OptiWave

OPTIPULSE & WAVESYNC

IIT Delhi

INTRODUCTION

Every day, millions of people with hearing or visual impairments face challenges that most of us take for granted —communicating a simple thought, identifying objects around them, or moving independently.

With 430 million individuals suffering from hearing loss and 43 million from blindness worldwide, the need for affordable, accessible solutions is more urgent than ever. Our team, OptiWave, aims to bridge this gap with two innovative products: Wavesync, which provides real -time offline subtitles for the deaf, and Optipulse, which uses AI to identify objects and narrate them to the blind.

Together, these solutions empower individuals to lead more independent and fulfilling lives.

PITCH OUTLINE

PROBLEM STATEMENT

Communication Barriers for the Deaf:

People with hearing impairments struggle to understand spoken language in real-time, leading to difficulties in daily communication and increased dependence on others.

Mobility and Awareness Challenges for the Blind:

Visually impaired individuals face challenges in identifying objects, navigating environments, and performing basic tasks independently, risking their safety and limiting their autonomy.

High Costs and Accessibility of Existing Solutions:

Advanced assistive technologies, like AR glasses or AI-powered mobility aids, are either prohibitively expensive or require constant internet connectivity, making them inaccessible to a majority of the target audience.

OUR INNOVATIVE SOLUTIONS

WaveSync

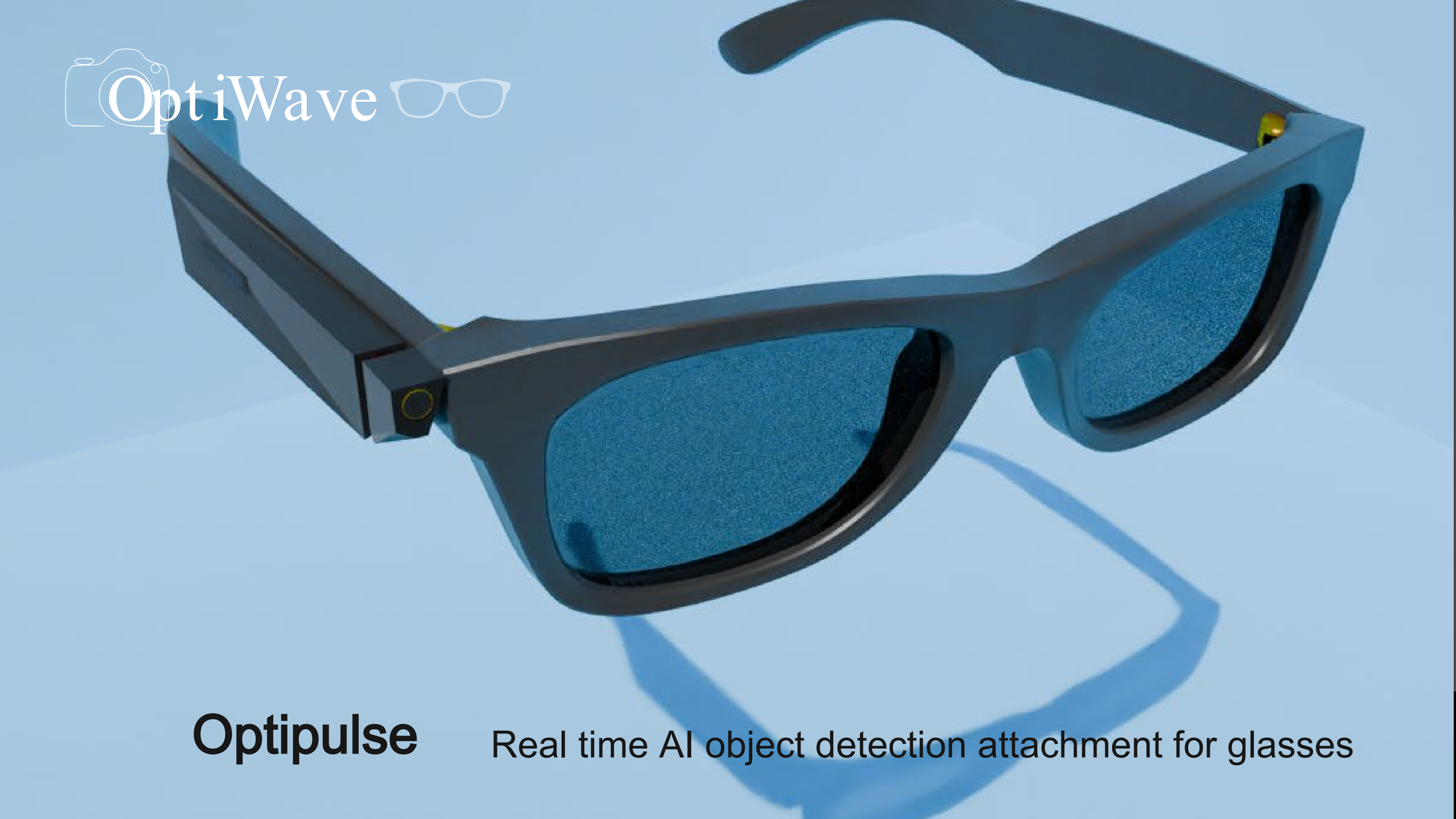
Optipulse

OptiWave

WaveSync

Real time subtitle attachment for glasses

OptiWave



Optipulse

Real time AI object detection attachment for glasses

FINANCES

Wavesync

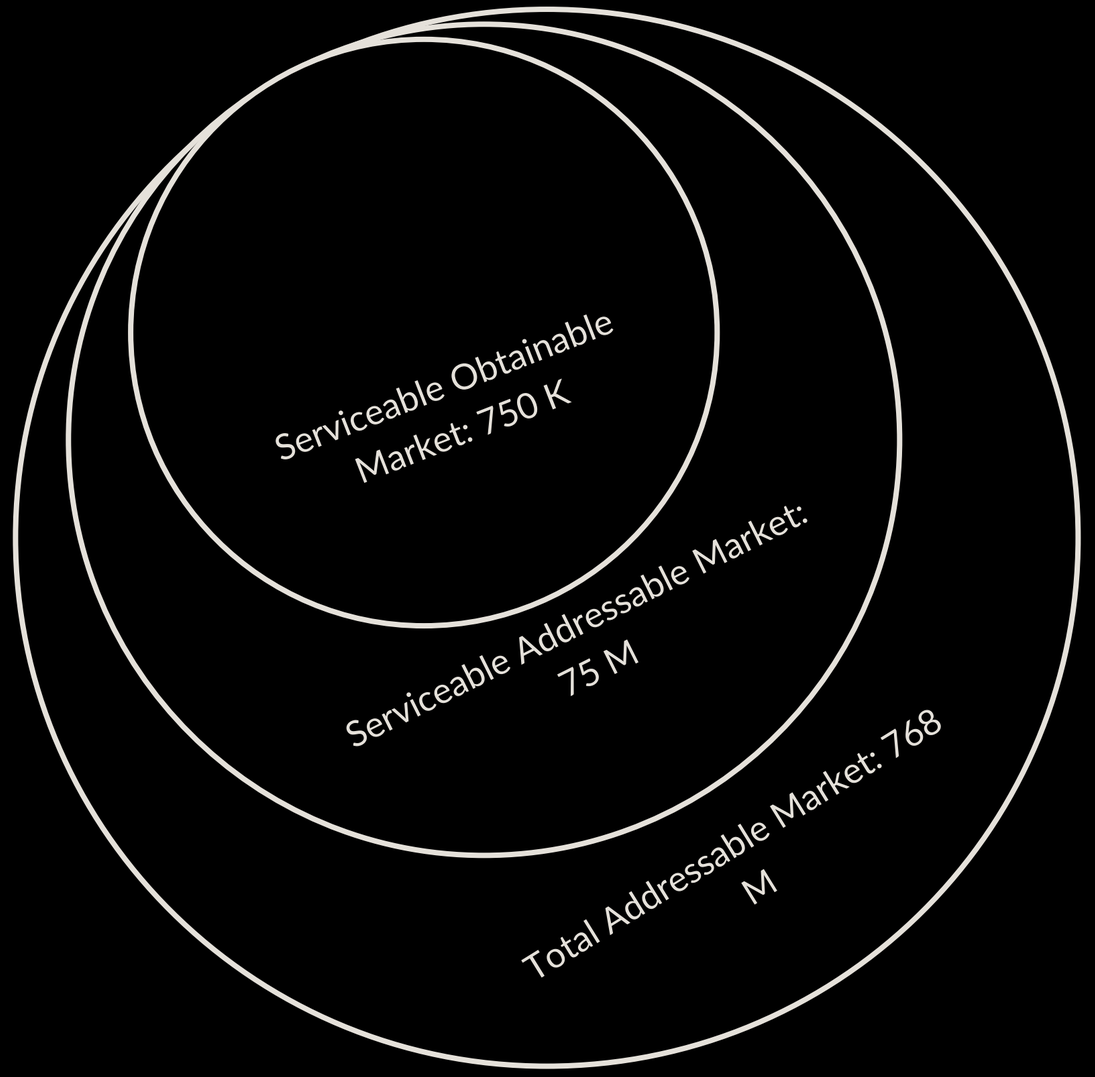
- The required equipment for our product includes key components with associated costs .
- A Raspberry Pi, the core processing unit, is priced at ₹1500,
- while the casing to house the device costs ₹300 .
- An OLEDdisplay for visual output is ₹800 , The battery for power supply is ₹600 .
- An SD card for data storage costs ₹400 and a mic is 400 .
- These components ensure functionality while maintaining cost - efficiency .
- Overall cost of the product : 4000 rs

Optipulse

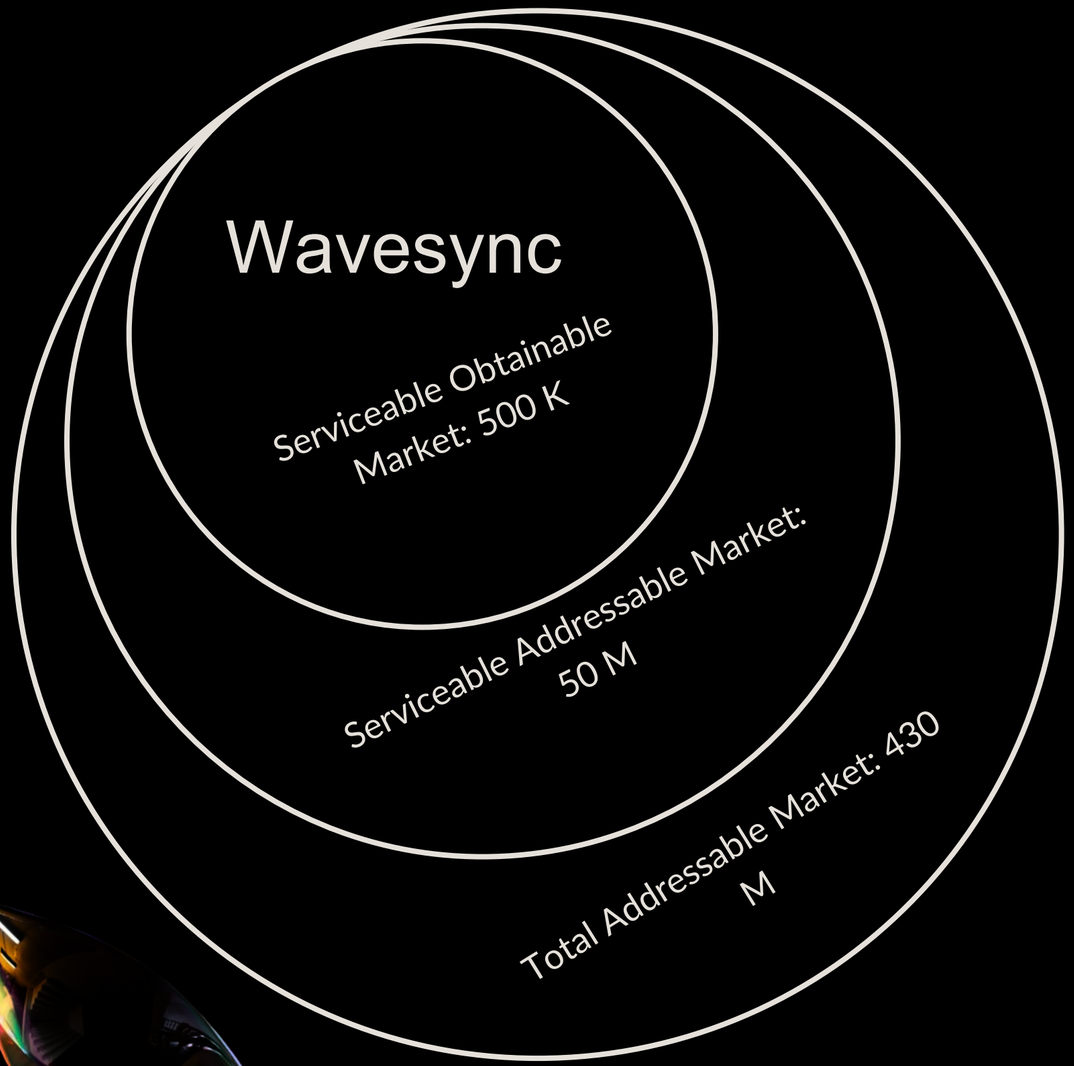
- The required equipment for our product includes key components with associated costs .
- A Raspberry Pi, the core processing unit, is priced at ₹1500,
- while the casing to house the device costs ₹300
- A speaker for audio output is ₹500 .
- The battery for power supply is ₹600 .
- An SD card for data storage costs ₹400 .
- camera cost 700 rs
- Overall cost of the product : 4000 rs

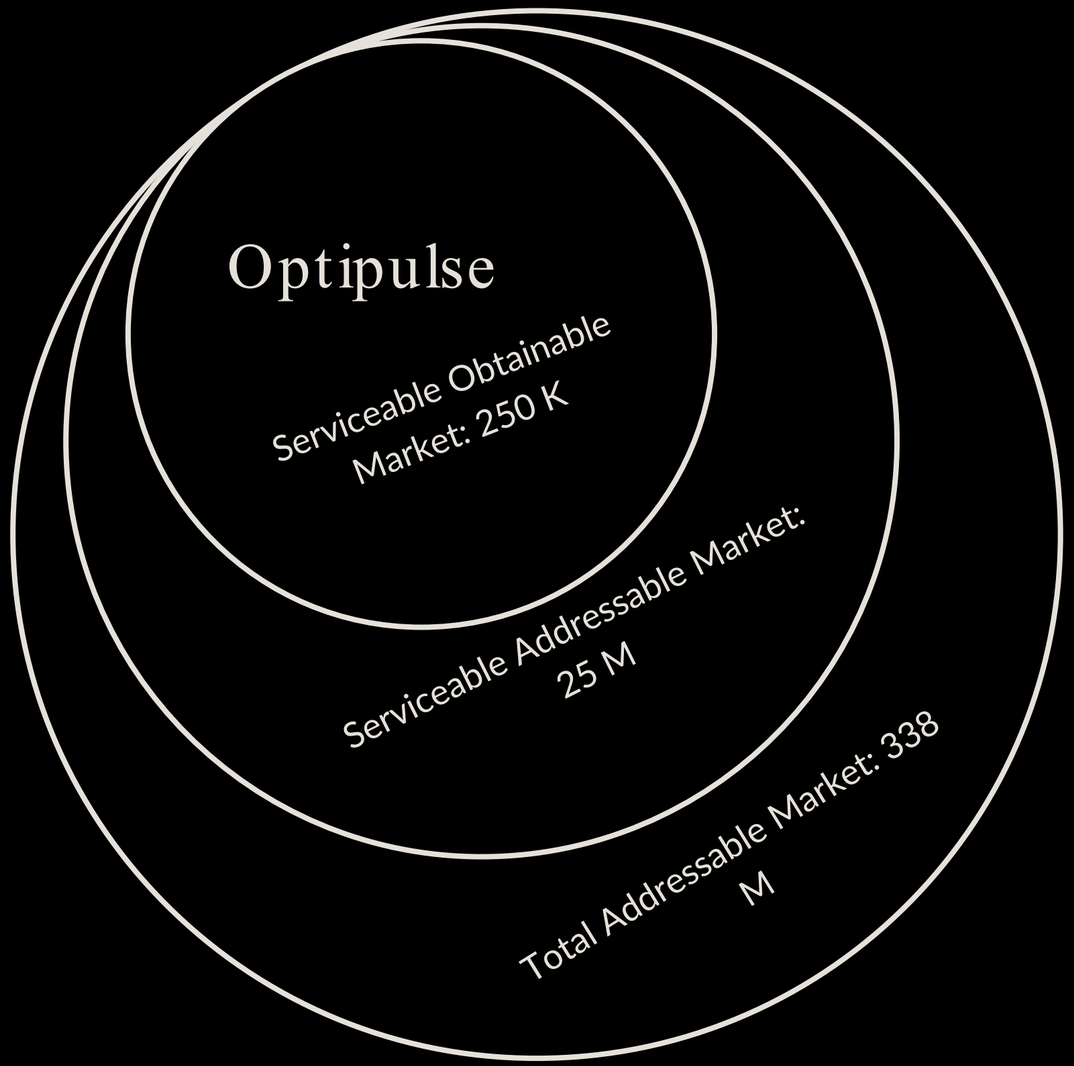
MARKET ANALYSIS

The global market for assistive technologies catering to the deaf and blind is vast and underserved. With over 430 million people suffering from hearing impairments and 338 million individuals facing blindness or visual impairments, the Total Addressable Market (TAM) is approximately 768 million users worldwide. However, focusing on middle-income regions, where affordability and offline functionality are key, the Serviceable Addressable Market (SAM) narrows to 75 million individuals. Initially, our products aim to capture just 1% of this segment, translating to a Serviceable Obtainable Market (SOM) of 750,000 users, or a revenue potential of ₹187.5 crore. This highlights the immense opportunity to empower millions while making cutting-edge solutions affordable and accessible.



TAM SAM SOM


Wavesync
Serviceable Obtainable Market: 500 K
Serviceable Addressable Market: 50 M
Total Addressable Market: 430 M


Optipulse
Serviceable Obtainable Market: 250 K
Serviceable Addressable Market: 25 M
Total Addressable Market: 338 M

Sales Projection

Projected Revenue and Profit:

Year	Units Sold	Selling Price (₹)	Profit per Unit (₹)	Revenue (₹ Lakhs)	Total Profit (₹ Lakhs)
1	1125	5000	1000	56.25	11.25
2	1238	5000	1000	61.88	12.38
3	1362	5000	1000	68.06	13.61
4	1498	5000	1000	74.87	14.97
5	1648	5000	1000	82.36	16.47

Export to Sheets

DIRECT COMPETITOR

- Offers similar services or products to ours.
- Targets the same customer base and market segments.
- Competes directly with us in terms of pricing, features, and positioning.
- Can be easily identified and recognized as a competitor by customers and industry analysts.

Eg: XRAI glasses

INDIRECT COMPETITOR

- Provides different services or products that solve similar customer needs or problems.
- Targets overlapping or adjacent market segments but may not directly compete with us.
- Might offer complementary products or services that could substitute or supplement ours.
- Can include companies from different industries or sectors that indirectly impact our market.

Eg: Meta AI glasses

KEY COMPETITIVE ADVANTAGES

Affordability:

At just ₹4000 –₹5,000 per unit, our products are significantly cheaper than competitors like XRAI Glass (₹30,400) and OrCam MyEye (₹3,00,000), making them accessible to a larger audience, especially in middle- and low-income regions.

Specific Targeted Features:

While many competitors provide general-purpose assistive tech, your products focus on solving specific problems (real-time subtitles for the deaf and object recognition for the blind), ensuring practicality and ease of use for the intended audience.

Offline Functionality:

Unlike many competing solutions that require constant internet connectivity, your products operate entirely offline, making them reliable in areas with poor or no internet access.

Compact and Lightweight Design:

Your wearable devices are simple, portable, and designed for everyday use, offering a more user-friendly experience compared to bulky or complex alternatives.

DRAWBACKS AND MITIGATION

This Section Includes our current drawbacks, challenges and how we aim to solve them in the near future

Early-Stage Limitations:

The display blocks part of the right eye.
Mitigation: Incorporate transparent displays or AR holographic technology as they become affordable.

Consumer Preference for Smartphones:

Response: Smartphones are not always convenient or accessible for the blind and deaf. Our products cater specifically to those who seek lightweight, standalone solutions.

Battery Life:

Mitigation: Optimize power consumption and integrate higher-capacity batteries in future versions.

Speech to text not picking up certain words due to accents

We aim to solve it by increasing the accent data in the model's next training data.


"THIS THING HAS TRULY CHANGED MY LIFE :))”


OptiWave
THANK YOU
for your time and attention
Team OptiWave