

EyeWalk

8 out of 12

1. Social Background/Business Incentive

In recent years, it was estimated that 310,000 people¹ out of 2,000,000 physically handicapped population² in Japan were in a severe state of vision impairment. As these numbers rise, crowded public transportations can be the cause of stress and prevent those with disabilities from participating in certain activities like employment³. For the visually impaired, easy access to public commutation is a major need out of which 60% (30% have fallen from platform) use trains more than a few times a week⁴. Our business incentive and motive is to assist these people with common transportation issues via the innovation of an ingenious white cane, the *EyeWalk*. Since the majority of Japanese people use public transportation to travel, crowded stations and narrow platforms make it more difficult for the visually impaired to navigate. *EyeWalk* is a solution to make transportation systems easier and safer to manage through voice assistance software.

2. Product

EyeWalk is a voice-guidance white cane which informs users with a detailed route to their destination. It notifies the user of surrounding obstacles, which is a vital function for the visually impaired. It also incorporates the technology of SirFusion, a GPS that is compatible with all ground levels, enabling stable networks at any time. With this technology, the *EyeWalk* will identify the appropriate route to the user's inputted destination virtually anywhere, including inside of train stations and department stores, indicating how the user can transfer trains and go from one location to another. This technology will also be able to analyze the distance of the user from the edge of the platform, walls and can even convey the number of steps in a set of stairs. The information will use GPS data from SirFusion, and the tech and development team will manually input directions directly from the institutes.

SirFusion is based on technology invented by the American company SirF Technology. It combines multiple technologies such as real-time Wi-Fi signals and 3G/4G, satellite positioning information, pedestrian dead reckoning, and the company's cloud-based CSR Positioning Center to accurately calculate the location of the user⁵.

Our product enables guidance of the placement of elevators and escalators, when and where to

turn, the route to the preferred exit, and the way to transfer efficiently and safely. Capable of connecting to the user's portable earphones, the voice could be set to male or female, and Japanese or English.

Material:

Aramid Fiber

Reinforced

Polymer: a fiber

with high

strength, heat

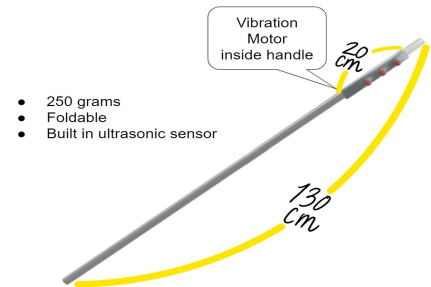
and chemical

resistance,

dimensional

stability, that is

used in many white canes



3. Target Customers

Our target customers are individuals with visual disabilities in Japan and have a need for walking aids to widen their area of travel. Although our main target is those with a disability, this product could be useful to foreigners who are not familiar with Japan.

4. Market Analysis

A large proportion of visually impaired people use the legally obliged white canes as under the road traffic law, walking sticks are mandatory for all visually impaired people⁶. Currently, 70% of them use white canes⁴, which implies that a further increase in sales can be estimated. These white canes have evolved over the years with new features such as voice control and outdoor GPS. Our main competitor is *WeWALK*, a company that produces and sells an advanced white cane that has ultrasonic sensors and navigation⁷.

However, compared to our product, it lacks the ability to be solely dependent and instead leans on a mobile app for navigation and bluetooth. In addition to this, it also does not equip a navigation system that can be used indoors. The *EyeWalk* has a built in GPS system and multifunctional navigation system which allows users to find their way easily inside a train station or building. By including all functions of our competitors and more, we provide consumers with a more advanced and overall affordable white cane. Since there is a growth in the number of people with visual impairments due to the aging population, we can

calculate that the industry and demand for this product will grow as well.

5. Marketing Strategies

A. Manufacturing method

310 *EyeWalks* would be produced annually. One product will cost 65,000 yen which is an appropriate price because it comes with a lifetime warranty. Repair or replacement of the product will be covered if the product breaks down unexpectedly. There will also be a free software update available every year. Although our product is more expensive than the *WeWALK*, which retails for \$499 and has a 1 year warranty, *EyeWalk* includes more technology into one product and offers a lifetime warranty, so our customers can use the product for a longer period of time.

We are collaborating with a warehouse to produce *Eyewalks*. Our products will be distributed directly by hand or by delivery. The product will be packaged in a cardboard box with an inner dimension of 212×172×102 millimeters, at 14.5 yen per box, and shipped from a partnership warehouse to the customers. We are employing 3.5 professional staffs: administration(1) - salary: 3.5 million yen
marketing(1) - salary: 4 million yen
tech and development(2) - salary: 4 million yen.

B. Promotion method

Our product would be promoted at events for the visually impaired, health centers, city halls, special support education schools, and support centers for the disabled through public speaking and promotion videos where we introduce the technology and inform consumers of our free one-week trial. Afterwards, interested parties will be able to buy our product at the venue or online on our website where customers can watch the promotion video, sign up for free trials, and purchase our product. A survey will be provided after the trial session to assess any inconveniences for future upgrades and improvements on our software and product. This will help maintain good relationships with our customers and keep our services modern and up to date. By engaging in this promotion method, advertisement costs could be decreased, since we are not paying for visual posters or web banners.

C. Marketability

Our multipurpose walking cane has a lightweight build, which is easy to maneuver and is durable for everyday use. This product's quality of high sensibility to surroundings and provision of detailed and accurate GPS guidance, even inside train and subway stations, as a single device differentiates our product from other companies. Since white canes are mandatory and would be likely to meet higher demands in the future, it is certain that this business is sustainable.

6. Financial Plan

Amount in JPY	Year 1	Year 2	Year 3
1. Revenues(a)+ [Units sold]	¥20,150,000 [310]	¥30,225,000 [465]	¥45,305,000 [697]
2. Production Cost	¥3,425,500	¥5,138,250	¥7,701,850
3. Expenses	¥28,016,000	¥25,016,000	¥28,516,000
Staff Salaries	¥23,000,000	¥23,000,000	¥26,500,000
Product Development and Maintenance	¥3,200,000	¥200,000	¥200,000
Repayment of Loan	¥600,000	¥600,000	¥600,000
Other expenses	¥1,216,000	¥1,216,000	¥1,216,000
6. Net Profit (Loss) after tax	(¥11,291,500)	¥49,525	¥6,361,005
7. Capital Investment	¥2,000,000	¥1,000,000	¥1,000,000
8. Free Cash Flow (Loss)	(¥13,691,500)	(¥950,475)	¥5,361,005
9. Loan Required	¥20,000,000	---	---
10. Cash Balance	¥4,308,500	¥3,358,025	¥8,719,030

Our product is produced from funds by capital investment and loans from the bank (at a 5 year, 3.00% interest rate). We plan on achieving a positive net profit by our second year, and free cash flow by the third. With our plan, we are able to maintain a positive cash balance at all times while repaying our loan.

As we provide a lifelong warranty for our product, the demand for the *EyeWalk* is expected to decrease as sales peak. The revenue from our upcoming software application will later make up for that decline.

7. Conclusion

In the future, we hope to expand the product to foreign countries with a wide variety of language and geographical readings. We also aim to expand our business by creating an application that can be used by anyone in need of guidance through stations and create a detachable version of the product that can be attached to any existing cane or other forms of assistance such as the wheelchair.

¹<https://www.nict.go.jp/en/>

²https://www.dinf.ne.jp/dpc/english/Us_Eu/conf/z00007/z0000711.html

³https://www.researchgate.net/publication/320387382_The_Needs_and_Problems_of_Students_with_Visual_Impairment

⁴<http://nichimou.org/wp-content/uploads/2017/03/mainichiannke-to.pdf>

⁵<https://www.businesswire.com/news/home/20141120005150/en/CSR-SiRFusion™-Accurate-Indoor-Location-Reality>

⁶http://nichimou.org/wp-content/uploads/2018/06/nisseiguhosougu-houkok_usyo.pdf

⁷<https://wewalk.io>