

Case Study

MCL759 | Entrepreneurship

RACHIT JAIN
2018ME10032





Problem

Hand **Tremor** signals affect the lifestyle of the person affected and the people around, increasing frustration and helplessness of the victim



Millions of people affected by Parkinson's & other neurological diseases suffer constant, **uncontrollable** tremors making it impossible to carry out daily chores



The growth in these number of affected patients has been rising at a **drastic** pace around the globe, with India predicted to have **700k+**

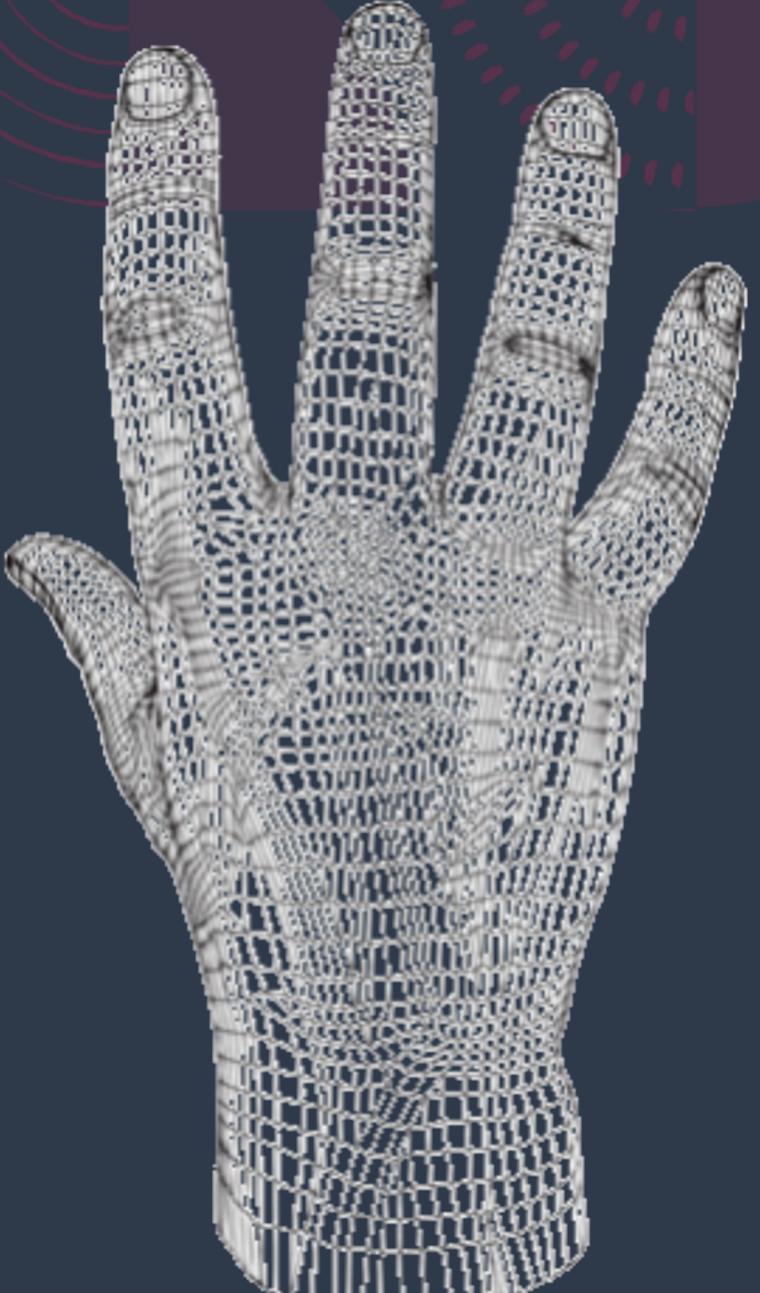




iStopTremors.

Bringing stability even in tremors





iStopTremors.
Bringing stability even in tremors

Case Study: Steadiwear



Stediwear: Introduction

Stediwear was incorporated as a company in 2015 and since then has developed two product offerings to reduce hand tremors. They have associated themselves with multiple foundations, including universities, hospitals, social-technological organizations, etc. and have raised \$2 Million in funding and grants.

Stediwear has a small team of 4-6 members, headed by a Structural Engineer and a Doctor who studies essential tremors (ET), targeting the Parkinson's affected population in the US & Canada.



iStopTremors.
Bringing stability even in tremors



Fig: Company Timeline [8]



Latest Offering



iStopTremors.
Bringing stability even in tremors

 Steadiwear.

FDA
REGISTERED



[Shop Now](#) [About Us](#) [How It Works](#) [FAQ](#) [Learn More](#)



USD 

Introducing the Steadi-Two

A cutting-edge device designed to reduce hand tremors for people with Essential tremor & Parkinson's Disease

Reserve yours today for \$99 USD



Purpose: Goal

Tremors running throughout the body, especially in hands, significantly affects **grip**, writing, gait, posture, head **stability** and even difficulty in eating and drinking. The entire lifestyle of the individual gets affected.

With millions affected worldwide, and multiple personally close cases, a **solution** that could enable their hands to function properly outside would have a huge **social, physical and mental** impact.

10mn+

Parkinson's patients
worldwide in 2021

Non-Curable

no single test to diagnose till date



iStopTremors.
Bringing stability even in tremors



Fig: Hand-Writing Samples for affected patients [3]

Impact that a solution can create
drives further motivation

Customer Persona



The product delivers its value to **Pakinson's** affected **patients** and other who might be suffering from hand tremors. Generally, the targeted customer **segment** is people of the age of **60** or more, affected by significant hand tremors. One such **customer persona** is shared in the video.



<https://www.youtube.com/watch?v=JTPBS2L0IPk&t=60s>



Before vs After



The initial version of the hand glove, though seemingly **bulky**, is said to cut off about **50%** of the hand tremors. As seen in the video, even this reduction has a **significant impact** on the **lifestyle** of the person and his ease of doing **activities** certainly comes across.

Thus, the device does a good job in trying to accomplish its goals to an extent, however at certain **costs**; literally and figuratively!



<https://www.youtube.com/watch?v=mXlvHrC9xJ0&t=1s>



How it Works?

- Magnets to control a disk that moves opposite to the hand tremors



<https://www.youtube.com/watch?v=CKMtTgKBMMA&t=1s>

The rotating disk mimics anti-tremors signals created by imbalance and provides opposing torque

The see-saw nature of the design, controlled by magnets, uses equal and opposing force to lower the magnitude of the tremors



Fig: Exploded View of the product offering

Features

The product offers multiple features which are useful additions for any solution to this problem; ambidextrous, battery-free, non-intrusive!

It caters to the needs of its users with a strong purpose, similar to that of all solutions to this problem.



iStopTremors.
Bringing stability even in tremors

Stedi-Two Features



Ambidextrous

Can be used interchangeably, on both the left and right hand with no adjustments needed



Significant Tremor Reduction

80% reduction of tremor amplitude in benchtop test



Lightweight

Weighs under 1lb



Battery-Free

No limits of daily usage



Non-Intrusive

Designed to provide relief in tremors without the side effects from medication, or the risks associated with surgery & powered devices



Machine Washable

When detached from the stabilizer, the glove can be thrown into the washing machine



Fig: Features provided by Steadiwear offering [8]

Lacking?



iStopTremors.
Bringing stability even in tremors

This offering does well in giving a solution to the problem but **lacks** lots of utilities which can be improved upon. Most important of them is not cost, but the **methodology** behind the solution. It **counteracts every oscillatory motion** that the hand goes through, **voluntary or involuntary**.

There should be a **processor** that **filters** out only those signals which contribute to tremors. Also, since such a solution can be extremely useful in hospitals for **monitoring** the **status of their patients**, there should be some sensors or storage device incorporated to **track** that performance.

Only Wrist ☹

No sensor output
possible for monitoring

Cannot distinguish b/w
tremors and voluntary
movements ☹

Extremely Costly ☹

Always counter-acting ☹

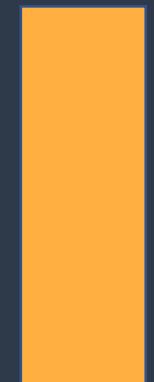
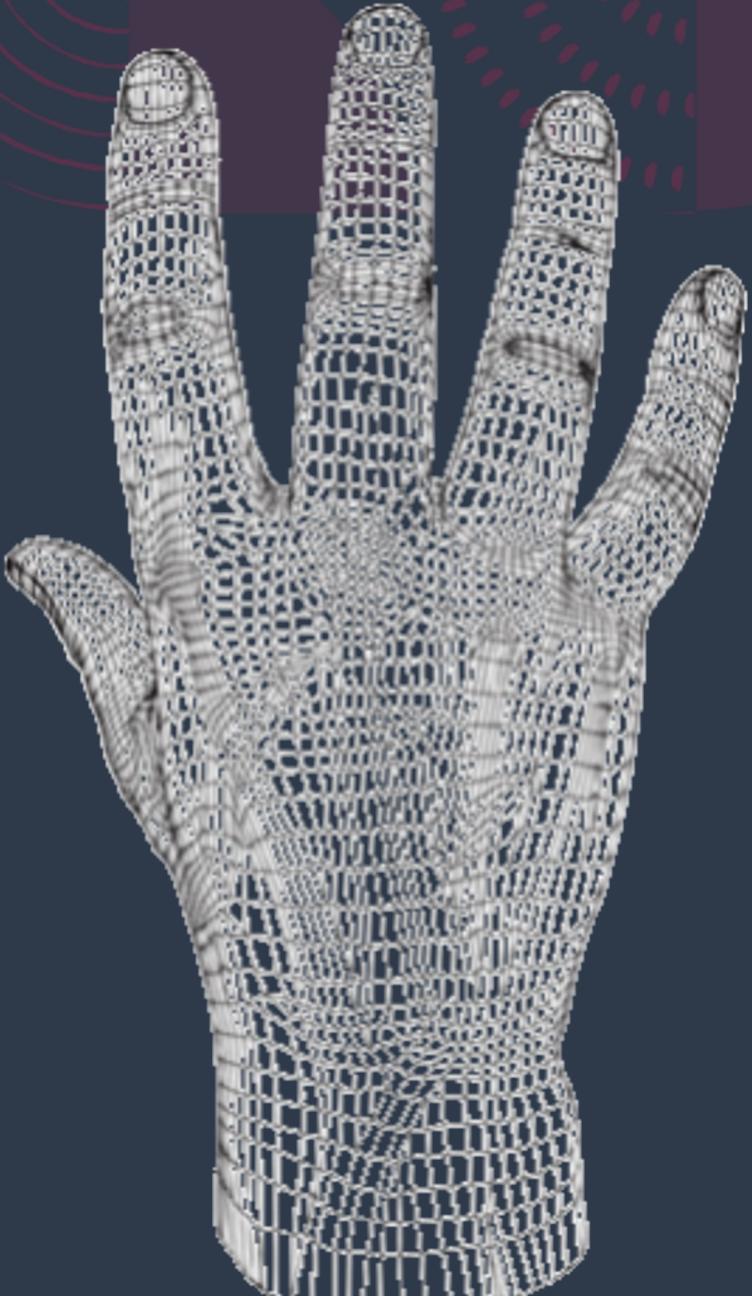


Fig: Steadi-Two Offering



iStopTremors.

Bringing stability even in tremors



Business Aspects

Market | Costs



Market Assessment



iStopTremors.
Bringing stability even in tremors

A **hand glove** that dampens or reduces the involuntary tremor signals in the hand of the affected patient, while ensuring smooth voluntary movement, allowing **close-to-normal** hand functioning.

The solution must be **viable**, **affordable**, with impactful results, easy to use and **comfortable** to wear, even for extended durations.

\$100,000+

cost for Parkinson's related surgery per patient

19-in-1000

affected patients in US with 80+ years of age

1.5x more

likely are men to have Parkinson's than women



Fig: A wearable hand-glove



Business Model



Though much information is not public about the company due to its demographically constraint marketing and smaller history and valuation, the company has gained significant amount of funding via investors and grants under the name of reputed institutes or projects.

Since its inception, the company has received funding of \$2 Million through various grants and investments. The team size has remained nearly intact (4-6) in all the years.

Fig: Funding History of Steadiwear [8]

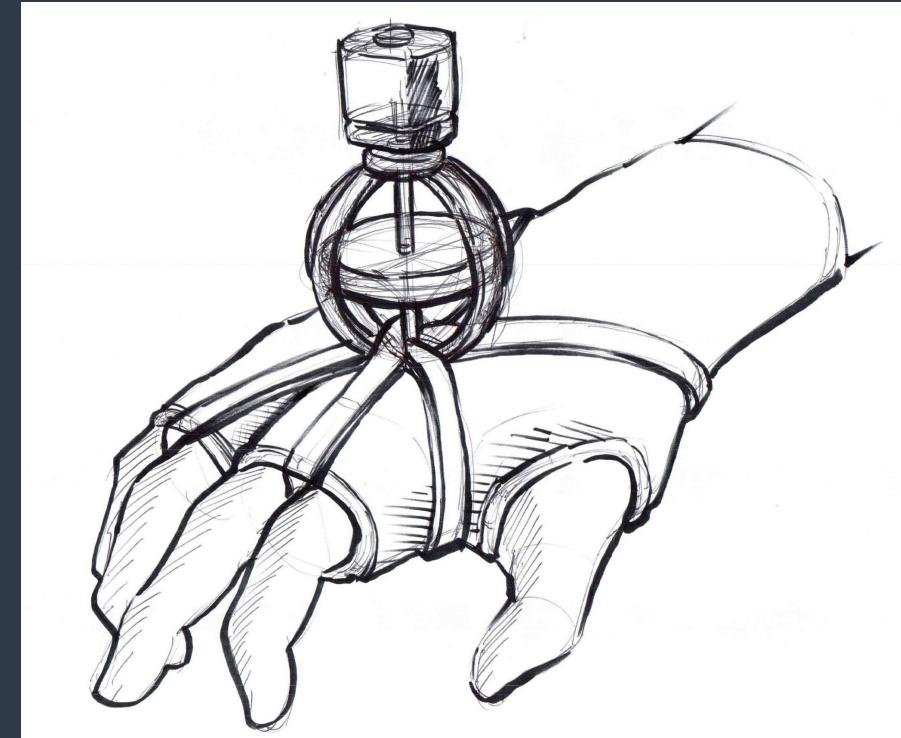
The screenshot displays a company profile for Steadiwear. At the top, there's a navigation bar with tabs for Summary, Financials, People, Technology, and Signals & News. On the right side of the header, there are buttons for CONNECT TO CRM and SAVE. Below the header, there's a section for 'About' which includes a brief description of the company as the developer of the world's first battery-free glove for tremor reduction, along with location (Toronto, Ontario, Canada), team size (1-10), funding stage (Seed), ownership (Private), website (steadiwear.com), and employee count (45,758). To the right of the About section are three boxes: 'Highlights' showing Total Funding Amount (\$2M), Contacts (3), Employee Profiles (2), and Investors (7); 'Recent News & Activity' listing a news item from Oct 20, 2021, about a \$1.1 million CAD funding round, and two funding round announcements from Jul 26, 2021 and Oct 1, 2020; and a 'Discover more funding rounds' link. At the bottom right, there's a speaker icon indicating audio content.

Raw Material

However small the product may appear, there are numerous components that go into the production of the final offering. Other than raw material, manufacturing and delivery aspects contribute to a significant portion to the unit economics for the product.



Fig: Components involved in GyroGlove [4]



Revenue Model: Unit Economics



iStopTremors.
Bringing stability even in tremors

To generate revenue, each product (unit) is sold at \$650 which approximates to Rs. 50,000! Though undisclosed, assuming a 1% market penetration since 2015, given that they are looking to launch their new product in 2022, they already have generated a revenue of more than Rs. 50 crores via sales alone. Other MOUs, agreements, patent royalties (if any), etc. would further increase their overall profits.

Assuming the cost to be anywhere between 40-50% of the selling price, the cost per unit comes out to be \$260, giving a gross profit of more than Rs. 20,000 per product, after considering a significant amount of other charges.

Steadi-Two
\$649.00 USD **\$499.00 USD Sale**

The Steadi-Two is a cutting-edge tremor stabilization glove designed to reduce hand tremors in people with Essential Tremor & Parkinson's Disease. Return to the activities you love without worrying about shaky hands!

Stediwear has proved that smart technology can, indeed, be life-changing with the new and improved Steadi-Two. Simply slip on the glove, and go!

Delivery and Purchase details:

Reserve your Steadi-Two today for \$99 & pay the rest upon delivery (\$400).

LIMITED SUPPLIES AVAILABLE!

Partial.ly
[Learn more](#)

SIZING CHART

Small - \$499.00 USD

RESERVE TODAY FOR \$99 USD



iStopTremors.

Bringing stability even in tremors



Other Competitors



Readi-Steady



iStopTremors.
Bringing stability even in tremors

Readi-Steadi® is the world's first fully customizable, anti-tremor orthotic glove system. Invented by an occupational therapist and made in the USA, it serves as a single tool to reduce both action and resting tremor patterns.

\$150 = Rs. 11.24k



READI STEADI®
ANTI-TREMOR ORTHOTIC GLOVE SYSTEM



Fig: Homepage of Readi-Steady [9]



Not under Sale

GyroGlove

Stabilising life.

[Subscribe for our latest updates >](#)

The GyroGlove® is not currently approved for sale or use.

(All pictures and computer-generated renders are copyright of GyroGear™ Ltd. for illustrative purposes only. GyroGear™ Ltd. reserves the right to amend, change, correct, and update its technical and design specifications without prior notice.)



Points of Failure



iStopTremors.
Bringing stability even in tremors

Existing solutions fail to assess non-US demographics for implementation of their products, especially on the cost front. Also, there are specific use-cases being handled, but not a viable, general implementation. Specific implementations include ease of writing, grabbing, writing, etc.

Only Wrist 😞



Fig: GyroGear GyroGlove^[4]

Intrusive 😞

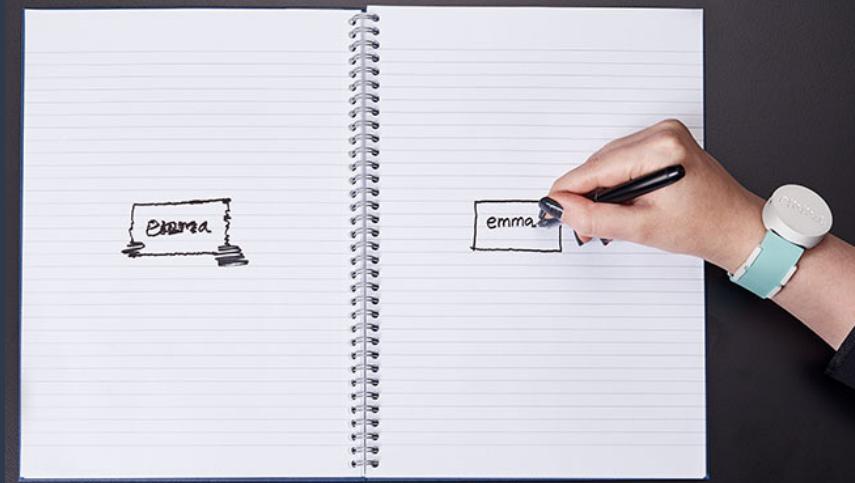
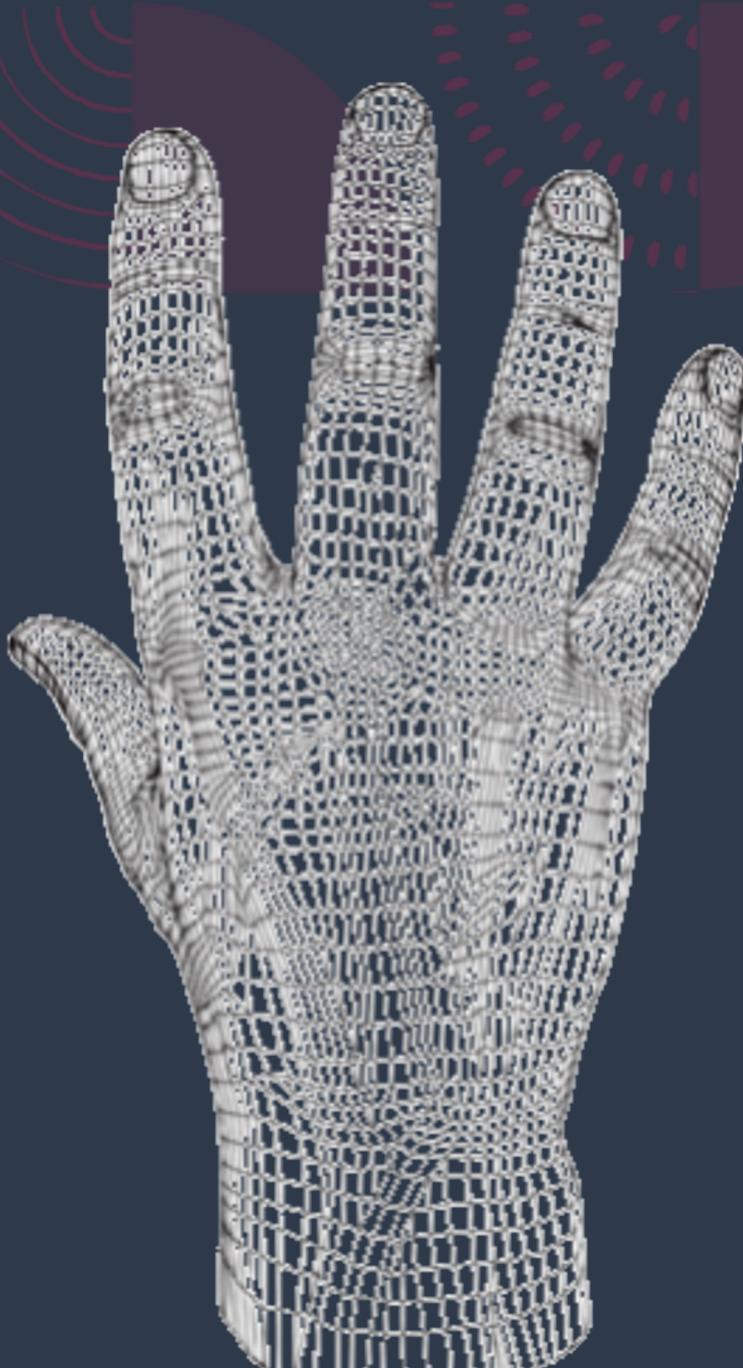


Fig: Emma Watch correcting writing^[5]
Rachit Jain



Fig: LiftWare MIT product
enabling eating^[6]



iStopTremors.

Bringing stability even in tremors



Relevant Resources



iStopTremors.
Bringing stability even in tremors

- [1] https://en.wikipedia.org/wiki/Parkinson's_disease
- [2] <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6311367/>
- [3] [Google Image of Hand Design](#)
- [4] <https://gyrogear.co>
- [5] <https://www.microsoft.com/en-us/research/project/project-emma/>
- [6] <https://www.liftware.com>
- [7] https://www.crunchbase.com/organization/steadewear/company_financials
- [8] <https://steadewear.com/pages/team-1>
- [9] <https://www.readi-stedi.com>

