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Problem Statement

Currently, an estimated 4.5 million veterans suffer from Post Traumatic Stress Disorder (PTSD)². As a result of increased physiological and emotional reactivity, many patients experience anxiety outbursts and agitation, many times with decreased insight and awareness. These attacks are reoccurring, causing strain on the patient's personal relationships which limit their social and career opportunities. Due to the neurophysiology of PTSD, many patients are unaware that they are experiencing stress or at risk for an anxiety induced episode until after the fact, decreasing their ability to use compensatory strategies.

Advisory Board



Howard Davis

A clinical assistant professor at Washington State University, Howard served as the CEO and VP of Research for multiple startups companies.



Ray Combs

CEO of Sprimo Inc. and Director of Harold Frank Institute, Ray is a veteran and successful entrepreneur who led the product team which designed and delivered the Amazon kindle.



Alicia Hegie

Dr. Hegie is a Neuropsychologist at St. Luke's Rehabilitation Center and the inspiration behind the research of Castor.

Value Proposition

Castor is a machine learning software company which senses early signs of an oncoming stress-induced anxiety attack, immediately providing exercises through the application interface, therefore reducing the severity of the attack.

Market Opportunity

After initial market outreach through our contacts, we will address the other 32,000 PTSD therapists in the US each working with roughly 30 patients (add citation). Castor will then expand out into the more general audience of PTSD (i.e. sexual assault victims, witnesses of crime/loss of loved ones, etc.) and traumatic brain injury (TBI) patients, through advertisement, word of mouth, and continuation of therapy recommendation.

Total Available Market: In the United States, there are about 32.5 million people diagnosed with PTSD and TBI¹.

Serviceable Available Market: The total military population consists of about of 22.6 M members, about 22% have PTSD¹, this amounts to 5 M military members with PTSD

Serviceable Obtainable Market: Of this community, eventually, we expect to penetrate half, bringing our SOM to 2.5 M people.

Go to Market Strategy

Castor is currently in contact with 10 healthcare professionals for a total of ~200 PTSD patients. Their clientele will become Castor's initial customers, and will be recommended to buy the Castor services by their therapist. As the efficacy of the product becomes known, we plan to grow through therapist recommendations and by word of mouth through previous customers.

Competitors

Our primary competitors in the space are companies that offer a combination of hardware and software components to their customers. Our three primary competitors are Heartmath, Oura Ring, and PTSD Test/Coach. A couple of major drawbacks of current products on the market is that neither do they use a continuous biomarker reading, nor do they have any medical applicability.

- **Heartmath** is a sensor attached to the ear, and as a result, is not very discrete. The app and algorithms involved are targeted at general well-being and health. No PTSD or other disorder application is found³.
- **Oura Ring** is used in general health and sleep quality control. The ring cannot be used when exercising or doing daily activities⁴.
- **PTSD Test/Coach** does not have any biofeedback. The app solely focuses on the emotional support aspect of PTSD stress management.

Finance

Employees will start getting paid after May 2020 post-incorporation. Initial funding for the company has come from NSF Innovation Corps, and WSU capstone funding. Funding for the first two years will come from non-dilutive capital from various competitions, and pre-seed funding (dilutive capital). By the third year we expect to receive Department of Defense grants from the grant application filed in the first of operations. Over the span of the first two years, an estimate of \$4.2 M will be spent towards incorporating, developing, hiring, legal, travelling, and other go-to-market expenses.

Revenue Model

The first year post-incorporation Castor will offer customers a wearable hardware, and smartphone compatible application bundle to purchase for \$140. After this initial year we will offer an application that is compatible with smart watches, this application will charge customers a subscription of \$20/month. By the end of the first year we expect to acquire 2800 paid monthly users, generating a total revenue of \$1 million by the end of the year 2023.

	2020	2021	2022	2023	2024
Revenue	\$0	\$504,000	\$1,080,000	\$2,314,286	\$4,050,184
Expenses	\$1,118,498	\$683,858	\$937,357	\$980,193	\$2,540,088
Net Income	-\$1,118,498	-\$179,858	\$142,643	\$1,334,093	\$2,419,096

² National Veterans Foundation. (2018, July 26). Veteran Mental Health - Facts and Stats that need to be Addressed. Retrieved from <https://nvf.org/veteran-mental-health-facts-statistics/>

³ <https://www.biospace.com/article/venture-capital-funding-in-digital-health-sector-reaches-8-9-billion-in-2019/>

⁴ Oura Ring. (n.d.). The most accurate sleep and activity tracker. Retrieved from <https://ouraring.com/>