



# StayStable

## Next-Generation Neurorehabilitation

Revolutionizing brain recovery through active real-time intervention



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Report Date: 2025-11-17



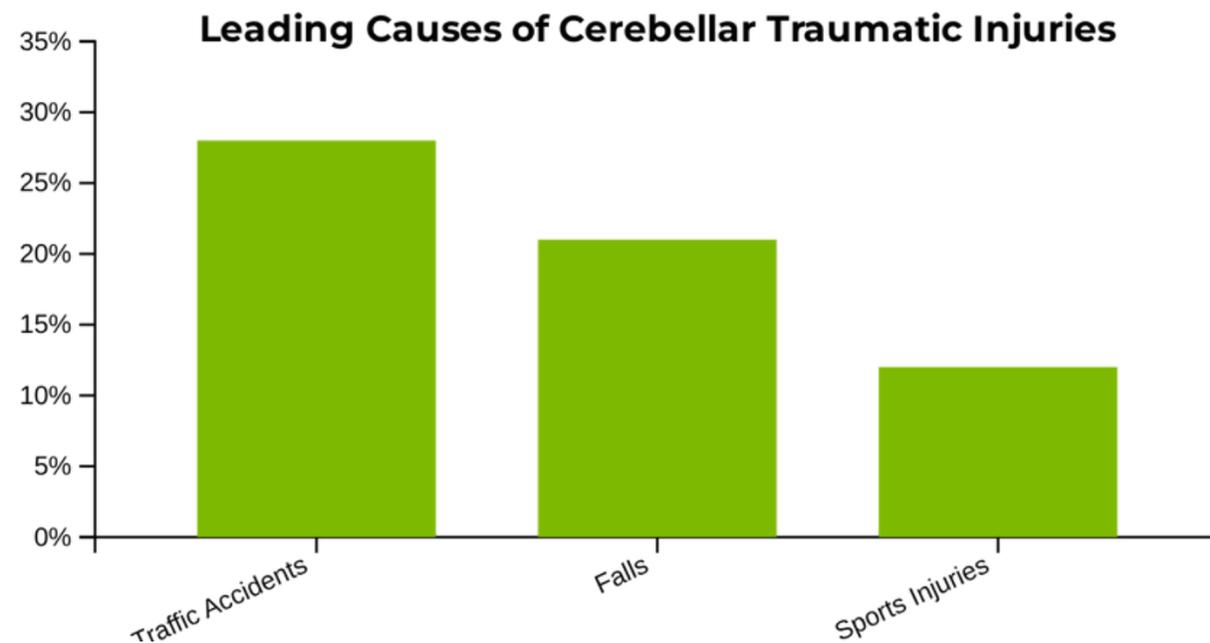
# The Neurorehabilitation Crisis

## Scale of the Problem



**25 million strokes annually**

Worldwide impact



Cerebellar Traumatic Injuries  
**60-70%**

Long-term Impairments  
**40%**

## Barriers to Access



**Economic Cost**

\$25,000-120,000/year for rehabilitation



**Access to Specialized Centers**

Only 35% of patients have access



**Insurance Coverage**

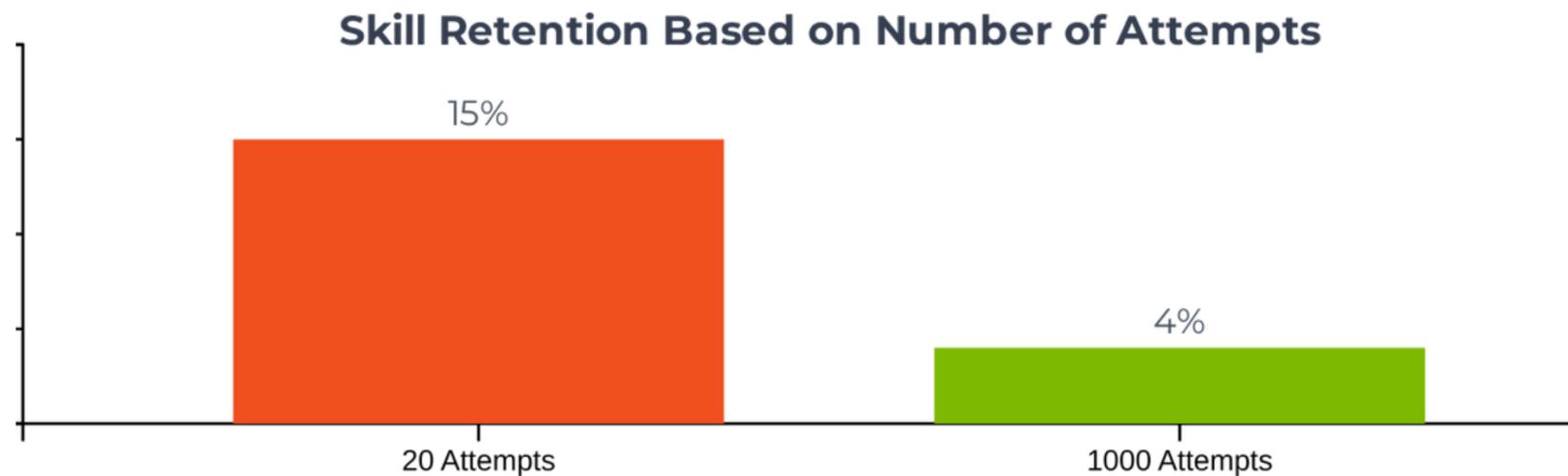
Covers only 60-65% of procedures

**Result:** Limited access to effective treatment

# Scientific Foundation: Cerebellar Neuroplasticity

## 🧪 Research by Herzfeld et al. (2020)

Study investigated skill retention based on number of attempts:



**Key Finding:** Intensive repetition significantly reduces skill loss

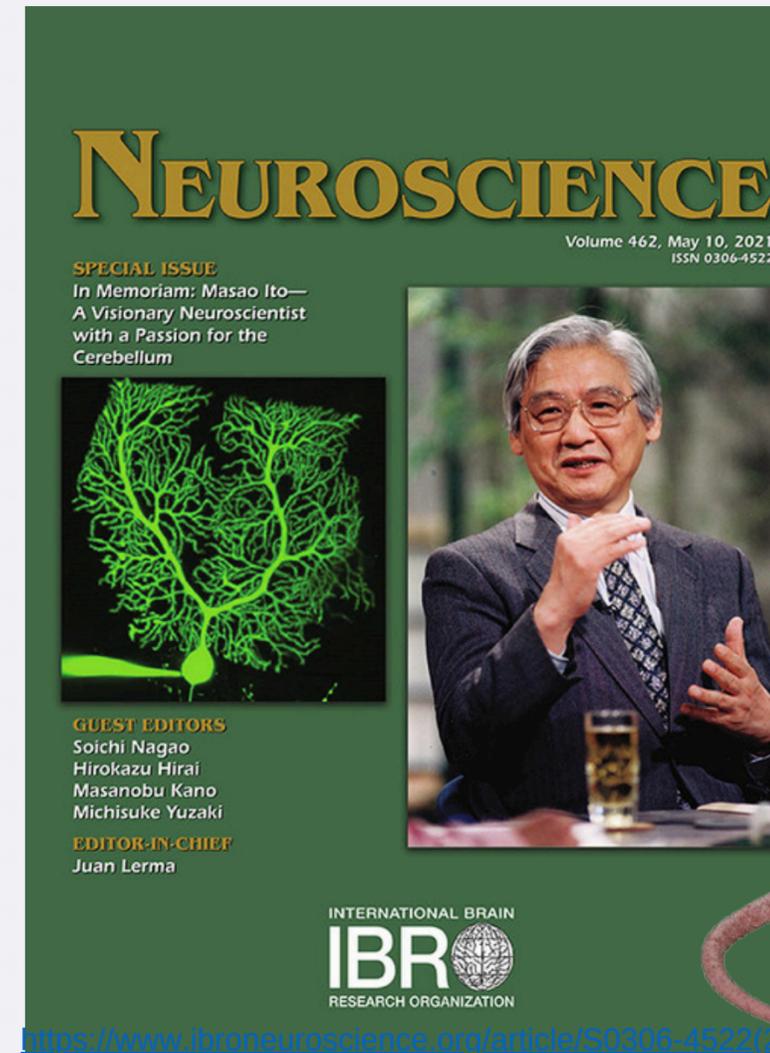
## 🧠 Two Components of Cerebellar Learning

### Fast (Floccular Cortex)

Learns quickly but unstably

### Slow (Cerebellar Nuclei)

Responsible for long-term skill retention



[https://www.ibroneuroscience.org/article/S0306-4522\(20\)30322-5/abstract](https://www.ibroneuroscience.org/article/S0306-4522(20)30322-5/abstract)

## 💡 Conclusion



**Intensive repetition + error control = brain retraining**

# StayStable Solution: Active Real-Time Intervention

## Local Platform for Neurorehabilitation

StayStable offers a local platform for active, real-time intervention in neurorehabilitation with direct doctor control.

 **Active Real-Time Control**  
Doctors control rehabilitation parameters during VR sessions

 **Adaptive 3D Environment**  
Exercises tailored to patient needs with four adaptive modes



## Adaptive Exercise Modes

**Horizontal Mode**  
For horizontal tracking

**Vertical Mode**  
For vertical tracking

**Prediction Mode**  
For trajectory prediction

**Random Mode**  
For random target engagement

## Clinical Correlations

Strong relationships between exercise parameters and neurological deficits enable precise rehabilitation.

Object speed ↔ Attention deficit r=0.73



Trajectories ↔ Ataxia r=0.68



# Technical Architecture: How It Works



## REHAB HUB

Server Core powered by Raspberry Pi

- ✓ HTTPS server
- ✓ WebSocket (WSS) for communication



## Wi-Fi Router

Isolated local network

- ✓ No internet dependency
- ✓ Enhanced security
- ✓ Local network creation



## Client Devices

### Patient (VR)

Android/iOS devices

### Doctor (Panel)

Any browser

## Data Flow

### Patient → Server

Metrics of each hit

### Server → Doctor

Real-time graphs

### Doctor → Server → Patient

New parameters

## Backend

Node.js (WebSocket)

## Frontend

Three.js, WebGL

## Hardware

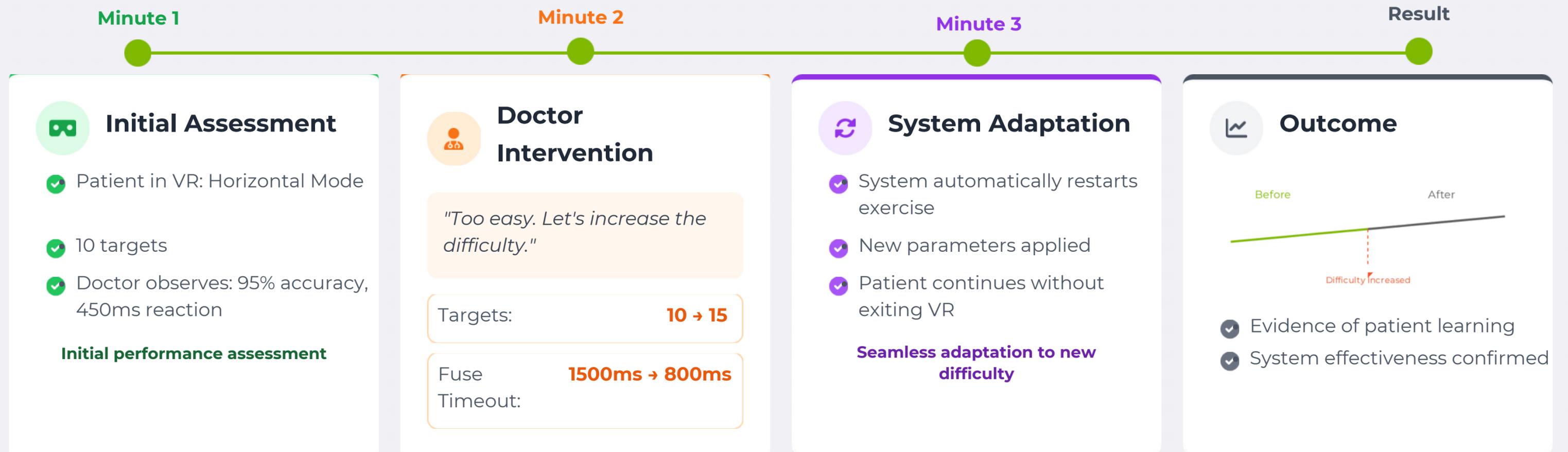
Raspberry Pi 4

## Clients

Android/iOS, browser

# Real-Time Loop in Action

Live intervention scenario demonstrating seamless parameter adjustments during patient VR sessions without interruption.

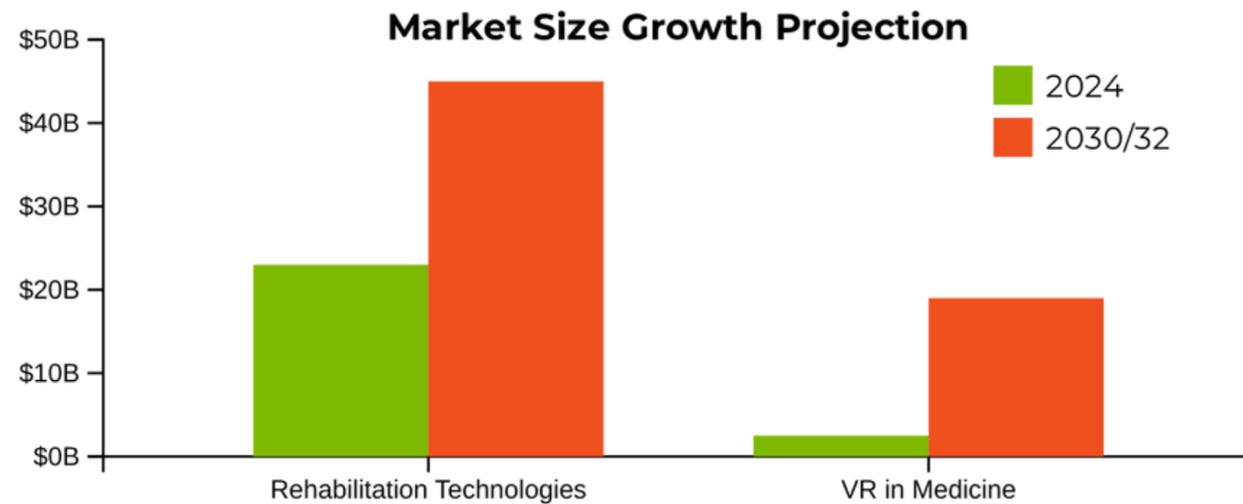


## Key Benefits of Real-Time Intervention:

- No session interruption
- Immediate difficulty adjustment
- Optimized rehabilitation intensity

# Market Opportunity and Business Model

## Market Growth



Rehabilitation Technologies

**\$23B → \$45B**

2024-2030

VR in Medicine

**\$2.5B → \$19B**

2024-2032

**TAM: \$5-8B | SOM: \$200-500M**

## \$ Pricing & Business Model



**Basic**

\$1,000/year  
Small clinics



**Pro**

\$3,000/year  
Medium centers



**Corporate**

\$5,000/year  
Large networks



**StayStable Kit**

\$350



**Patient Subscription**

\$9/month

**6.9x**

**LTV/CAC Ratio**

Strong business model

# StayStable Advantages

## For Patients



### Works on Regular Smartphone

Increased accessibility for patients



### Gamification

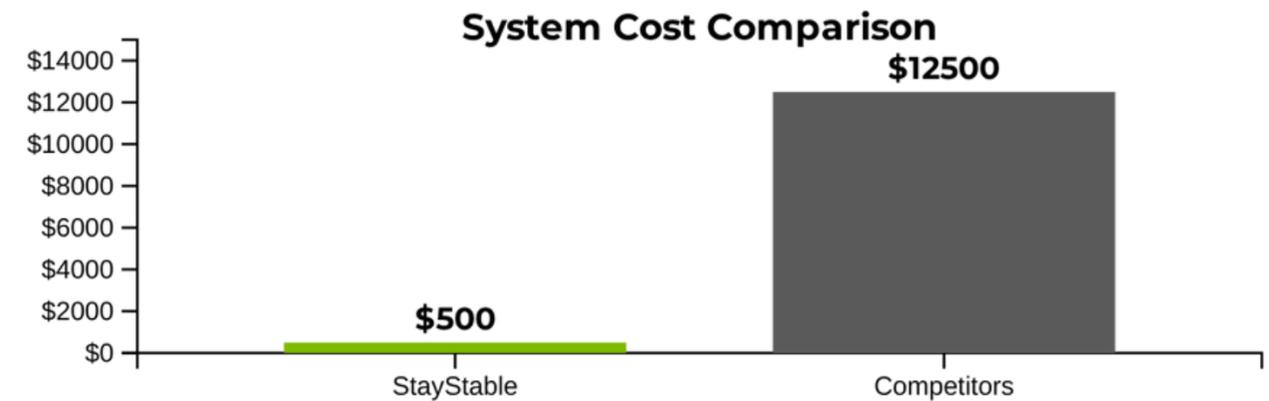
**3x higher motivation** compared to traditional methods



### Home Rehabilitation

Convenience and continuity of care

## For Clinics



### Implementation

1 day



### Throughput

+40% patients



### Duration

**-30%** rehabilitation time



### Security

100% offline operation

# Competitive Landscape



## 10x More Affordable

Lower cost than competitors



## Works on Regular Devices

Smartphone compatibility

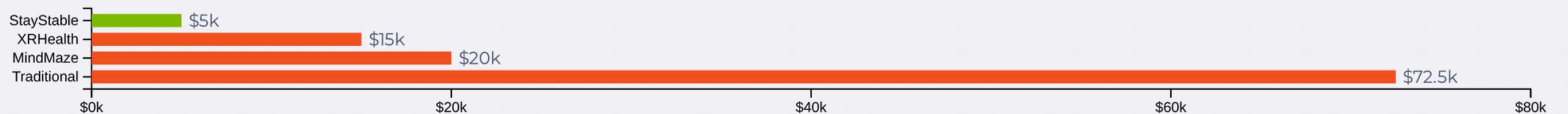


## Real-Time Doctor Control

Unique active intervention

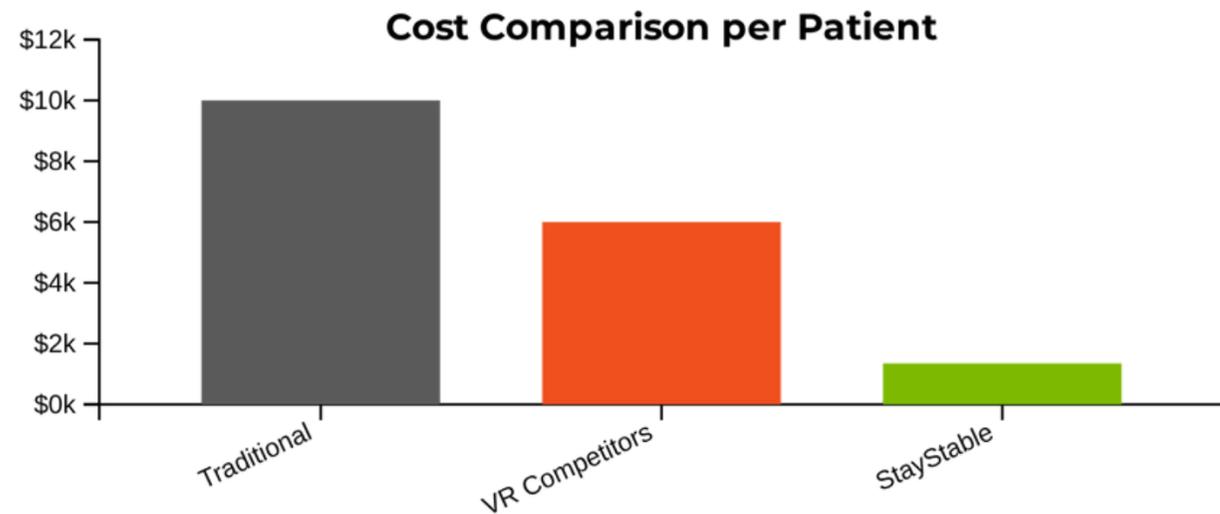
Solution	Cost	Equipment	Limitations
✓ StayStable	\$1,000-3,000/year	Smartphone (\$0/150\$)	—
MindMaze	\$20,000+	VR system (\$5,000+)	High price, complex implementation
XRHealth	\$15,000/year	VR headsets	Requires internet, subscription
Neurofeedback	\$10,000+	EEG equipment	Difficult to use
Traditional	\$25,000-120,000/year	Specialized centers	Limited access

## Cost Comparison (Annual)



# Clinic Economics and ROI

## \$ Cost Comparison



Traditional  
**\$8,000-12,000**  
per patient

VR Competitors  
**\$5,000-7,000**  
per patient

StayStable  
**\$1,000-1,500**  
per patient

## Return on Investment



Based on 50 patients  
treating annually

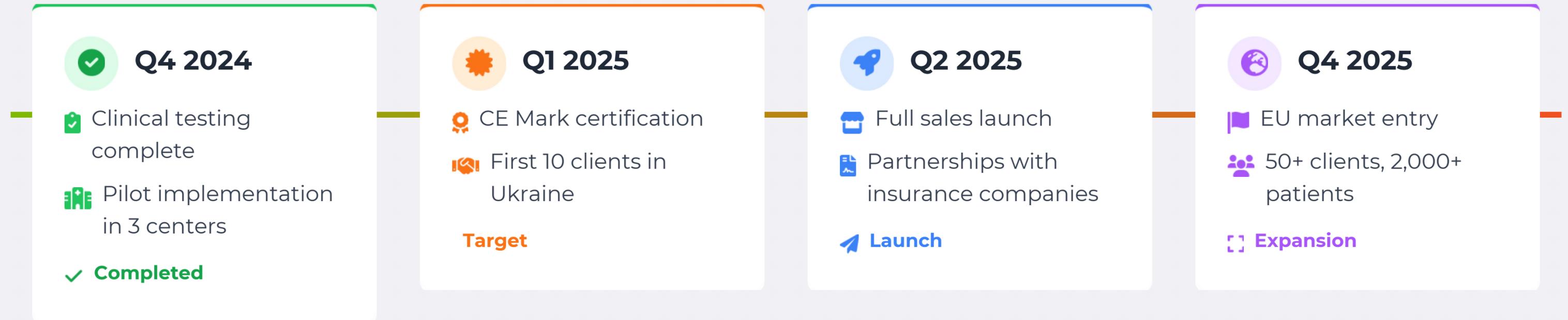
### Financial Benefits

-  Savings per patient  
**\$6,500-10,500**
-  Annual savings (50 patients)  
**\$325,000-525,000**
-  Investment (license + equipment)  
**\$1500**

**Key advantage:** Significantly higher ROI compared to traditional methods

# Strategic Roadmap

From clinical validation to global expansion, StayStable's strategic milestones target rapid market entry and growth.



### Key Growth Metrics

	Clients	Patient Impact
	<b>50+ → 200+ → 500+</b>	<b>2,000+ → 10,000+</b>

# HIGH WAY

IDEA

TEST

DEMO

PROTOTYPE

PRODUCT



Hack4Innovation  
October 19-20,  
2024



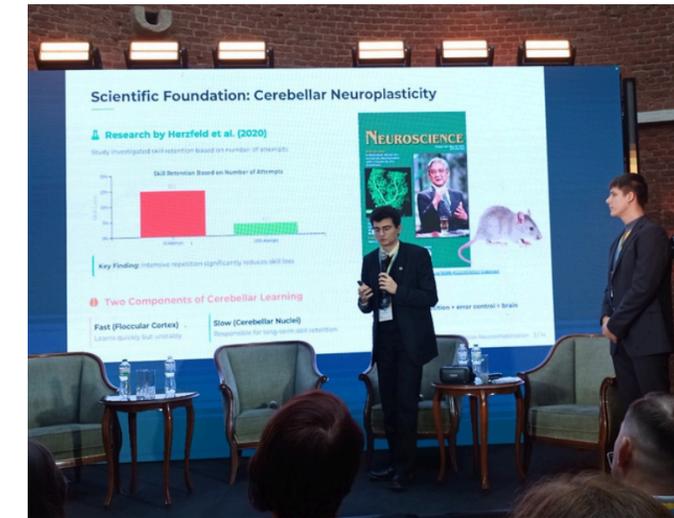
INFOMATRIX UKRAINE 2025  
15-16 березня 2025 року



Другий етап проєкту зі  
створення мережі Стартап-  
шкіл — інкубаторів  
24 червня 2025 року



POLYTECH SUMMIT 2025  
18 жовтня 2025 року



Ukrainian Automotive  
and Mobility Cluster  
16-17 листопада 2025 року



Всеукраїнська програма  
ментального здоров'я Ти як?  
1 липня 2025 року



Startup Pitch Day  
Digital Innovation Forum 2025  
28 жовтня 2025 року

# Expert Team

Experienced leadership combining strategy, technical architecture, clinical validation, and expert mentorship across key disciplines.



**Iliia Riabko**

CEO

- ✓ Strategy
- ✓ Development
- ✓ Partnerships



**Mykhailo Krasin**

CTO

- ✓ Technical architecture
- ✓ Development
- ✓ System design



**Olena Borodai**

Clinical Psychologist

- ✓ Clinical validation
- ✓ Hypothesis confirmation
- ✓ Patient assessment



**Tetyana Bulana**

Mentor

- ✓ Expert support
- ✓ Consulting
- ✓ Strategic guidance

# Funding Requirements

## Use of Funds



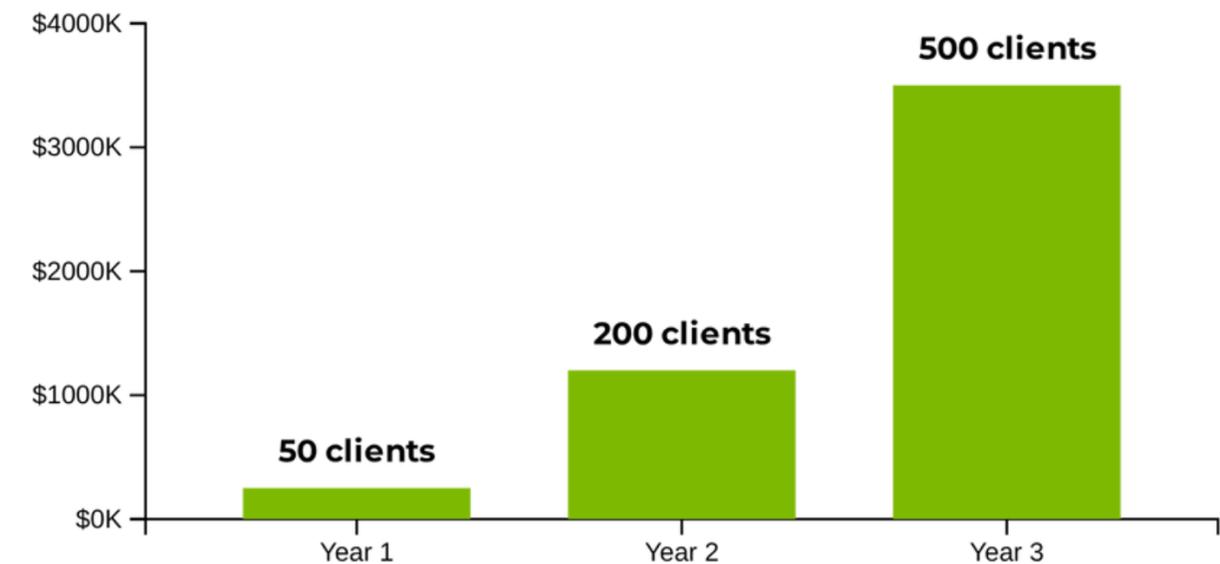
**\$25,000**

Seed Round Needed

- Clinical trials and certification (40%)
- Team scaling (2 dev, 1 medical consultant) (30%)
- Marketing and first 20 pilots (20%)
- Operational expenses (10%)

**Strategic Focus:** Accelerate clinical validation, team expansion, and market entry

## Revenue Forecast



Year 1  
**50 clients**  
**\$75K**

Year 2  
**200 clients**  
**\$300K**

Year 3  
**500 clients**  
**\$750K**

# Investment Opportunity

## Join StayStable in Making Quality Rehabilitation Accessible

Revolutionizing neurorehabilitation through innovative technology



### Market Opportunity

- ✓ Global market: \$23B today, growing to \$45B by 2030
- ✓ VR in medicine: \$2.5B today, \$19B by 2032



### Technology Advantage

- ✓ Active real-time intervention with doctor control
- ✓ Scientific foundation in cerebellar neuroplasticity



### Investment Rationale

- ✓ LTV/CAC: 6,9x in first year
- ✓ 60% ROI in first year for clinics



## Invest in StayStable

Be part of a revolutionary neurorehabilitation solution



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