

**TECH OFFER**

**Virtual Reality (VR) Cognitive Therapy & Rehabilitation Platform**



**KEY INFORMATION**

TECHNOLOGY CATEGORY:

Healthcare - Telehealth, Medical Software & Imaging

Healthcare - Medical Devices

Healthcare - Pharmaceuticals & Therapeutics

TECHNOLOGY READINESS LEVEL (TRL): **TRL8**

COUNTRY: **CHINA**

ID NUMBER: **TO175328**

**OVERVIEW**

Cognitive dysfunction and impairment are increasingly prevalent due to aging, neurological conditions, and lifestyle-related factors. These issues can significantly affect memory, attention, and mental well-being, reducing quality of life and increasing long-term healthcare burdens. Traditional interventions—such as medication, physiotherapy, and psychotherapy—often face limitations in engagement, adaptability, and measurable outcomes.

This virtual reality + artificial intelligence (VR+AI) Cognitive Therapy & Rehabilitation Platform offers an innovative, science-backed alternative that enhances the way cognitive impairments are managed. Through immersive, interactive virtual reality experiences, patients engage in targeted exercises that stimulate brain functions in a dynamic, gamified environment. The platform is designed to improve cognitive function, memory, and emotional health by encouraging active participation and consistent therapy adherence.

Validated in clinical settings, this technology enables more engaging and effective cognitive rehabilitation while reducing dependency on one-on-one therapist-led sessions. It presents significant opportunities for collaborative development and clinical research in the fields of neurology, mental health, and geriatric care. Collaboration partners may explore joint clinical trials, co-creation of specialized therapy modules, and integration with broader digital health ecosystems to extend the platform's reach and impact. Different forms of solution catered for hospital or home use are available.

## TECHNOLOGY FEATURES & SPECIFICATIONS

Different modules and system for use in hospital or home-based setting.

- **VR Therapy Modules:** Includes attention training, memory enhancement, and exposure therapy for cognitive rehabilitation.
- **AI-Powered Diagnostics:** Incorporates eye movement analysis, EEG-assisted evaluations, and HRV-based depression diagnosis.
- **Interactive & Immersive Training:** Utilizes multi-person training and highly immersive VR scenes for realistic treatment experiences.
- **Digital Therapy Roadmap:** Features a digital treatment library, including customized therapy plans and a research-backed framework.

## POTENTIAL APPLICATIONS

This multi-functional VR+AI platform is tailored for diverse populations:

- **Children with developmental disorders**, such as those on the autism spectrum, benefit from engaging, gamified environments that build core cognitive and social skills.
- **Adolescents**, particularly those under academic stress, receive personalized mental health support and cognitive training to enhance focus, emotional regulation, and performance.
- **Adults and the elderly** experiencing cognitive decline due to neurological conditions or brain injuries engage in targeted rehabilitation to train patients in skills such as execution ability, memory, and spatial orientation.
- **Individuals in clinical, community, and corporate environments** can undergo accurate, private psychological assessments, enhancing early detection and mental wellness support from the psychological assessment module.

Potential applications include:

- **Physical & Cognitive Rehabilitation:** Post-stroke rehabilitation, cognitive impairment therapy
- **Sleep Therapy & Stress Management:** VR-assisted relaxation, mindfulness therapy, breathing practice to relieve stress.
- **Mental Health & Psychiatry:** Psychological assessment, therapy modules to improvement of depression, anxiety, phobias, schizophrenia.

## UNIQUE VALUE PROPOSITION

- **Personalized Digital Therapy:** Therapy modules tailored to patient needs. Serves as a digital therapeutic to complement traditional use of drugs.
- **Enhanced Patient Engagement:** Immersive VR experiences encourage active participation in cognitive and physical rehabilitation.
- **Data-Driven Insights:** Uses big data analytics & AI modeling for precision diagnostics.

- Cost and Time-Saving for Medical Professionals: Applicable for use in hospitals where it offers a one-to-many rehabilitation form and allows for remote monitoring.