NASDAQ: AIFF

FIREFLY
NEUROSCIENCE

Transforming Brain Health Through AI

FIREFLYNEURO.COM

Forward-looking Statements

Certain statements in this presentation may contain certain information that is "forward-looking information" or "forward-looking statements" within the meaning of applicable securities laws with respect to Firefly Neuroscience Inc, or its subsidies ("Firefly Neuroscience" or the "Company"). Such statements include all statements other than statements of historical fact contained in this presentation, such as statements that relate to the Company's current expectations and views of future events. Often, but not always, forward-looking information can be identified by the use of words such as "may", "will", "expect", "anticipate", "predict", "aim", "estimate", "intend", "plan", "seek", "believe", "potential", "continue", "is/are likely to", "is/are projected to" or the negative of these terms, or other similar expressions, as well as future or conditional verbs such as "will", "should", "would", and "could" intended to identify forward-looking statements. These forward-looking statements include, among other things, statements relating to our expectations regarding future clinical trials, expectations regarding regulatory approvals, expectations regarding the safety and efficacy of our products, our expectations regarding commercializing our approved products and our ability to generate revenues and achieve profitability; our expectations regarding the safety, efficacy and advantages of our products over our competitors and alternative treatment options; our expectations regarding our products fulfilling unmet clinical needs and achieving market acceptance among patients, physicians and clinicians; our expectations regarding reimbursement for our approved products from third-party payers; our ability to attract, develop and maintain relationships with other suppliers, manufacturers, distributors and strategic partners; our expectations regarding our pipeline of product development, including expanding the clinical application of our products to cover additional indications or clinical uses; our expectations regarding current and future clinical trials, including the timing and results thereof; our expectations regarding receipt of additional regulatory approvals for our products and future product candidates; our mission and future growth plans; our ability to attract and retain personnel; our expectations regarding maintenance of the current regulatory approvals we have received, including our compliance with the conditions under such approvals; our expectations regarding our competitive position for our products in the jurisdictions where they are approved; our ability to raise debt and equity capital to fund future product development, pursue regulatory approvals and commercialize our approved products; and anticipated trends and challenges in our business and the markets in which we currently operate or may in the future operate.

Forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Company to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. The results, performance and achievements of the Company will be affected by, among other things, such as risks related to our limited operating history and history of net losses; risks relating to the extent and impact of COVID-19; risks related to our ability to commercialize our approved products, including expanding our sales and marketing capabilities, increasing reimbursement coverage for our approved products and achieving and maintaining market acceptance for our products; risks related to the regulation of our products, including in connection with obtaining regulatory approvals as well as post-marketing regulation; risks related to our successful completion of future clinical trials with respect to our products and future product candidates; risks related to managing growth, including in respect of obtaining additional funding and establishing and maintaining collaborative partnerships, to achieve our goals; risks related to competition that may impact market acceptance of our products and limit our growth; risks relating to fluctuating input prices and currency exchange rates; risks related to the reimbursement models in relevant jurisdictions that may not be advantageous; risks related to reliance on third parties, including our collaborative partners, manufacturers, distributors and suppliers; risks related to intellectual property, including license rights that are key to our business; and risks related to the loss of key personnel. The Company's forward-looking statements are made only as of the date of this presentation and, except as required by applicable law, Firefly Neuroscience disclaims any obligation to update any forward-looking statements, whether as a result of new information, future events or results or otherwise, unless required by applicable law. There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, and because of the above-noted risks, uncertainties and assumptions, readers should not place undue reliance on forward-looking statements due to the inherent uncertainty in them.

This presentation does not constitute an offer to sell or a solicitation of an offer to buy any securities. For additional information regarding risks and uncertainties, see our filings with the U.S. Securities and Exchange Commission ("SEC").

Era of the Brain: Next 20 Years in Healthcare

1920s – 1960s

Antibiotics

Penicillin launched modern pharma and transformed infectious-disease survival

Pfizer

Transformed penicillin into a global pharmaceutical powerhouse

1950s – 1990s

Heart

Pacemakers & cardiac devices cut mortality in half and reshaped global care

Medtronic

Scaled pacemakers and became the world's largest device company

1990s – 2020s

Cancer

Precision oncology ushered in a targeted-therapy revolution across cancer care

Celgene

Enabled precision oncology and was acquired for $74B

2020s – 2040s

Brain

Cognitive electrophysiology analytics address critical gap in brain health care

FIREFLY NEUROSCIENCE

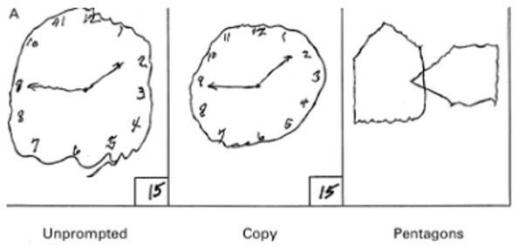
Harnessing the power of AI and EEG to transform neuroscience and clinical development

Gap in the Marketplace

Deliver Neurology Tools to the Masses

Current Low-Cost Tools

Questionnaires
(MoCA, MMSE, etc.)



- Low cost (~$50/test)
- High volume
- **Subjective, no direct brain measurement**

ERP & EEG

Market Opportunity

- **Relatively inexpensive (approximately $100-500/test)**
- **Provides objective electrophysiological measurements of brain function**
- **Scalable for broad clinical use, subject to clinical judgment and applicable labeling**

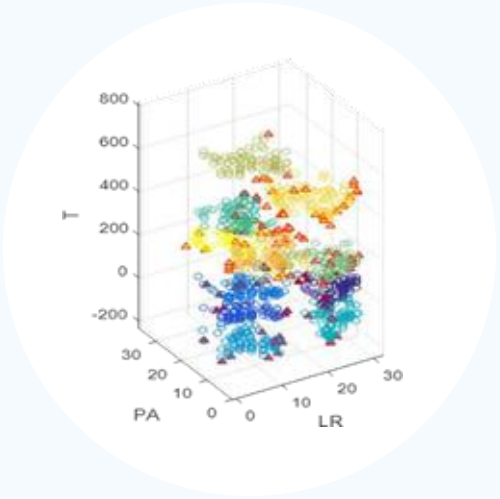
High-Cost Imaging

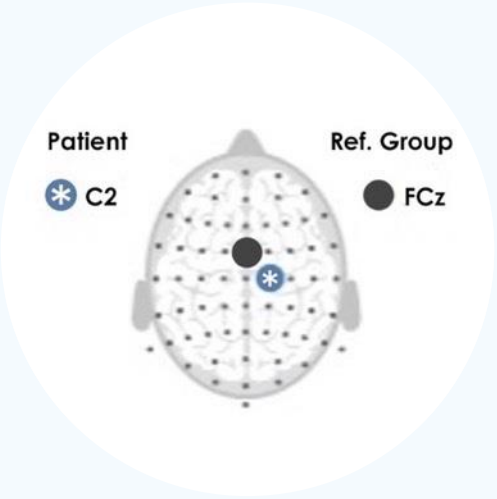
PET, CT/MRI, fMRI

PET | CT / MRI | Functional MRI (fMRI)

- High cost ($1,500+ / test)
- Often takes up to **3.5 years** from symptom to a formal dementia diagnosis
- **Too costly & too slow for broad use**

Our Solution: Cognitive Electrophysiology





Scan Brain's Electrical Activity

- Resting state EEG
- Evoke response potentials (ERP)

Compare to Proprietary Database

- FDA-cleared
- Compares a patient's EEG data to the expected normal range for healthy individuals of the same age (12–85)

Objectively Measure Electrophysiology

- Measure a patient's baseline, progression, & response
- Provide reports to clinicians

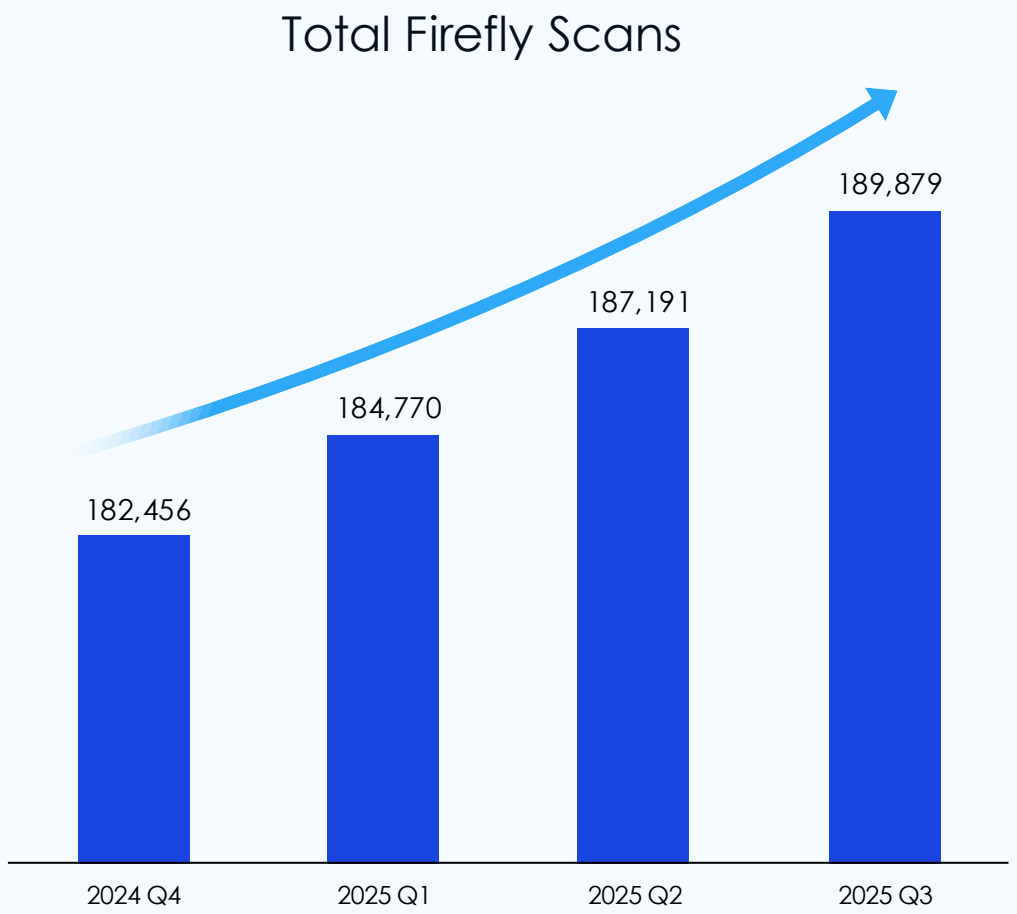
To Solve The Brain…Requires Data
Firefly Has the Largest Known EEG + ERP Database*

191,000+

Standardized Scans

More Data > **More Insights**

Higher Quality > **Better Predictions**



* To Company's Knowledge

Proprietary Database of Brain Wave Tests

Largest Standardized EEG + ERP (brain function) database of 191,000+ scans

>100,000 patients	~9,300 Patients from clinical trials
12 types of neuropsychiatric disorders	5 different types of cognitive tasks
20 measures of cognitive functions	3 avg. visits / patient (longitudinal data)

12+ Types Of Neuropsychiatric Disorders

Anxiety	Dementia / Early Alzheimer's
Depression	Parkinson's
Bi-Polar	MCI
Schizophrenia	mTBI/TBI
ADHD	ASD
PTSD	Schizoaffective Disorder

Case Study: Dementia or Depression?

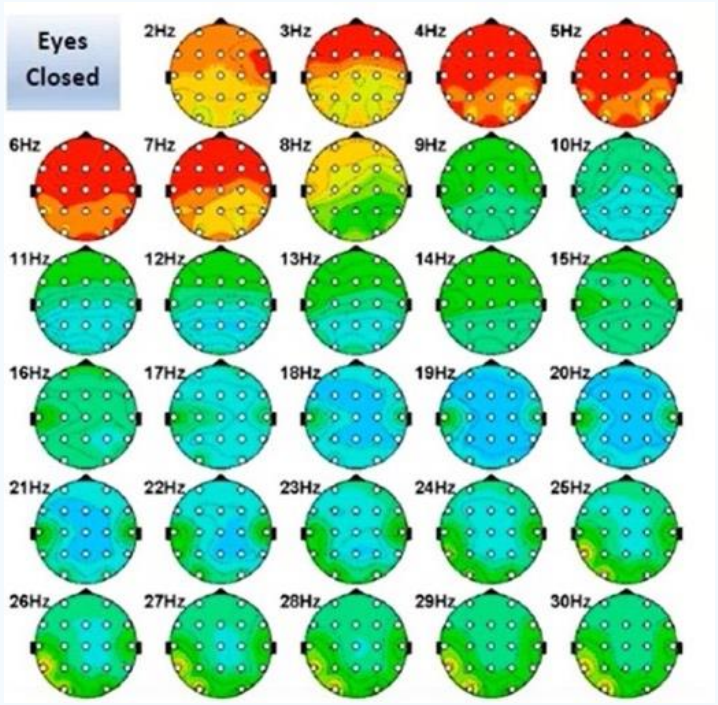
Is Grandma getting dementia, or is she depressed since grandpa passed?

MCI/DEMENTIA

High power in delta/theta (too much slow cognitive processing)

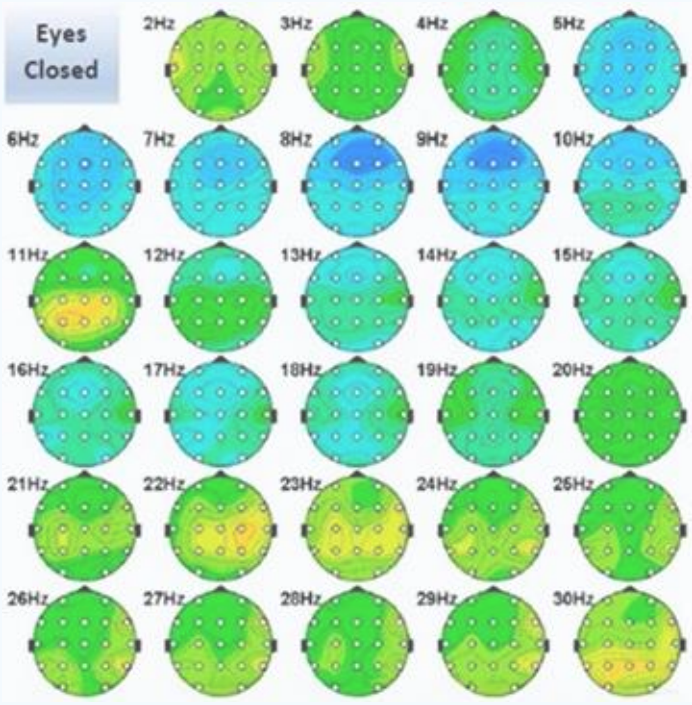
Low power in alpha/beta (not enough fast cognitive processing)

ERP shows delayed speed and reduced power



DEPRESSION

Low power in alpha band, in frontal lobe (responsible for emotional control)



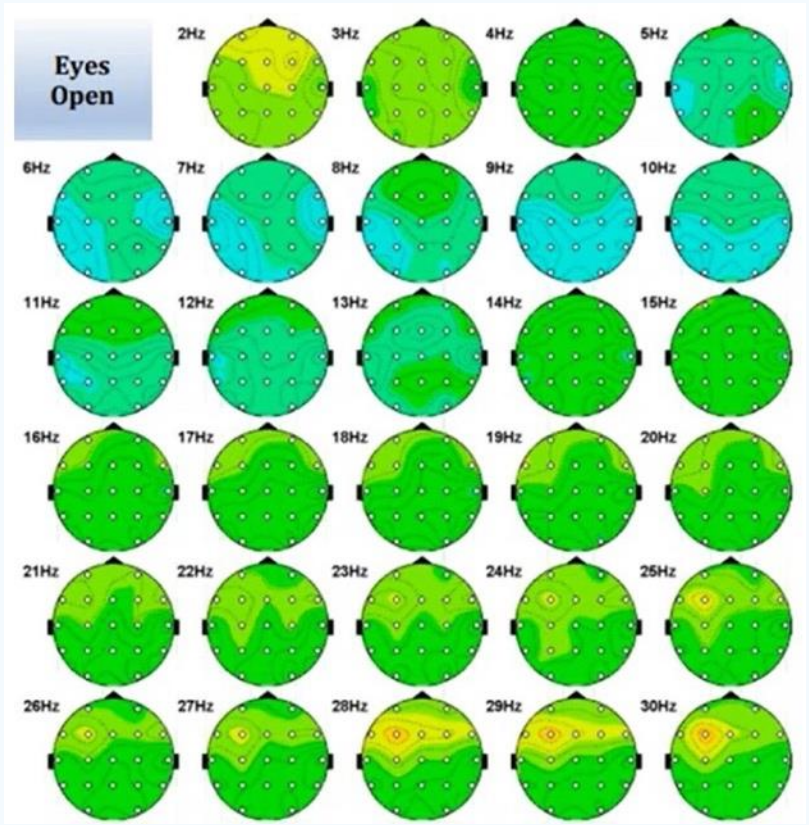
Case Study: PTSD

Is the patient cleared to go back to work?

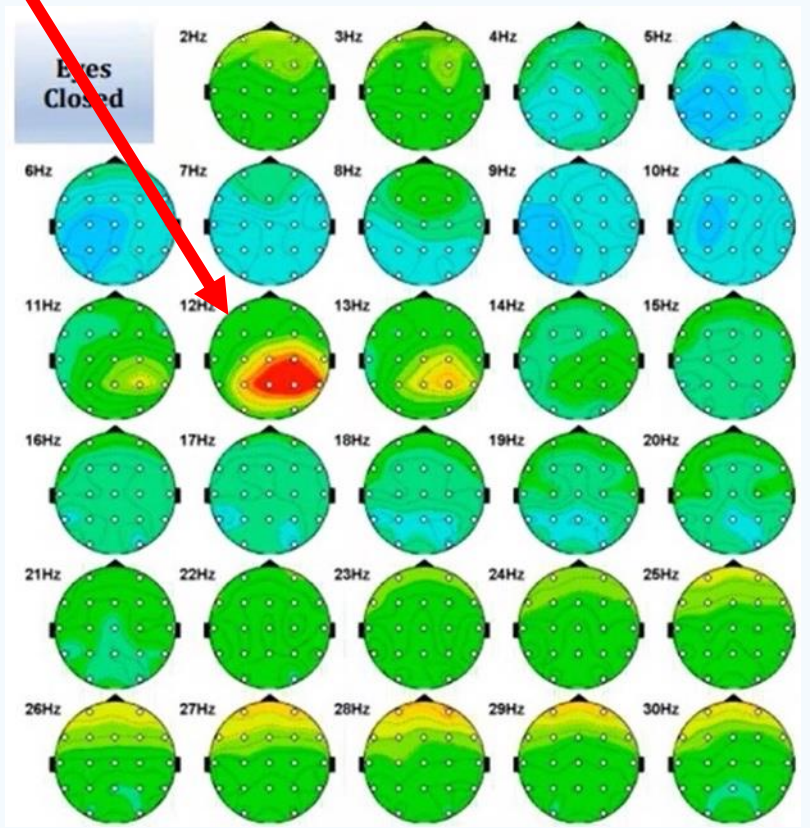
High power in faster alpha2 frequency band in the eyes-closed relative to eyes-open condition

A most common Post Traumatic Stress Disorder bio-marker for hypervigilance and failure of the default mode network function

EYES OPEN



EYES CLOSED

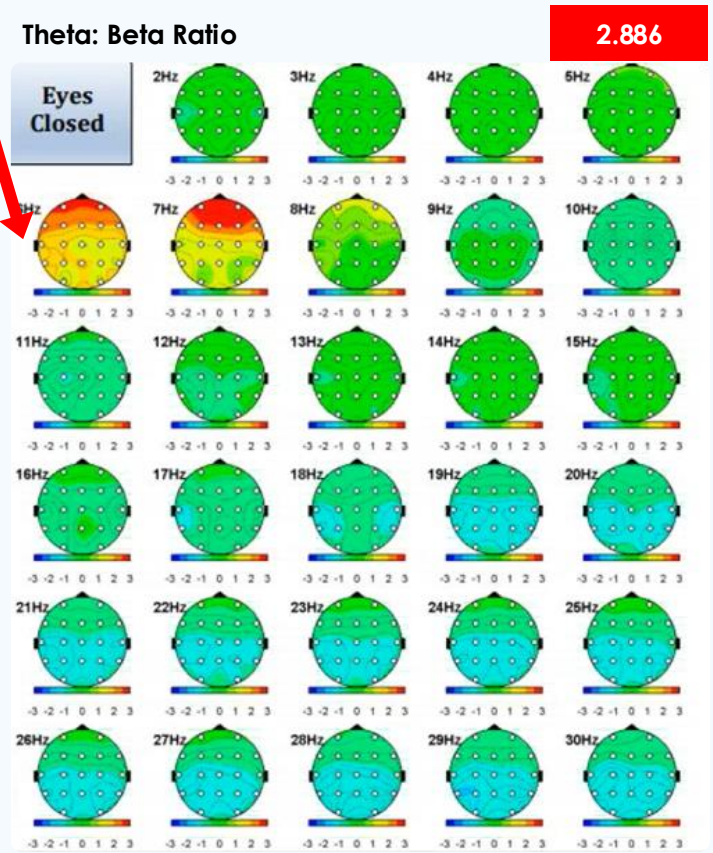


Case Study: ADHD

Should my child be on stimulants?

RESPONDS WELL

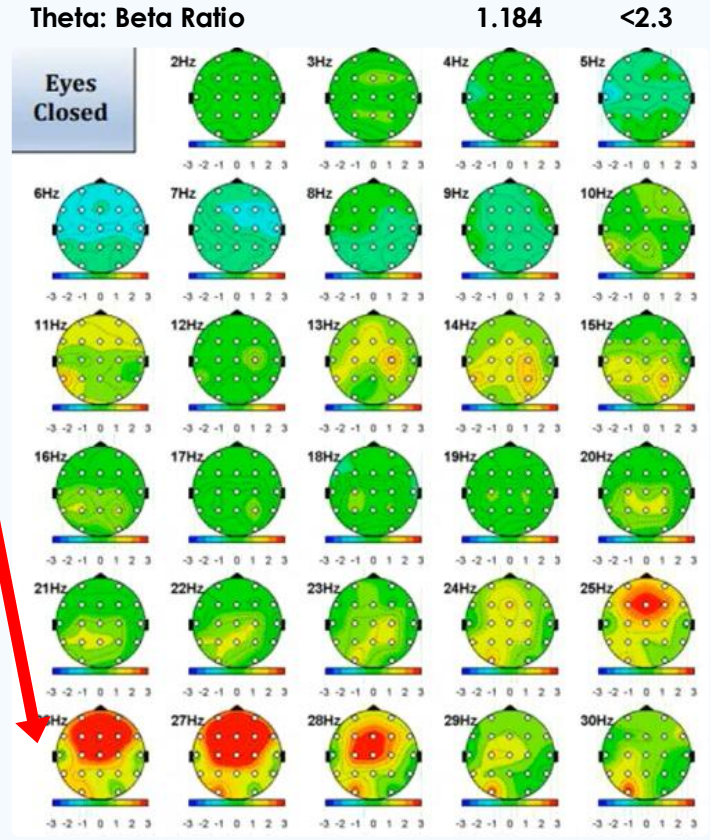
Excess theta endophenotype: **responds well** to stimulant medications.



RESPONDS POORLY

Excess beta endophenotype: **does not** respond well to stimulant medications.

Different approach such as neurofeedback



Business Model: Monetizing Through Subscription and Licensing Fees

Data Platform

Clinicians

- Data: each incremental brain scan adds to database
- $ Monthly Subscription Fee

>342,000 psychiatrists, neurologists & primary care physicians in the U.S.

Pharma

- Data: each incremental brain scan adds to database
- $ Licensing Fee
- $ Equity on new drug created

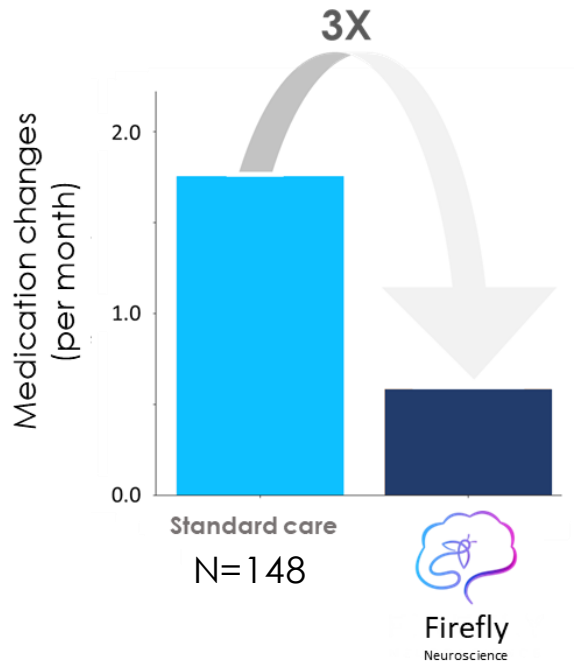
~940 active CNS trials

Source:
https://www.beckersbehavioralhealth.com/behavioral-health-news/all-50-states-ranked-by-psychiatrists-per-capita/
https://www.aan.com/PressRoom/Home/PressRelease/1178
https://www.iqvia.com/-/media/iqvia/pdfs/library/white-papers/cns-whitepaper-32024.pdf

Clinics Using our Software Achieve Better Outcomes

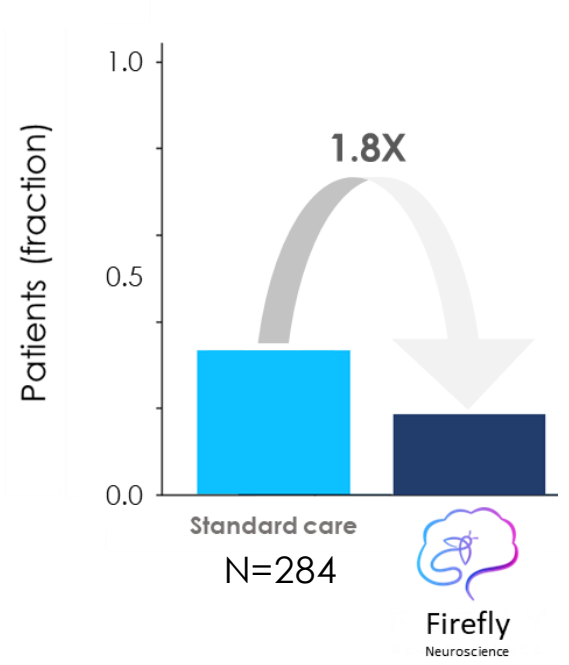
Informed Treatment Selection

Fewer medication changes



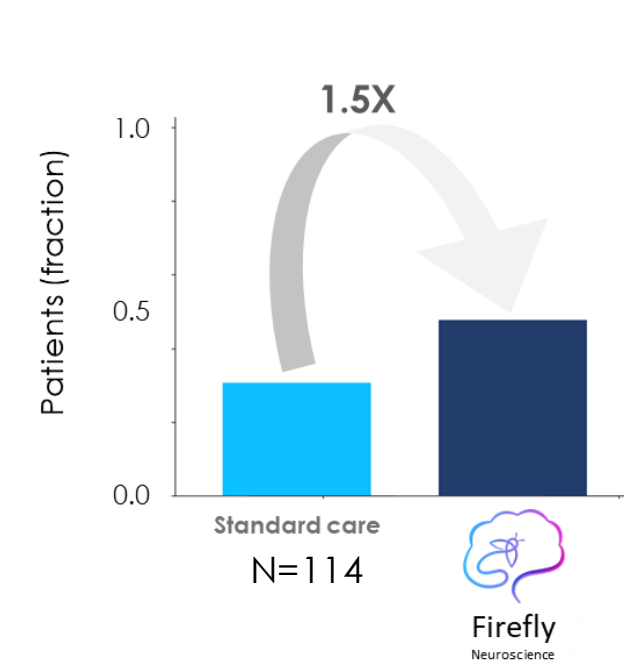
Increased Compliance

Less discontinuation



Improved Treatment Outcomes

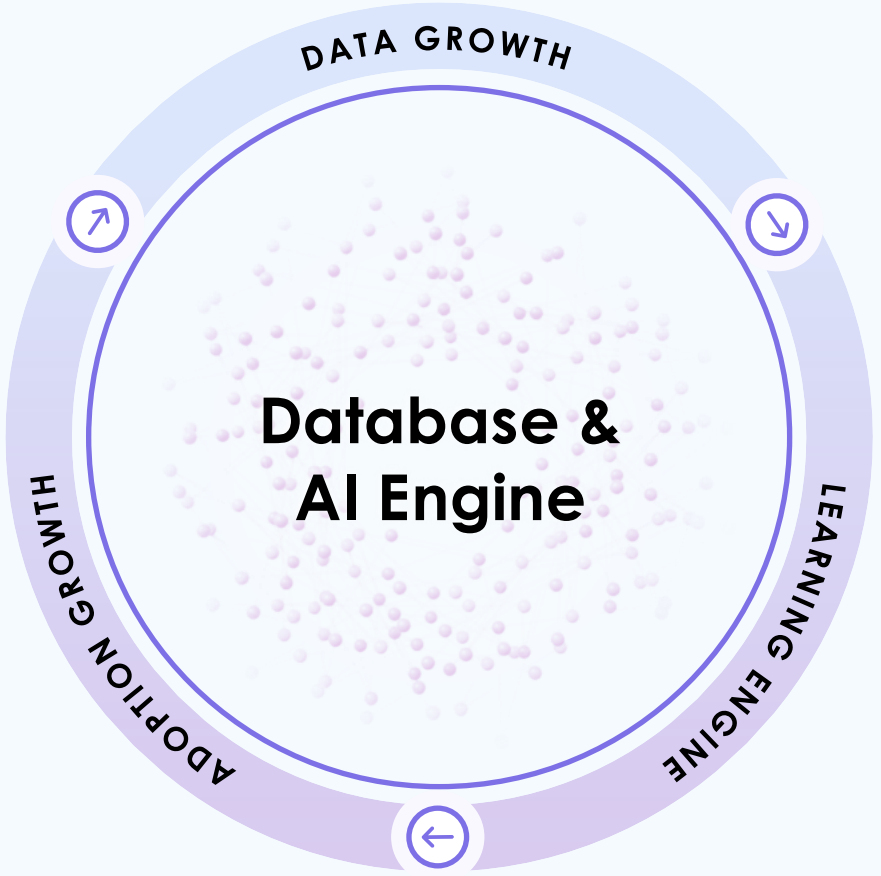
Increased response and remission rates



Source: Baumeister Charlotte. Brain Network Analytics (BNA) in the Psychiatric Practice (2023).
https://s3.amazonaws.com/media.fireflyneuro.com/wp-content/uploads/2024/08/29174946/BNA-in-Psychiatry-White-Paper.pdf

Network Effects: More Scans = More Data

- Data platform grows with each incremental brain scan
- Continue to learn and **generate more insights**
- More insights, results in more value to customers to drive further customer adoption



Empowering Neuroscience Drug Development

- Comparison to FDA-cleared normative database helps understand drug effect
- Reduces cost and risk associated with new drug/therapy development
- Pursuit of Neuro-biomarkers
- Further validates EEG + ERP as objective measure of efficacy

Cognito Therapeutics

Objective EEG/ERP endpoints in neurodegenerative therapy development.

BRIGHT MINDS

EEG/ERP analysis across Phase 1–2 trials to evaluate drug effects in epilepsy.

STALICLA

Objective cognitive biomarkers used as endpoints in ASD drug development.

NOVARTIS

Objective endpoint for PK/PD modeling in depression.

Takeda

Software used to show SNRI drug direct effects on cognitive function.

Heidelberg UNIVERSITY

Neuro-biomarker testing in academic CNS research programs.

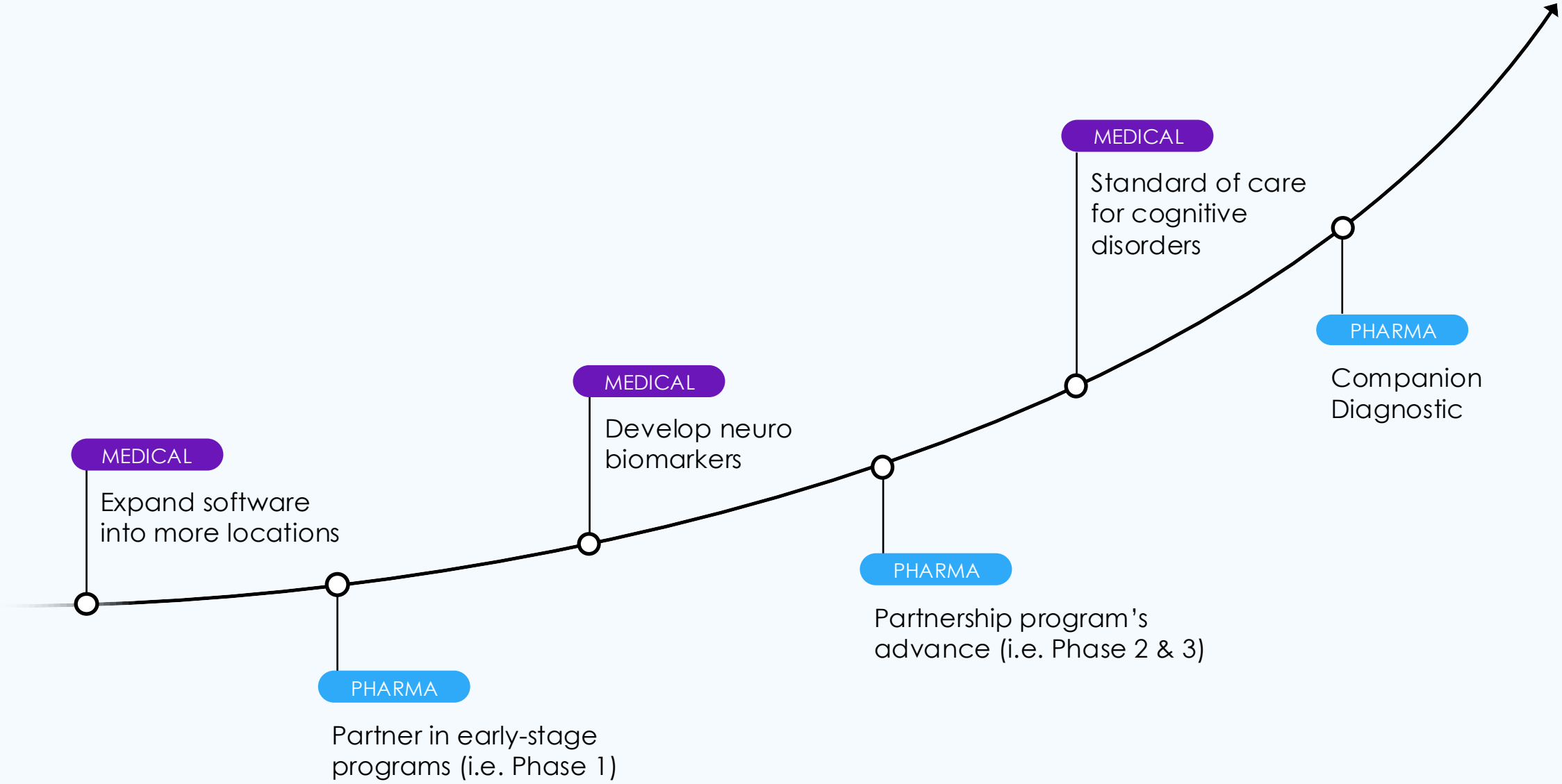
Winners in Brain Health Will Unlock Billions of Dollars of Value

These companies turned cardiac physiology into billion-dollar markets.

Firefly's aim is to create the same platform advantage in brain physiology.

Company	Annual Sales	% of Company Revenue (approx.)	Market Cap	Strategic Takeaway
Edwards	$4.1B	~75%	$48B	A single breakthrough device became a global franchise
Boston Scientific	$8.3B	~50%	$148B	Diversified cardiology ecosystem across multiple modalities
Medtronic	~$11.6B	~30–40%	$118B	Global scale by owning devices + data + clinical workflow
Abbott	$2.25B	~5–6%	$218B	Early bets in structural heart became major growth engines

Roadmap to $100 Billion+



Combination of AI & Medtech Experience Board Members and Management

Dr. Arun Menawat
Chairman

- Chairman & CEO, Profound Medical (NASDAQ:PROF)
- Previous exits: Cedara ($1B to IBM) and Novadaq ($700M to Stryker)

PROFOUND NOVADAQ

Greg Lipschitz
CEO & Director

- 15+ years in private equity, capital markets & merchant banking
- 10+ years advising high-growth businesses
- Advised over $1B in mergers & acquisitions

Stella Vnook
Director

- CEO, Likarda Biotech and Founder, OralBioLife, Dialysis Biosciences and ACG Group
- 25+ years leading innovative improvements to global clinical product portfolios through commercialization, including 13+ years at Merck

MERCK

Dave DeCaprio
President, COO & Director

- Co-founder of ClosedLoop.ai. (Voted #1 AI Software Solution for Health Care '23/'22)
- 20+ years transitioning advanced tech from academic research labs to successful businesses

ClosedLoop

Brian Posner
Director

- CFO, electroCore Inc. (NASDAQ: ECOR)
- 35+ years of diversified management experience at public and private companies

electroCore™ NASDAQ: ECOR

Gil Issachar
CTO

- 11+ years software and algorithm developer, data science, and research
- Masters Degree in Biomedical Engineering (thesis focused on signal processing and neuroscience)

In Summary

Significant Competitive Advantages

- Largest known EEG/ERP database: 191,000+ scans*
- World's largest database of FDA-cleared, normalized, age-matched EEG scans
- FDA-cleared for use in 12–85-year-olds

Experienced, High-Performing Team

- **Dave Decaprio:** MIT alumni, previously mapped human genome with MIT & Harvard. Co-Founder of ClosedLoop AI
- **Greg Lipschitz:** Advisor/investor in multiple high-growth companies, including a $2B sale
- **Arun Menawat:** Led a $1B exit to IBM, and $700M exit to Stryker

Entering Stage of Anticipated Rapid Growth

- Q3-2025 revenue grew 10X YoY and 30% QoQ
- Q3-2025 scan volumes grew ~11% QoQ
- Continuously onboarding new clinics

* To Company's Knowledge