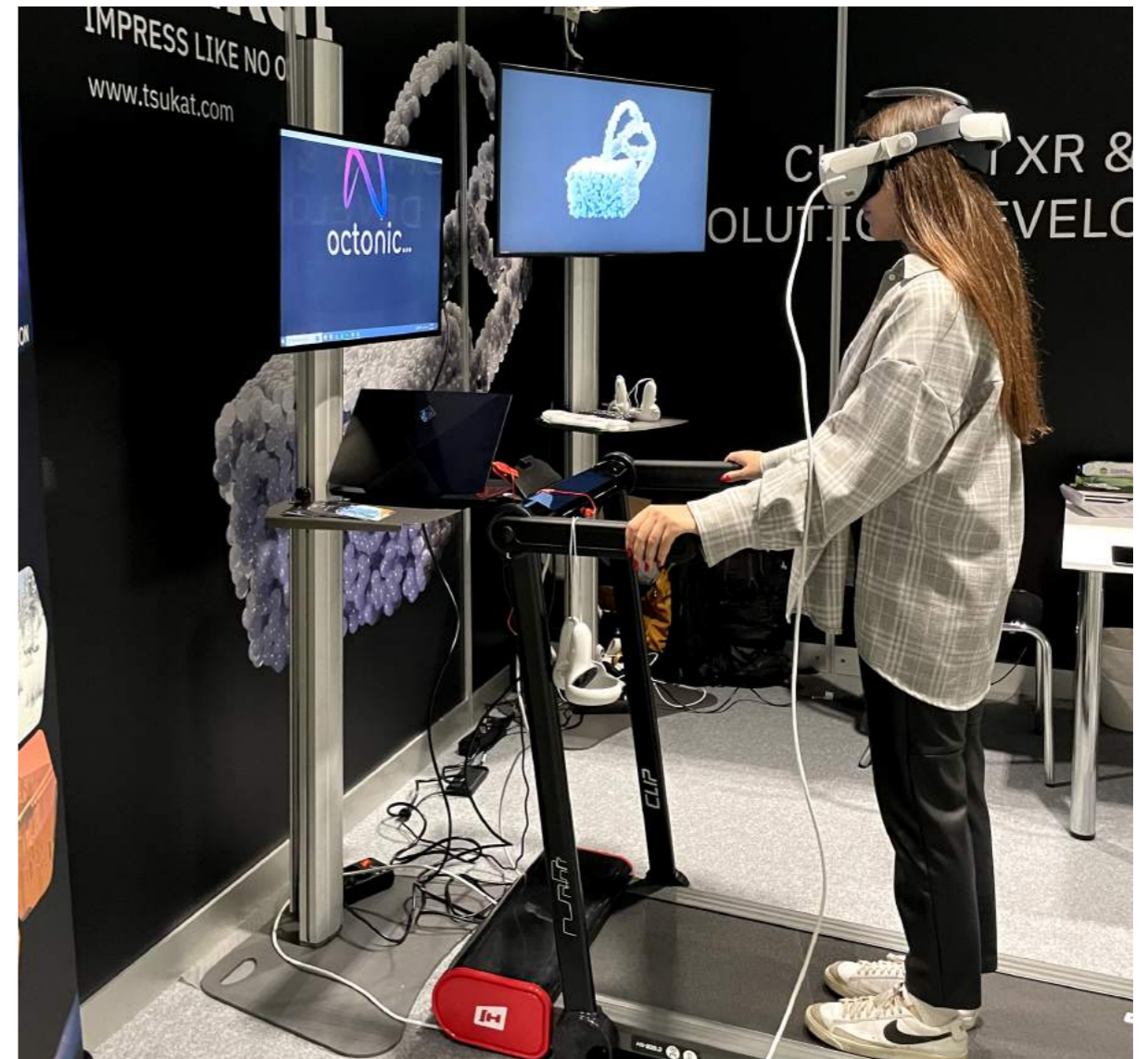
## 02 Ensuring application stability

Among the demands crucial to the customer was ensuring the VR application's performance stability while preserving an entertaining and detailed virtual environment. As the interaction between a user on a treadmill and the virtual world is in real-time, stable application performance is essential to prevent motion sickness and ensure a seamless experience.



## 03 Designing a secure VR running experience

Another critical challenge was ensuring a smooth experience for users running with a headset, particularly during turns. Users are naturally inclined to turn when they see a turning point, but it's impossible on a straight treadmill, and poses a risk of injury. Therefore, the **tsukat** team had to devise a solution to this problem.



A sunset over a rocky landscape. The sky is a mix of blue and orange, with some clouds. The foreground is dominated by large, dark, jagged rock formations. A semi-transparent dark grey box is overlaid on the left side of the image, containing white text.

The client entrusted us with their project among other AR/VR companies, drawn by our unmatched technical knowledge and extensive practical experience, which makes us a perfect match for achieving their goal.

The tsukat team successfully developed two immersive VR worlds for the platform, focusing on aspects such as level design and its implementation, general design work, and UI/UX functionality integration.

Our UI/UX designers created an intuitive user panel that provides quick access to all the information about the world's gallery and a clear map of users' virtual routes. This design ensures seamless and problem-free engagement with the VR sports platform.

As for the creation of the virtual worlds, our 3D and Unity engineers concentrated on level design. This involved developing general concepts, determining the physical layout of the virtual environment, and strategically placing elements within them. Since the platform comprises a VR content library, developing precise and visually appealing components was vital to ensure a smooth and engaging user experience.



## Caves & Canyons

Caves & Canyons was the first virtual world we developed in terms of our cooperation with Octonic. It contained a 3D scene rich in textures and assets, including caves, rocks, and cacti. Our team put a lot of effort into fine-tuning lighting, textures, and overall ambiance to accurately capture the essence of the Grand Canyon. Most importantly, the **tsukat** team worked on incorporating rotating elements along the virtual route, presenting a more natural turning experience using the treadmill. This not only improves visual implementation essential for a seamless experience, but also helps prevent accidents, such as running off the treadmill.

## Sky Island

Sky Island was the second project **tsukat** worked on. The development phase presented several challenges, particularly in balancing interactivity with application performance. Due to limitations in complexity and the number of 3D elements, our 3D artists and Unity engineers optimized the scene. The Island was divided into sections, with a reduction in the number of elements on each side to maintain application performance without compromising visual quality.

As the Island floats in the sky, transmitted with 360° experience, one side has a steep edge, and the other is filled with mountains, waterfalls, beach houses, caves, and vegetation. This division allowed for varied scenery changes as the user runs, enhancing interactivity. Such an approach helped preserve the quality of smaller 3D elements and movable objects like floating rocks and waterfalls and diversify the user's journey.



The outcomes of our cooperation include:

**01** PRECISE 3D MODELS

**02** DIVERSIFIED USER JOURNEY

**03** OPTIMIZED APP PERFORMANCE

**04** HIGH-QUALITY GRAPHICS

**05** DETAILED PHOTOREALISTIC ENVIRONMENTS

## Technologies and tools



Unity



Autodesk 3ds Max



C#



Photoshop

## Headsets



META QUEST 2



META QUEST PRO



META QUEST 3

The client has received two highly immersive and interactive VR worlds for their Meta VR fitness platform with vast and seamless functionality, providing end-users with virtual world diversity. The Octonic VR platform fits perfectly for individual and group workouts. Since its launch, the application has been downloaded by over 13,000 users, bringing clients commercial benefits they can use in application updates and improvements just like they did by working with our team. As for today, we continue our cooperation and work alongside the client's team, developing innovative features, such as multiplayer and others.

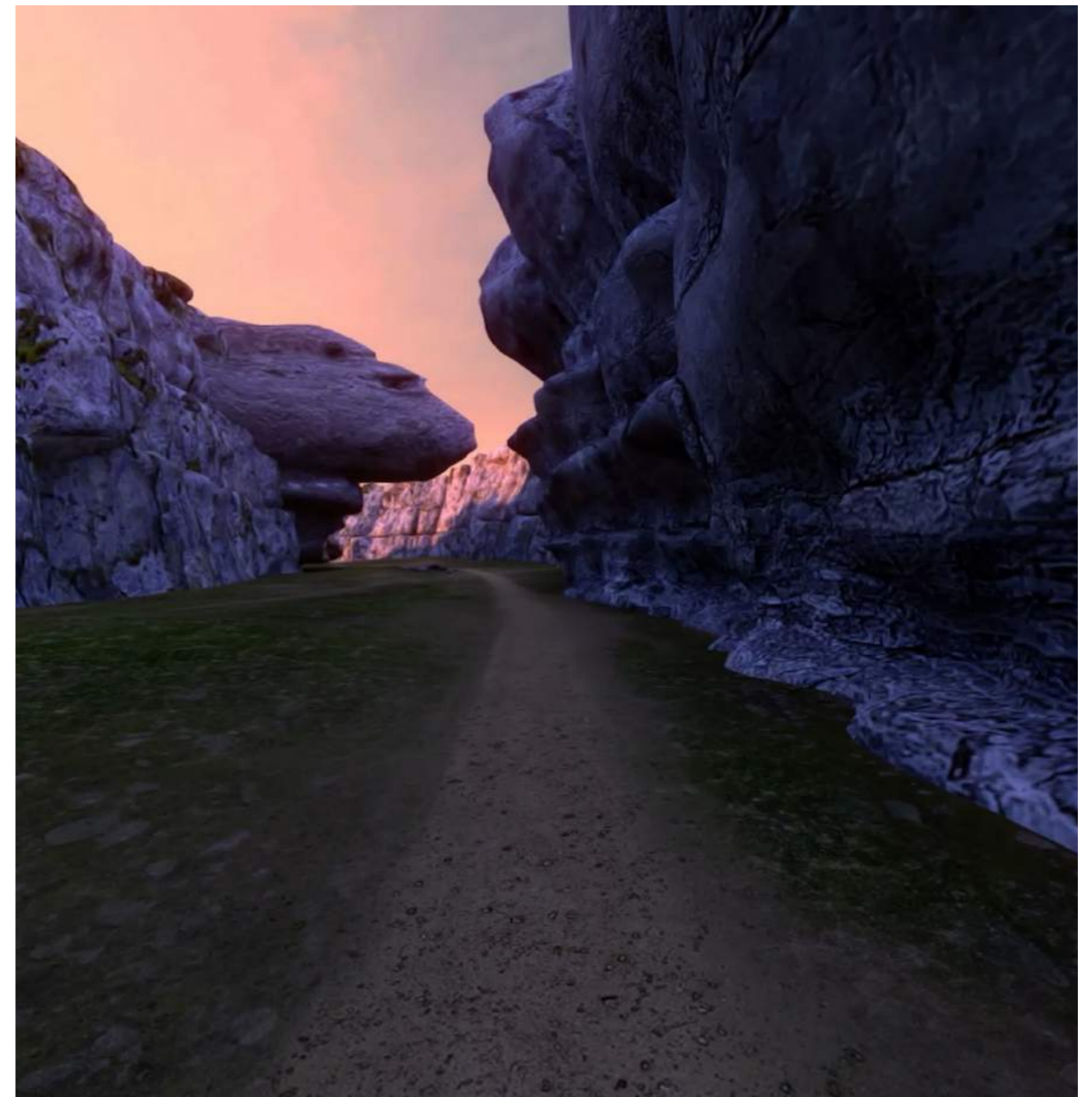
## Team

Project Manager

Unity Developer

3D artist

UI/UX Designer



## Clutch

CLUTCH'S TOP 10 AR/VR COMPANIES

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### 10+

years of commercial experience define each of our tech leads

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### 90%

of clients highlight our transparent cooperation model and communication

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### 80+

in-house talents

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### 81%

NPS (Net Promoter Score)



**tsukat** is a multidisciplinary team of XR experts passionate about cutting-edge interactive, VR, AR, and AI technologies and their massive impact on the modern world. Since 2017, we have provided top-notch solutions for businesses worldwide, empowering their capabilities and opening new interaction methods.

**If you are searching for a reliable partner to help you overcome any obstacle on your business path, you can rely on tsukat.**

**CONTACT US TODAY!**

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