

CerebrAI-VorTX



**Neural-Synthetic Hybrid Brain-Computer Interface
(BCI)**

NeuroFlow Project





CerebrAI-VorTX

Think, Innovation, Transform

We are developing a local language supported brain-computer

Communication and Mobility Barriers



15%

of global population
has disabilities

€30.000+

cost of existing systems

% 60-70

accuracy rates of
current solutions



According to WHO data, patients with ALS, cerebral palsy, and spinal cord injuries face serious communication challenges.



Cost: Systems €30,000+
(import-dependent)



Accuracy: Existing BCI systems offer only 60-70% accuracy

Language: Lack of native language support limits

Removing Communication Barriers



Over one billion people worldwide face communication barriers. One in seven people experience difficulty with speech or comprehension. CerebrAI-VorTX aims to overcome these barriers through brain-computer interfaces.

NeuroFlow Edge Computing Device:

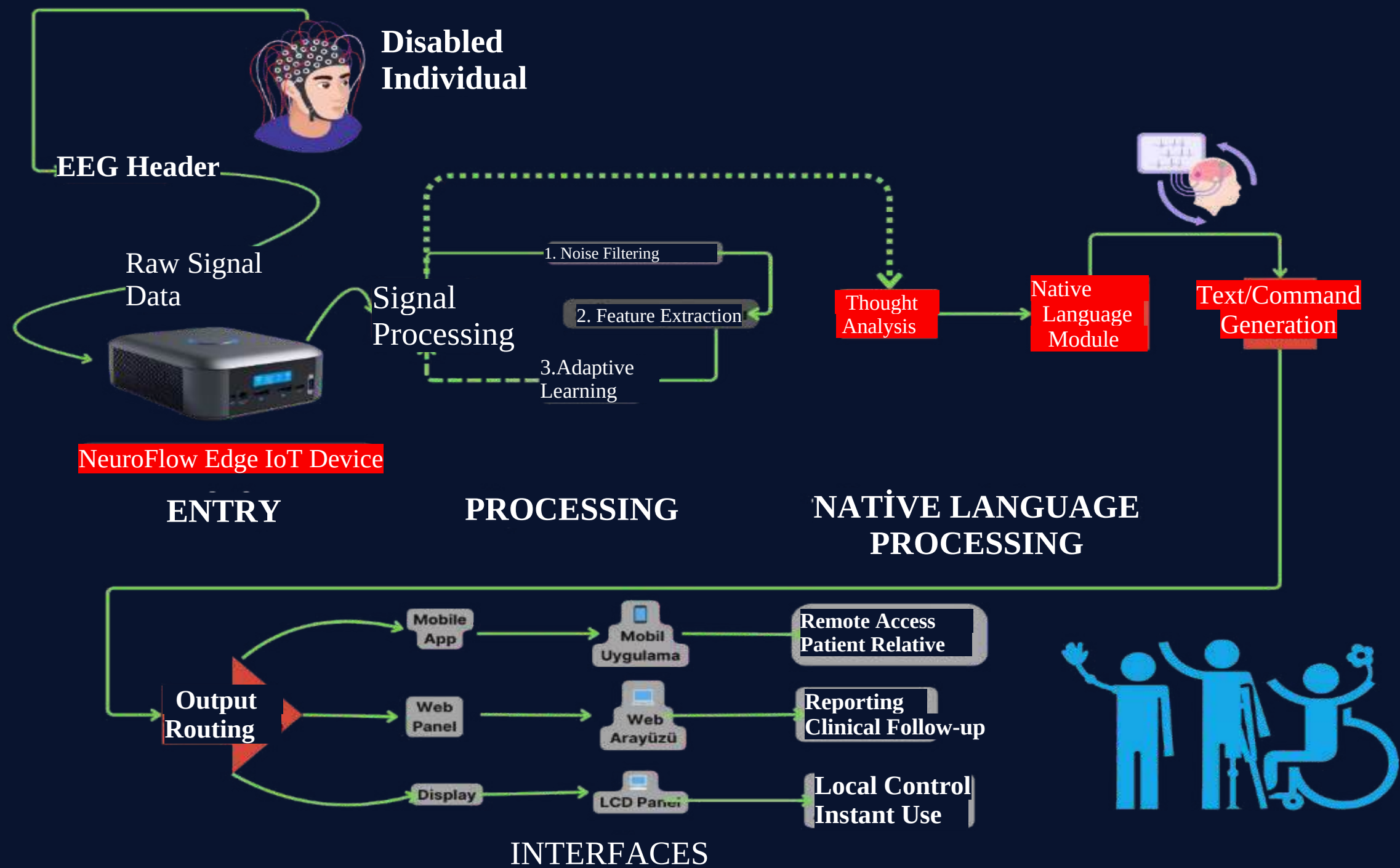
- Real-time signal processing
- Native language support
- Low cost
- Compact and user-friendly design
- High accuracy

Benefits:

- Enhances communication abilities for individuals with disabilities
- Suitable for clinical, rehabilitation centers, and home environments
- 8+ hours battery life for uninterrupted use
- Continuous usage possible with power supply



Breaking Barriers



NeuroFlow: Gateway to Mental Freedom

**Safe and
Comfortable**

**Speed and Accuracy
Champion**

**Native Language
Support**

Non-invasive EEG technology provides painless and secure usage with use as comfortable as the primitive solution available. Our local language support and adaptive learning capabilities respond instantly to user needs.



A World Without Barriers: For Everyone!



NeuroVR: Beyond Limits Rehabilitation

1 Daily Living Activities

Develop independent living skills in realistic virtual environments.

2 Motor Skill Development

Strengthen movement abilities through gamified exercises.

3 Cognitive Rehabilitation

Enhance mental capabilities through interactive simulations.

4 Social Interaction

Practice social skills in safe virtual environments.

Our Training Modes Break Boundaries

NeuroVR, offers flexible, comprehensive rehabilitation solutions:

- Individual Training - Personalized programs tailored to specific needs

- Group Therapy - Interactive rehabilitation experiences with peers

- Remote Rehabilitation - Location-independent, continuous treatment



NeuroFlow's Technological Power

4x %40 %95+ 7/24

Processing speed compared to competitors

Edge Computing Architecture

- 🎬 Data processing at source
- 🎬 <2ms latency
- 🎬 Server-independent operation
- 🎬 99.9% data security

Cost advantage

Deep Learning Models

- 🎬 95% accuracy rate
- 🎬 Adaptive learning system

Signal processing success

Special Signal Processing

- 🎬 24-bit precision
- 🎬 Custom noise filtering
- 🎬 32 channel support

Local technical support

Native Language Processing

- 🎬 Local language support
- 🎬 150ms response time
- 🎬 Natural language understanding
- 🎬 Personalized output

Market Analysis



\$2.4B

\$3.2B

% 15.8

% 10

2024

2025

CAGR

Disability
Associations
Segment

Global BCI Market

Projected Market Size

Annual Growth Rate

Largest Segment - Rehabilitation Centers (41%)
Second Largest Segment - Research Laboratories (35%)

Technology Companies (15%)

Constitutes the largest market share. Institutions providing direct service to end users. Continuous and regular usage potential.

High technology adaptation. R&D focused usage. High academic reference value.

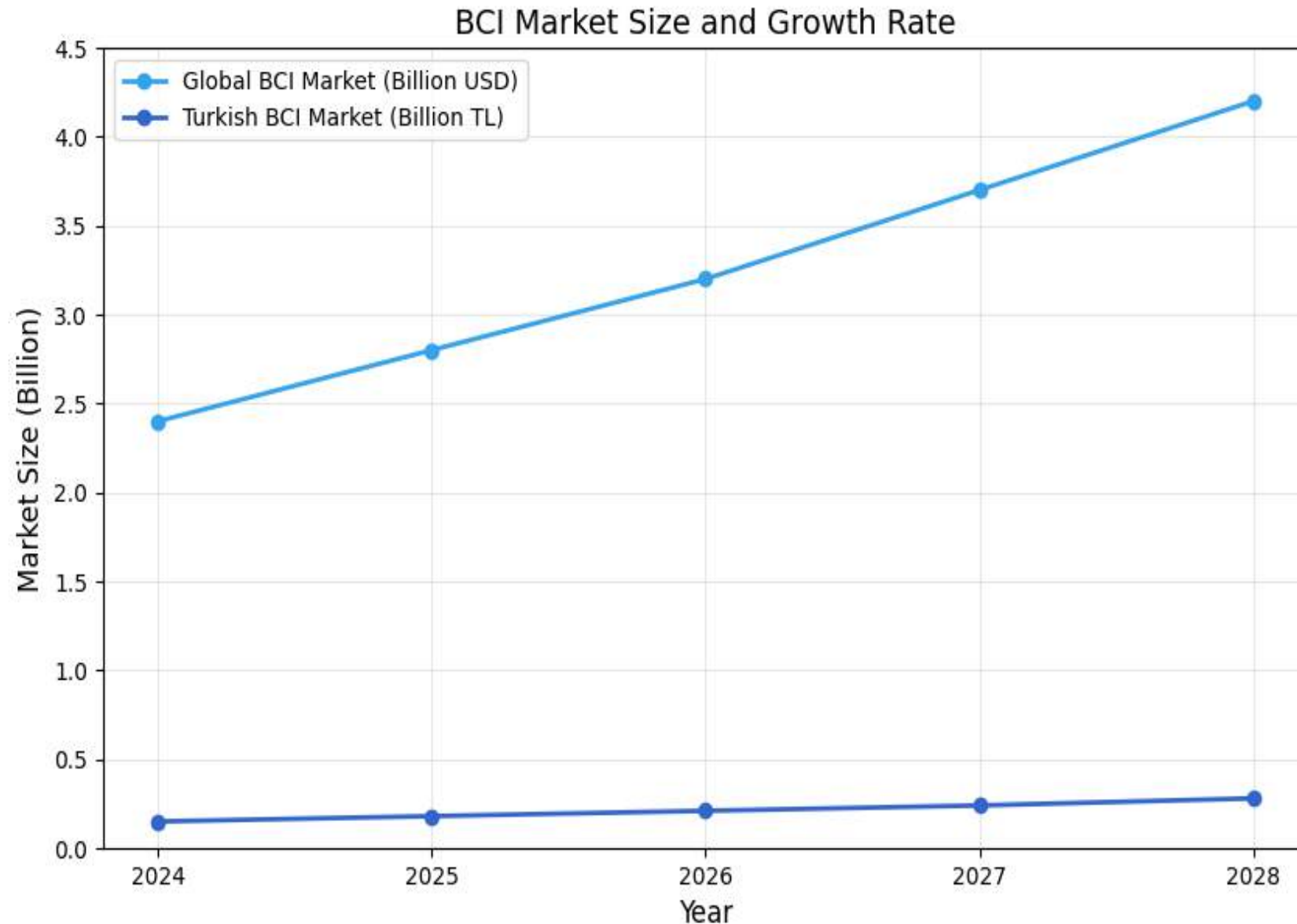
Integration and development potential. Social impact potential. API and SDK usage. Cap Access to wide user networks. Awareness creation capacity.

Total Potential: 2,500+ centers
Active Laboratory Potential: 25+

Active Company Potential: 50+

Institution Potential: 500+

\$2.4B, 2024 -Global BCI Market



The graph shows:

Global BCI Market (Billion USD) -

represented by the blue line trending upward from approximately \$2.4B in 2024 to over \$4.0B by 2028

Turkish BCI Market (Billion TL) - represented by the dark blue line showing more modest but steady growth

X-axis shows years from 2024.0 to 2028.0 Y-axis shows market size in billions

The graph illustrates the significant growth trajectory of the global BCI (Brain-Computer Interface) market, projected to nearly double in size over the next four years, while also showing the relative scale and growth of the Turkish market segment.

Us and Our Rivals



CerebrAI-VorTX OpenBCI

- ✓ Edge Computing IoT
- ✓ Edge AI Processing
- ✓ <2ms latency
- ✓ 32 Chanell
- ✓ Native Language Support
- ✓ Local technical support

- ✓ DIY Kit
- ✓ Open source
- × 50ms delay
- × 8-16 channels
- × Forum support

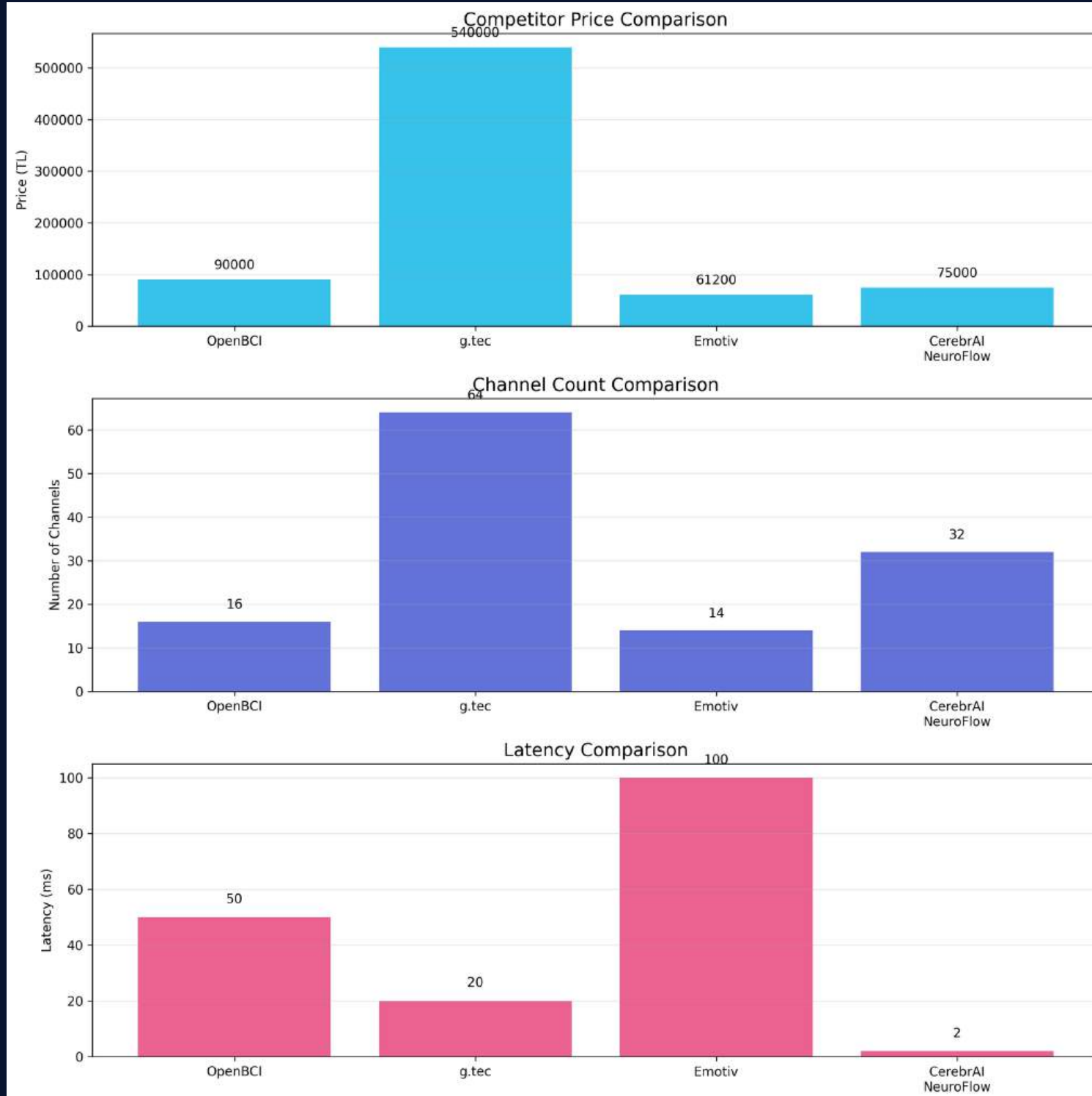
g.tec

- ✓ Medical device
- ✓ 16-64 channels
- × 20ms delay
- × High cost
- × Complex Installation

Emotiv

- ✓ Consumer orientated
- ✓ Mobile app
- × 100ms delay
- × 14 channels
- × Cloud dependent

We stand out from the competition by offering non-invasive, low cost, native language support and high accuracy.



The charts will clearly highlight your competitive advantages, particularly your extremely low latency (2ms) compared to competitors (20-100ms), and your balanced approach to channel count and pricing.

When presenting to European investors and partners, your value proposition becomes even stronger. While g.tec offers more channels, it comes at a significantly higher price point (€15,000), making CerebrAI NeuroFlow a much better value proposition with 32 channels at only €2,100. This positions your solution in the mid-range price segment but with advanced features typically found only in premium systems.

The revolutionary 2ms latency (compared to competitors' 20-100ms) represents a technological breakthrough that enables real-time neural feedback impossible with other systems. This key differentiator is particularly valuable in European markets where advanced healthcare technologies and rehabilitation solutions command premium value when backed by clear performance advantages.

Business Model

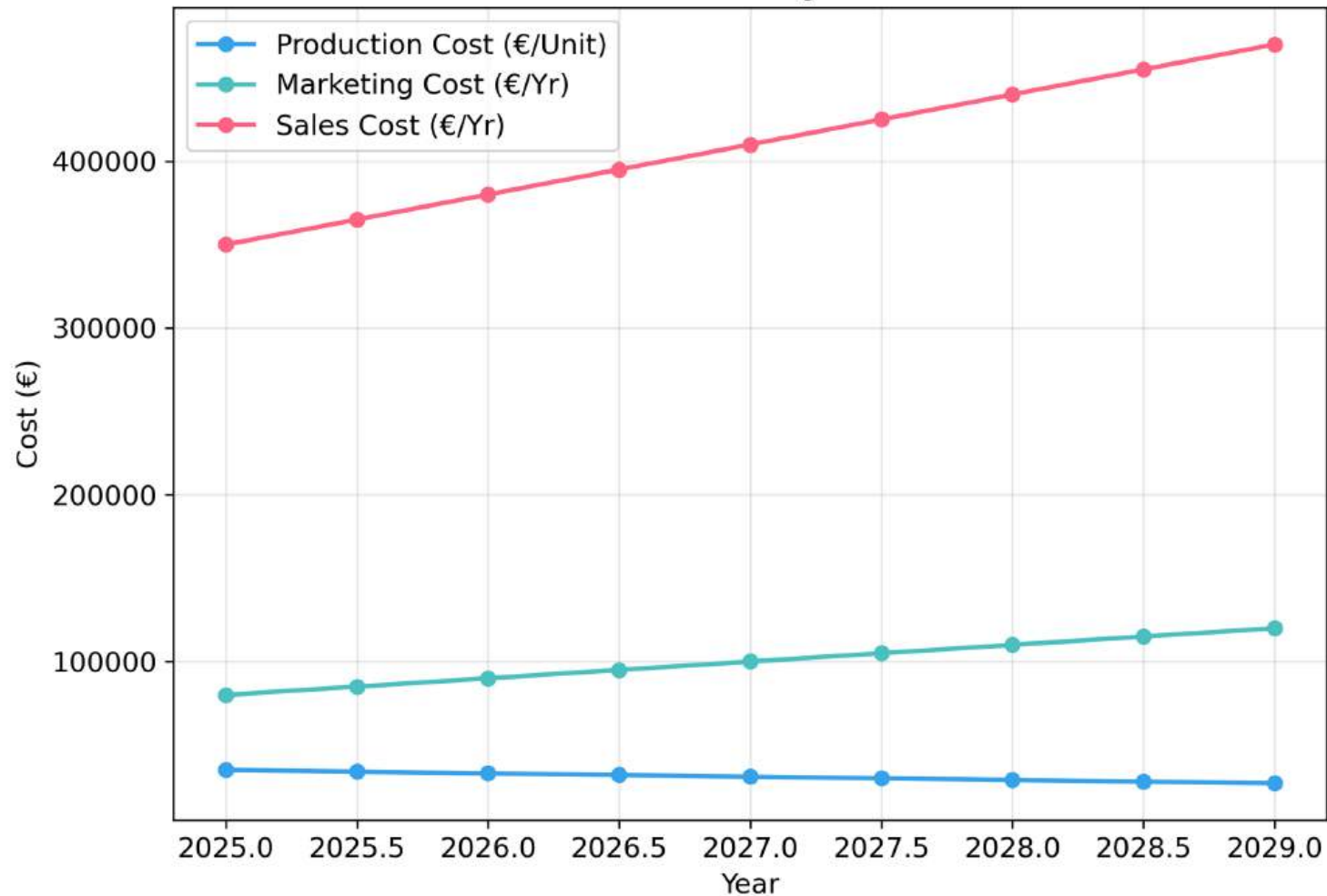


With a target of 45 unit sales and 12 customers in 2025, we aim for €290K revenue and 45% profit margin. We have letters of intent and support from specific institutions. We offer a scalable business model with national expansion and new product lines.

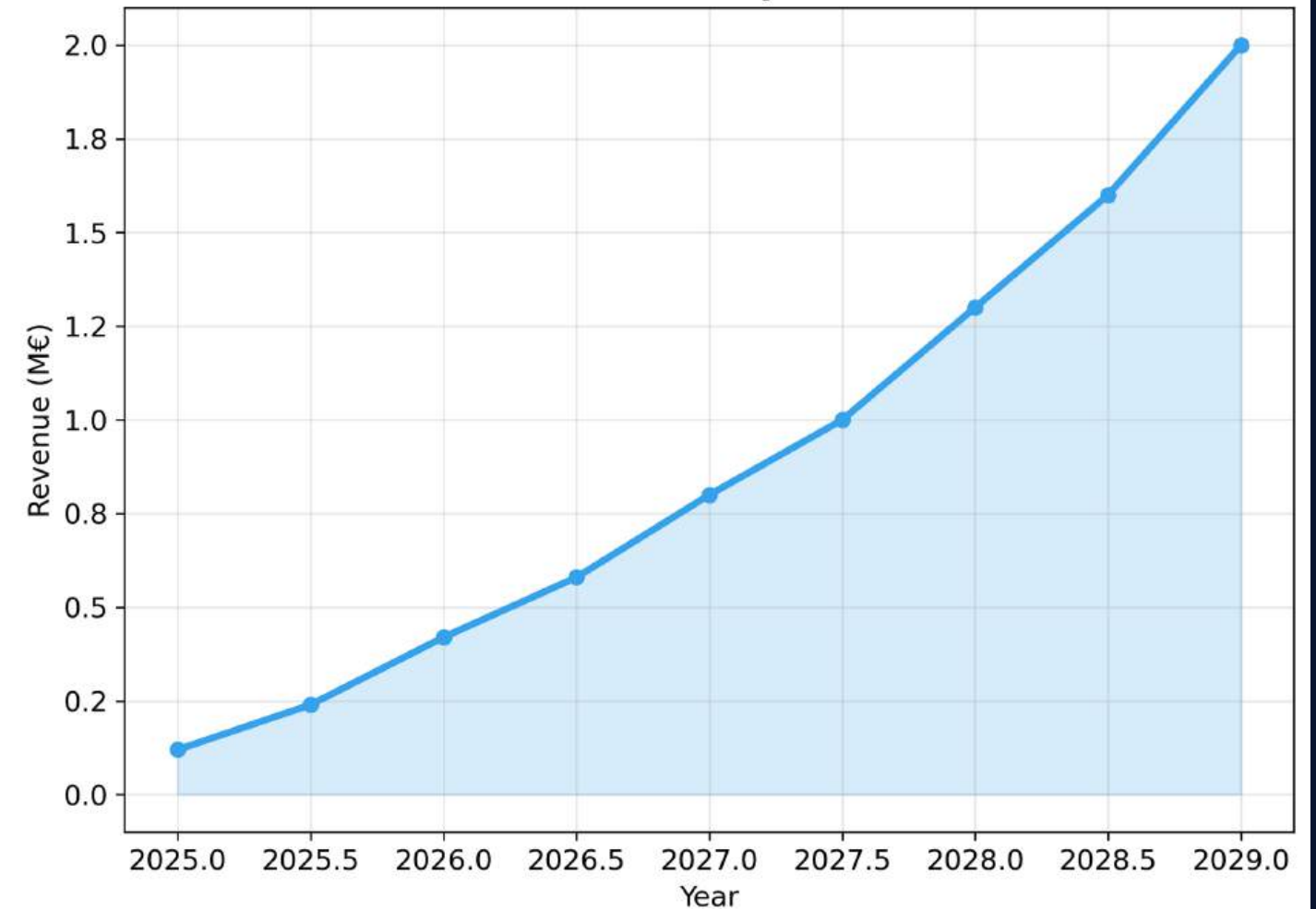
Financial Projections



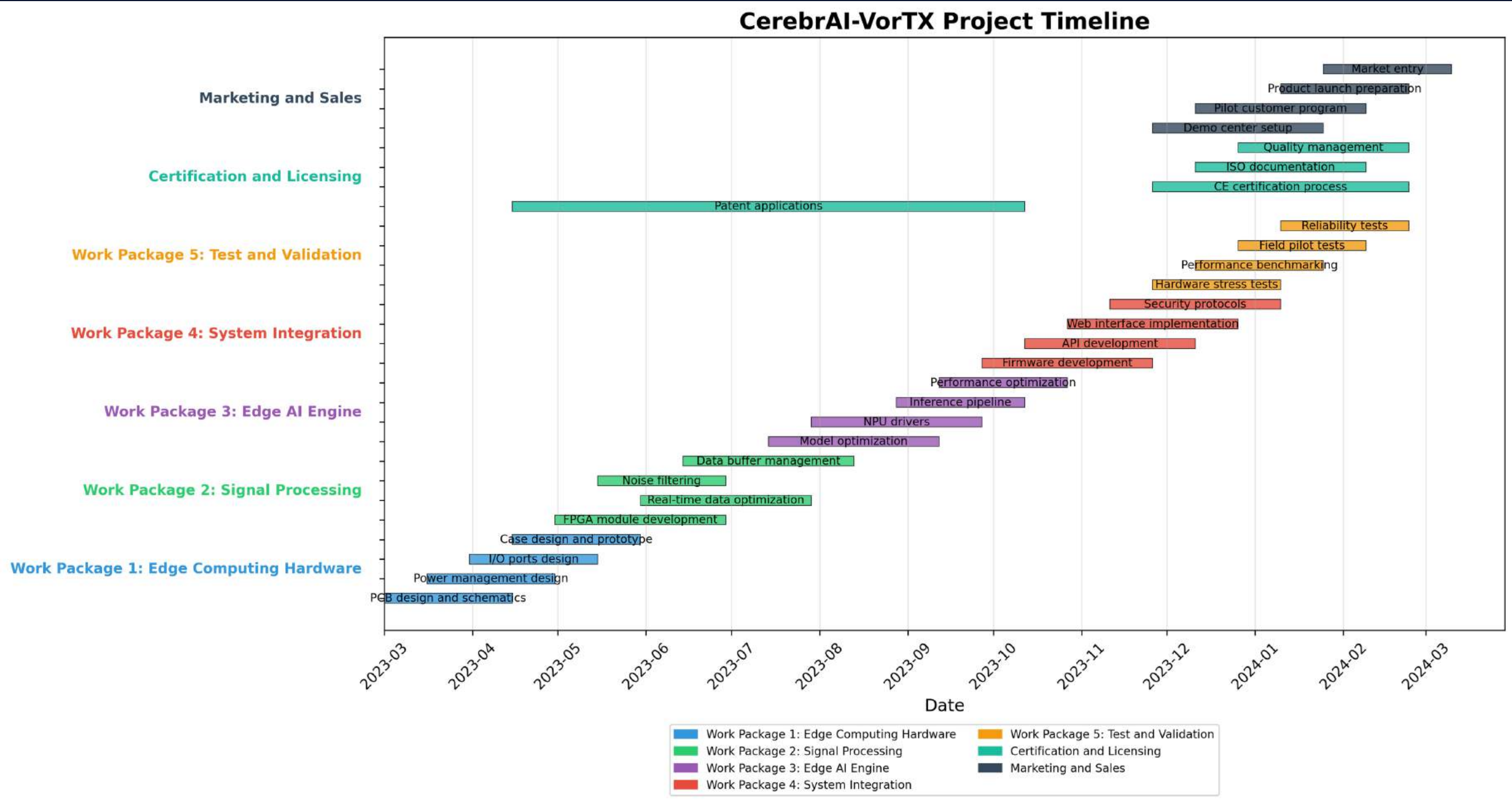
Cost Analysis



Revenue Projection



Project Flow



Main Product - NeuroFlow Edge Computing



Basic Model

- Price: €2,100
- Basic hardware package
- 1 year basic support
- Standard API access



NeuroFlow V.1.0

Pro Model

- Price: €3,500
- Advanced hardware + VOICE PACKAGE
- 2 year premium support



NeuroFlow V.2.0

Enterprise

- Custom pricing
- Customized solutions (voice + chat + thematic simulations)
- 24/7 dedicated support
- Full API access



NeuroFlow V.3.0

1

Initial Contact - 2-3 weeks

2

Demo - 2-3 weeks

3

PoC - 2-3 weeks

4

Proposal - 2-3 weeks

5

Contract - 2-3 weeks

6

Installation - 2-3 weeks

Sales Process Timeline





Technological Validation and Approval

Our technological validation process consists of 4 main phases:

Hardware Design (TRL 3-4)

PCB and hardware design, cooling system optimization
Initial prototype production
Validation of basic components

1

Signal Processing (TRL 4-5)

Filtering algorithms, FPGA implementation
Real-time performance tests, <2ms latency goal validation

2

Edge AI Engine (TRL 5-6)

Model optimization
Lightweight and fast models, >95% accuracy target
Adaptive learning system

3

System Integration (TRL 6-7)

Integration of all components, end-to-end tests
Pilot applications, clinical validation

4

Critical Test Parameters



Performance Metrics:

Latency: <2ms

Accuracy: >95%

Power consumption: <45W

Uptime: >99.9%

Reliability Tests:

72 hour continuous operation

Thermal stress (0-70°C)

EMC/EMI compliance

Data security tests

Clinical Validation:

Pilot study with 20 volunteers

Testing in 3 different clinical environments

1000+ hours total test time

Validation Timeline:



This technological validation process is designed to test and validate our performance goals, reliability criteria and suitability for clinical use.

Roadmap 2025-2026

1

2025 Q3

MVP launch, first 5 pilot hospitals and Technology Hub establishment.

2

2025 Q4

MVP Launch: MVP officially launched.

Initial Pilot Applications: System setup and user training begins at first 5 pilot

3

2026 Q2

CE Certification: CE certification obtained.

Hospital Integration: Integration with 25 hospitals completed.

MENA Market Entry: Entry into Middle East and North Africa market.



FDA Europe
2026

CE
Certification
2026

MVP
Launch
2025

MVP
Launch Trng Q4
2026

Our Strong Team



Our team consists of experts in ML engineering, signal processing, and UI/UX design with experienced advisors.

Yasin TANIŞ Founder & CEO

3+ years Data Science & ML

3+ years BCI system development

T3 Entrepreneurship Participant

NLP Finalist

Currently active in the field of artificial intelligence.

Muhammet Emin POLAT Co-Founder & CSO/CIO

Founder of METADER (Metaverse Application and Development Association)

AR-GE experience

NLP and artificial intelligence model development expertise

Cybersecurity specialist

Strategic partnerships and R&D management

Currently active in cybersecurity, and artificial intelligence sectors.

Keziban TOPAL R&D Director

5+ years Nanotechnology Researcher

T3 Trainer & Nanologist

Experience with Research Projects

Academic Research Background

Currently active in nanotechnology and artificial intelligence research.

Sefa KABATAŞ Senior VR/Game Development

2+ years medical VR simulation development

3+ years C# and Unity VR/AR development

2+ years multiplayer VR systems

Currently active in VR 3D game simulation design.

CerebrAI-VorTX

Think, Innovation, Transform

"Your thoughts are now your voice!"

Our Goal: Not just a product, but creating an ecosystem that will transform the lives of disabled individuals and reconnect them with society. Every successful application will open a new page in someone's life, becoming a new hope.

With respect, CerebrAI-VorTX Team

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