

NEUROTECHX HACKATHON

diveXR

01

The next level of Neurofeedback
therapy for ADHD kids





10%

Are the school-age children with ADHD. ADHD kids struggle with focus, and the only solution for them to succeed is taking drugs for their lifetime - when/if drugs are effective.

Neurofeedback

Neurofeedback is a promising therapy to develop the ability to focus. It is FDA approved.

Yet, there is no fun and standardized way to deliver it. Most programs are boring to an ADHD kid, and less engagement means decreased therapy effectiveness.

As a consequence, effects may vary depending on therapist and platform.

In addition, these programs have huge costs, which can range between 2000-5000\$



The solution

Increased focus

We want to give every child the possibility to change their life, by gaining the everlasting skills that will allow them to be more focused.

Fun

Immersive and gamified experience thanks to VR will make the therapy more effective, as already shown by few studies.

The game will alternate dynamic sessions with meditative sessions where NF is delivered as part of the game experience.

Clinically validated

Validating effectiveness also means making it more accessible thanks to insurance reimbursement. We will establish a quality management system from day 1 to gain FDA-approval as SaMD class I or II.

Connected

The children will be able to take the platform at home for the duration of the therapy (40 days).

A secondary app will provide progress data to the therapist.



The Process

As a framework, DiveXR looked to the Theta/Beta Ratio as a means for measuring distraction and concentration in our users, drawing inspiration from [Picken et al](#) and [Markovska-Simoska et al](#).

For internal validation, DiveXR ran an experiment using OpenBCI's "ULTRACORTEX "MARK IV" EEG HEADSET, measuring Theta/Beta Ratio through a guided content experience from "High Engagement" to "Low Engagement" to "Concerted Effort."

[See test demonstration and corresponding data.](#)

DiveXR will continue to replicate the test in our target age group in order to further validate the Theta/Beta Ratio framework, and use findings to construct our application.



Go-To-Market

DiveXR will leverage a dual commercialization path, with more immediate go-to-market through a consumer application.

Using the data and revenue from our consumer iteration, DiveXR will continue to validate the Theta/Beta Ratio framework in a clinical setting.

In continued prototyping of the VR application, we will measure our game and its ability to positively impact that Ratio.

Our goal will be to offer DiveXR as an FDA-approved, provider-prescribed, insurance-remimbursable prognostic tool for improving outcomes for adolescents already diagnosed with and treated for ADHD. .