

NEUROHACKER

C O L L E C T I V E

Overview

NHC was founded in 2015 with the mission of creating best in class wellbeing products, employing a novel approach to research and development based on complex systems science.

- This approach focuses on supporting the body's ability to self regulate, rather than overriding regulatory systems with chemicals designed to move a biomarker in a particular direction. This means focusing on whole regulatory pathways and systems, rather than single molecular targets.
- This approach provides improved performance while maintaining (and often improving) homeostatic functioning. Desired upside with limited to no downside.
- The scope of application is very broad. The company began with a focus on psycho-affective products (nootropics, sleep, mood, etc.) but can address a wide range from immune system support to cellular regeneration with equivalently superior performance.



Overview

NHC generated its first revenue in April 2016 and has experienced rapid growth in the last 2 years

- Through a combination of strong revenue growth and operational efficiency, NHC is on track to reach operational break-even in June 2018 and had only a nominal loss in May 2018.
- Over 83% of revenue is subscription-driven

Key multinational companies have recently approached NHC and expressed interest in investment coupled with strategic partnership.



Neurohacker Collective - Leadership Team



Jordan Hall

Executive Chairman, Co-founder

While studying at Harvard, Jordan became fascinated by the idea that industries, economies, and societies as a whole can be entirely disrupted by technology delivered in the right way, at the right time. He enacted this philosophy by cofounding DivX in 2000, fundamentally transforming entertainment and video sharing online. Jordan raised over \$150M for DivX, then took DivX public with a \$800M IPO. He then spent years as a trustee at Santa Fe Institute, examining cutting edge approaches to civilization infrastructure. As Executive Chairman of Neurohacker Collective, he leads the application of complex systems science to neurotechnology, creating tools for people to empower their most capable form.



Daniel Schmachtenberger

Chief Strategy Officer, Co-founder

Daniel is focused on developing processes and technologies for advancing medicine and human optimization. He is particularly focused on personalized medicine, adequate approaches to complex illness, and deepening our knowledge of how the human regulatory systems function, how they break down, and how they can be supported to function with greater resilience.



James Schmachtenberger

CEO, Co-founder

James is a successful serial entrepreneur, with a lifelong focus of using business and innovation to effect large-scale change for the benefit of all. Prior to Neurohacker he created several companies in natural and integrative medicine, worked on legislation to improve prohibitory laws, created award winning documentaries and founded some of the top companies in the cannabis sector. As CEO of Neurohacker, James supports every department of the organization and leads new business development and organizational culture.



Hakan Lindskog

Chief Operating Officer

Hakan brings 20 years of leadership and P&L management of digital marketing, media, direct marketing and ecommerce companies such as Time Life, Highlights for Children and Matomy Media. With a focus on revenue and profit growth, he oversees Operations, Customer Acquisition, Finance and Legal.



Shawn Ramer, PhD

Vice President, Product Development

Shawn is an experienced senior executive with extensive experience in science, healthcare, and information technology. He has a proven record of success leading large organizations and in developing and delivering complex product and services strategies in the pharmaceutical industry, including in his most recent role as Sr. VP at Bristol-Myers Squibb. Shawn's focus at Neurohacker is on the creation, testing, and development of new products.



Mark How

Chief Revenue Officer

Mark is a uniquely seasoned entrepreneurial executive. He drives rapid growth by building business development, corporate development, and leads the sales and marketing team.



Lauren Alexander

Vice President, Marketing

Lauren creates marketing strategies, builds robust revenue models and leads multiple cross-functional teams towards enterprise-wide growth and success. She specializes in digital advertising, technology, and profit maximization.



GK Parish-Philp

Vice President, Technology

GK is a full-stack web developer, iOS and Android mobile application developer, and product manager who loves creating great products.

Collaboration with an International Community of Doctors, Scientists and Practitioners



Zak Stein, EdD

Chair of Education Program,
Meridian University
Ed.D. Human Development
and Education, Harvard
University



Andrew Huberman, PhD

Neurobiology Professor at
Stanford University School of
Medicine



Lindsay Briner

Research Scientist, The
Transformative Technology Lab
Neurophenomenology &
Consciousness



Jon Wilkins, PhD

President, Ronin Institute
Professor, Santa Fe Institute



Scott Barry Kaufman, PhD

Psychologist, Author,
and Speaker



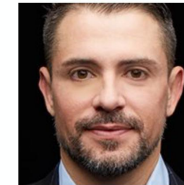
Heather Sandison, ND

Naturopathic Doctor, North
County Natural Medicine,
Baster University



Dan Stickler, MD

Medical Director,
Neurohacker Collective
Co-founder, Apeiron Center
for Human Potential
Co-founder, Apeiron Academy



Dan Pardi

CEO HumanOS &
Researcher at Behavioral
Sciences Department at
Stanford



Michael Mannino

Neuroscientist at Center for
Complex Systems and
Brain Sciences at Florida
Atlantic University



Andrew Hill, PhD

Founder & Director of Peak
Brain Institute;
Lecturer at UCLA



Hyla Cass, MD

Physician
Psychologist
Published Author



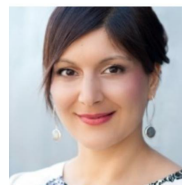
Sara Adães, PhD

Human Development &
University of Porto
Faculty of Medicine
Neurobiology



Jeffrey Becker, MD

Neuropsychiatry and
Functional Medicine



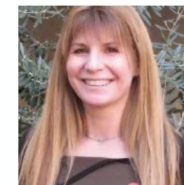
Nafysa Parpia, ND

Gordon Medical
Associates



Gregory Kelly, ND

Lead Product Formulator



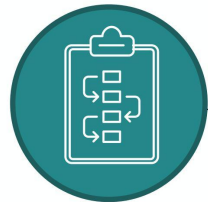
Kat Toups, MD

Bay Area Wellness
Functional Medicine
Psychiatry

Formulation Process

Approach

- Whole complex-system approach (not reductionist)
- Regulation based (balance, not a “more is better”)
- Employ synergies of molecules (not single “magic bullet”)



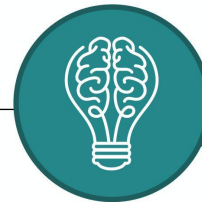
Define Target Outcome

- Wellness
- Optimization
- Resilience
- Subjective
- Objective



Structured Review of Literature

- Pathways & interactions
- Ingredients
- Whole system approach

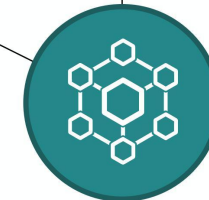
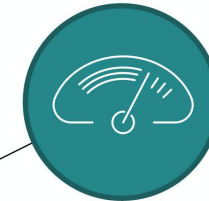


Formulation

- Hypothesis creation
- Factor primary and secondary mechanisms, synergies, interactions, etc.
- Best in class ingredients from all categories

Testing & Feedback

- 1000 + pool of testers
- Subjective & objective data
- Formal Trials (eventually)
- Quantified Self (in development)



Analysis & Iteration

- Effects
- Tolerability
- Dosing and dosing schedule

Multi-disciplinary diverse scientific team

- PHD's in neuroscience, chemistry, pharmacology, etc.
- ND's and MD's
- Supplement, pharmaceutical, & medical backgrounds

Press and Influencers

Inc.

"If the challenges of your organization are overwhelming your brain, then check out Neurohacker Collective..."

The Street

"Just as Netflix brought the movie theater to the living room, Neurohacker Collective is bringing the centerpiece of life to a higher standard with a citizen science community untethered from the bureaucracy of the old-guard health industry. "

BuzzFeedNEWS

"Nootropics, Smart Drugs, Cognitive Enhancers, or BioHacking, all these terms seem nebulous and full of mystery. But, what are these supplements? How are they changing our humanity? The Neurohacker Collective has some answers."

HUFFPOST

"Neurohacker Collective is both highly effective in different domains and forward thinking. Between the leadership and scientific expertise, this is grounded in revolutionary ideas and their methods of operating the business reflect as much."

THE WALL STREET JOURNAL.

"Now a new generation of entrepreneurs want to hack the brain and body, improving everyday performance through nutritional supplements called nootropics. Nootropics are designed to heighten productivity, memory, mental function, and overall physical energy..."

KEY INFLUENCERS:

Dr. Daniel Stickler
from the Apeiron Center for Human Potential



Andrew Huberman
Neurobiology Professor at Stanford University
School of Medicine



Jon Wilkins, Ph.D
from Harvard University, professor at Santa Fe Institute,
President Ronin Institute



HARVARD
UNIVERSITY



SANTA FE INSTITUTE

Zachary Stein Ed.D
from Harvard University,
Chair Education program Meridian University



HARVARD
UNIVERSITY



MERIDIAN UNIVERSITY
EDUCATION THAT TRANSFORMS

Jason Silva - Storyteller,
Futurist, Keynote Speaker -
Host of BrainGames & Shots of Awe



Early Customer Reception on First Two Products is Strong



Qualia Original Stack

5.0

4.72



- “You can't put a price on the mental clarity I get from this”
- “your product has changed my life”
- “I started taking this last week; immediately could tell a difference. This is the best nootropic I've tried; well worth the \$ “
- “For me it is like windshield wipers for my brain “
- “After 16 months of use, I still LOVE Qualia. I use it for targeted creativity and motivation”

n = 182 Note: product launched Sept 2016



Qualia Mind

5.0

4.74



- “Stress level was at a 10+ now it's at a 0.”
- “Day four, and I'm blown away with the clarity, and drive that I have. The added bonus is the calmness during a stressful situation. Amazing”
- “It's like your brain expanding three inches in diameter. feeling EXTREMELY motivated and passionate about everything”

n = 27. Note: product launched March 2018

Pilot Study of Qualia Original (May 2017)

9 Participants

- Not currently taking Nootropics or Psychiatric Medication
- Non-Blinded
- Non-controlled
- Qualia Original

32 lead qEEG

- Pre-Qualia
- 4 hours post initial dose
- 30 days of taking Qualia

Psychophysiologic Stress Profile

- Pre-Qualia
- Repeat after 30 Days on Qualia

CNS Vital Signs Pre- and Post-

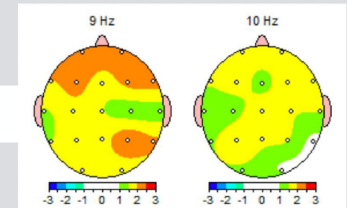
Capnography Pre- and Post-

Decreases in the upper band of Beta which are commonly associated with **reduced anxiety and general improvement in mood function.**

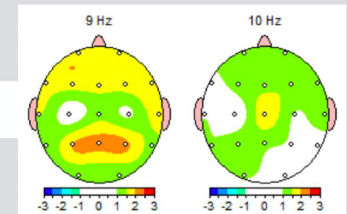
Increases in the Beta 1 band, typically indicative of improved perfusion and **more efficient cognitive function**

Decreases in the lower bands of the EEG (Delta, Theta and Alpha) and increases in the beta bands which are typically associated with **increased attention and cognitive efficiency**

PRE-QUALIA



POST-QUALIA



Objective and Subjective improvements in Stress responses

Cognitive Testing (30d)

- Neurocognitive Index – 14% improvement
- Composite Memory – 25% improvement
- Verbal memory – 17% improvement
- Visual memory – 26% improvement
- Executive function – 13% improvement
- Attention – 11% improvement

Improved respiratory rate & capnography

Research conducted May 2017 by Dr. D. Stickler, Apeiron Center, Asheville, NC

Preliminary data from cognitive testing of Qualia Mind customers (April-June 2018)

23 Participants (April-June 2018)

Open-label

Tests completed prior to taking Qualia Mind, after first dose, and after 5 days on Qualia Mind.

Cambridge Brain Sciences is the leading online platform for cognitive assessment with one of the largest secure cognitive databases

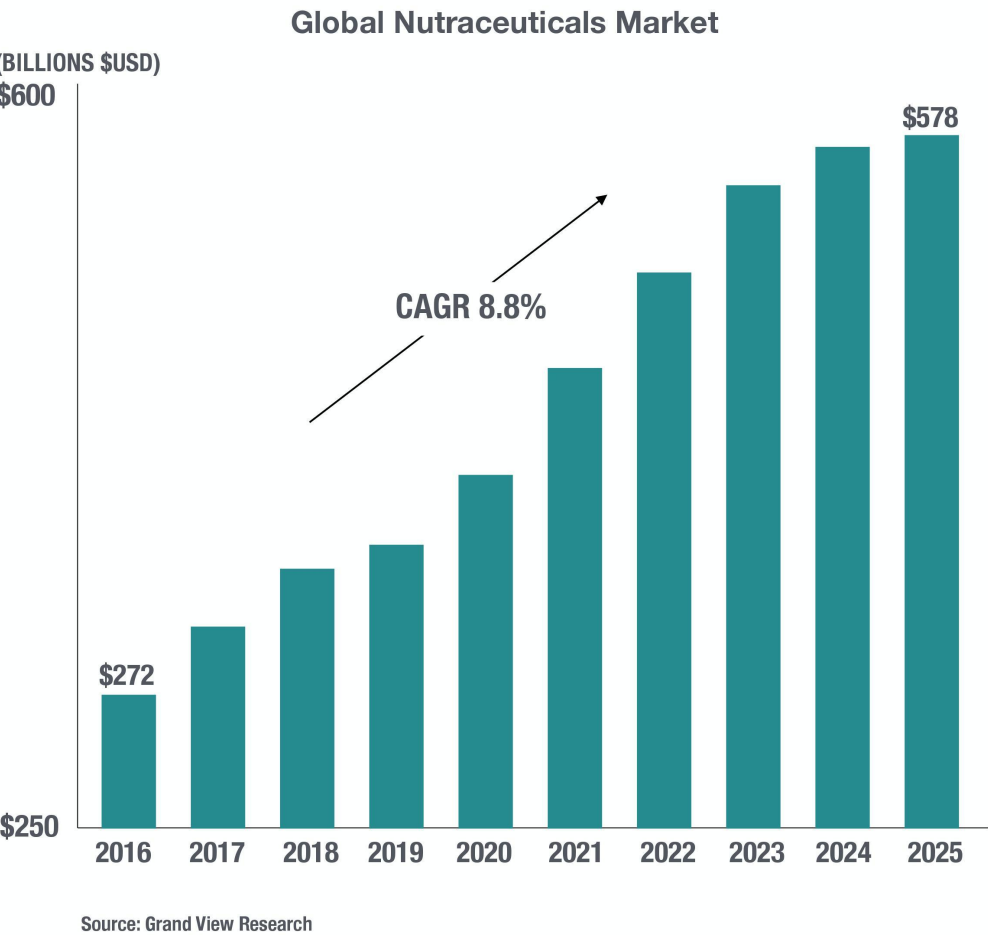
- Hundreds of thousands of people
- Tests completed more than 8 million times
- Used in 300+ peer-reviewed academic papers.

Core Cognitive Area	Verbal Ability & Cognition			Reasoning & Memory		
Outcome Measure	Verbal Reasoning	Verbal Short-Term Memory	Concentrate / Avoid Distraction	Visual Representation	Planning	Episodic Memory
Average Score Increase (%)	16.9%	13.3%	85.4%	31.1%	37.2%	10.2%
Expected Learning Effect (%)	2.2%	1.3%	4.9%	5.4%	3.8%	-0.4%
Changes in Cambridge Brain Sciences (cambridgebrainsciences.com) testing scores after 5 days of Mind in 23 subjects. Score increases have $p \leq 0.05$. Expected learning effect is the amount of change in scores because of repeated testing based on Cambridge Brain Sciences historical data.						
Outcome Description	Ability to quickly understand and make valid conclusions about verbal concepts	Ability to temporarily store information in a specific order in short-term	Ability to concentrate on relevant information despite distracting	Ability to efficiently manipulate mental representations of objects	Ability to act with forethought and sequence behavior to reach specific goals	Ability to remember and recall specific events, paired with the context they occurred



Intense Investment Activity

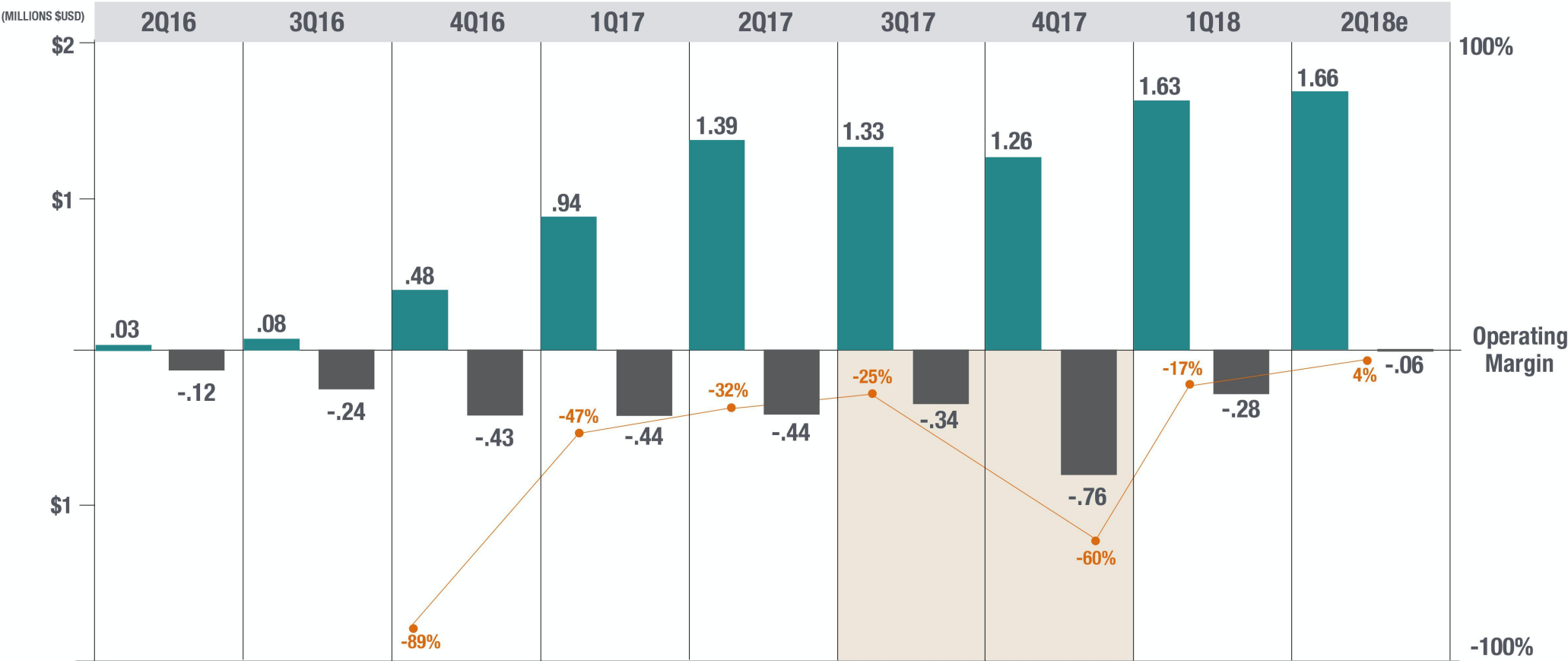
Nutraceutical Companies have attracted significant investment activity as health and wellness focus goes mainstream



Selected Nutraceutical Investment Activity			
Company	Focus	Raised	Select Investors
Metagenics	Nutraceuticals, Medical foods	\$28M	Unknown
Elysium Health	Supplements based on advances in science and technology	\$31M	General Catalyst Sound Capital Silicon Valley Bank
KIND	Health and Wellness foods	Strategic Investment	Mars
EAS	Specialized Nutrition	\$320M	Acquired by Abbott Laboratories
NutraNext	Dietary Supplements	\$700M	Acquired by Clorox
Amplify Snack Brands	Better for you snacks	\$1.6B	Acquired by Hershey

Revenue Growth

Neurohacker has achieved significant revenue growth using only its seed capital. Supply chain and production bottlenecks have been solved and the company is ready to scale more rapidly.

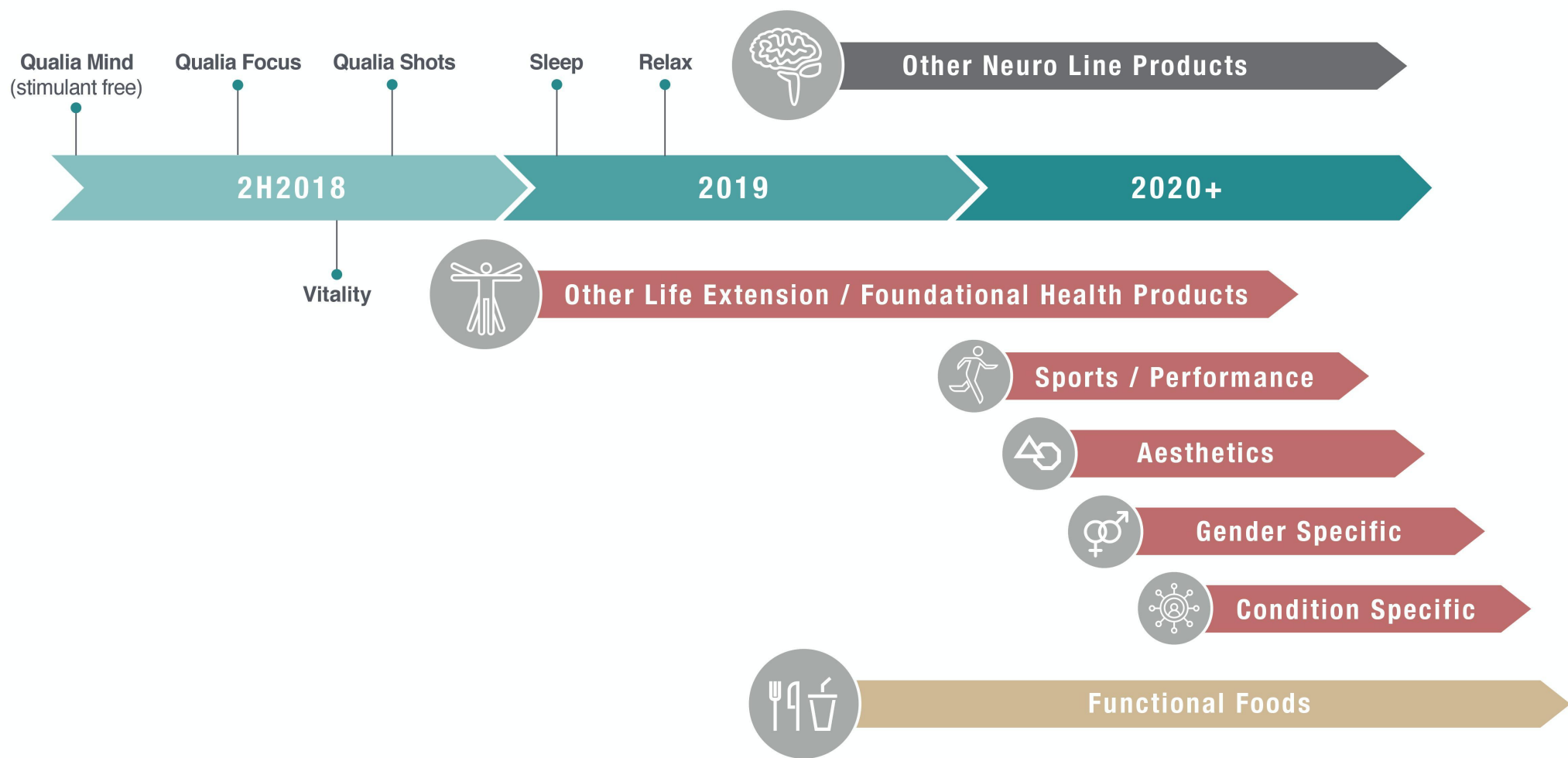


Q3 and Q4 2017 revenues were depressed by persistent supply chain failures, which have since been resolved. Q4 2017 operating loss included a one-time write-off of \$170k related to inventory used for research and promotional purposes.

The Qualia Line: New Products in Development



Product Roadmap



Subscription Revenue

Neurohacker’s subscription revenue continues to steadily increase while CAC remains steady and returns are modest, despite a generous 100 day refund offer.

