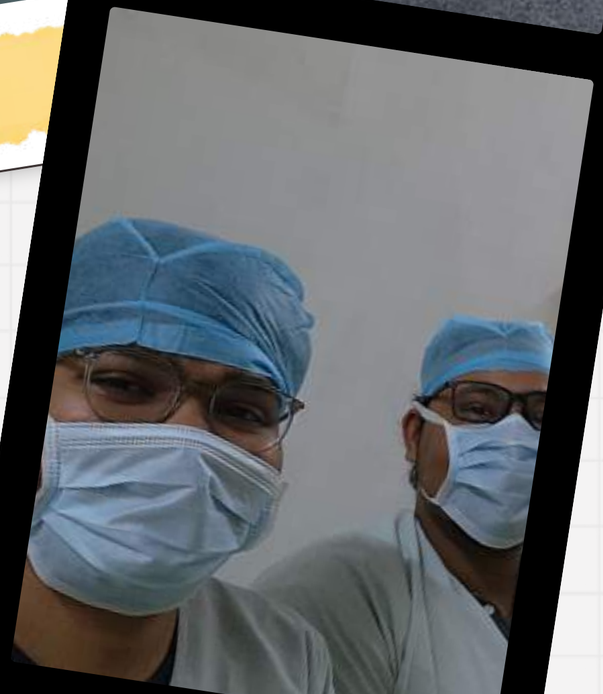
Non-Invasive Haemoglobin meter

Ashirwad ,Jaswanth and Rakesh

Clinical Immersion

O.T.



Anaemia- A Silent Burden

According to NFHS 2019–2021:

1. Children – 67%
2. Women – 57.1%
3. Adolescent girls – 59.1%
4. Adolescent boys – 31.1%

Needles and Hospitals don't scale beyond a point

https://www.pib.gov.in/PressReleasePage.aspx?PRID=1795421

Anemia = Hemoglobin deficiency.

https://www.pib.gov.in/PressReleasePage.aspx?PRID=1795421

Solution

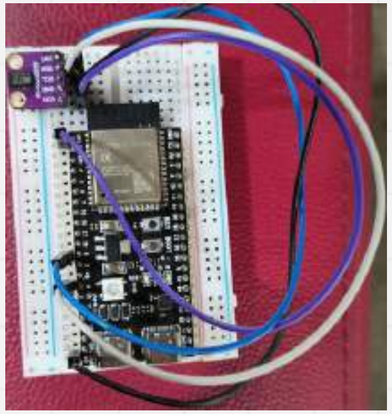
A novel device that is:

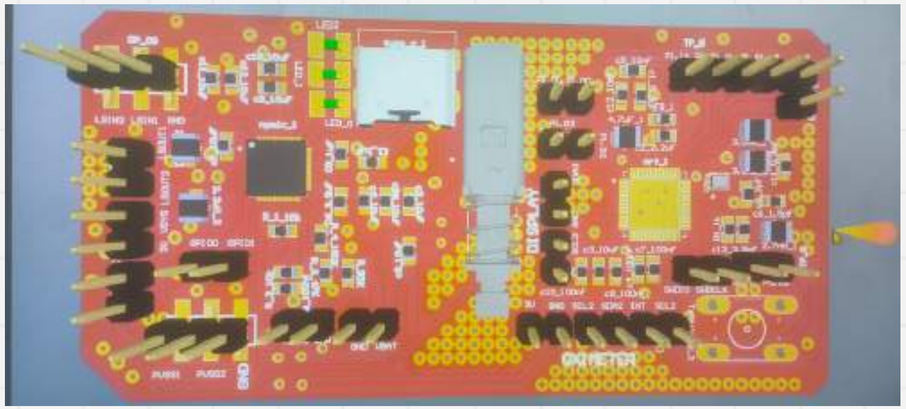
non-invasive	less time consuming	Accurate

Current Status

Proof of Concept

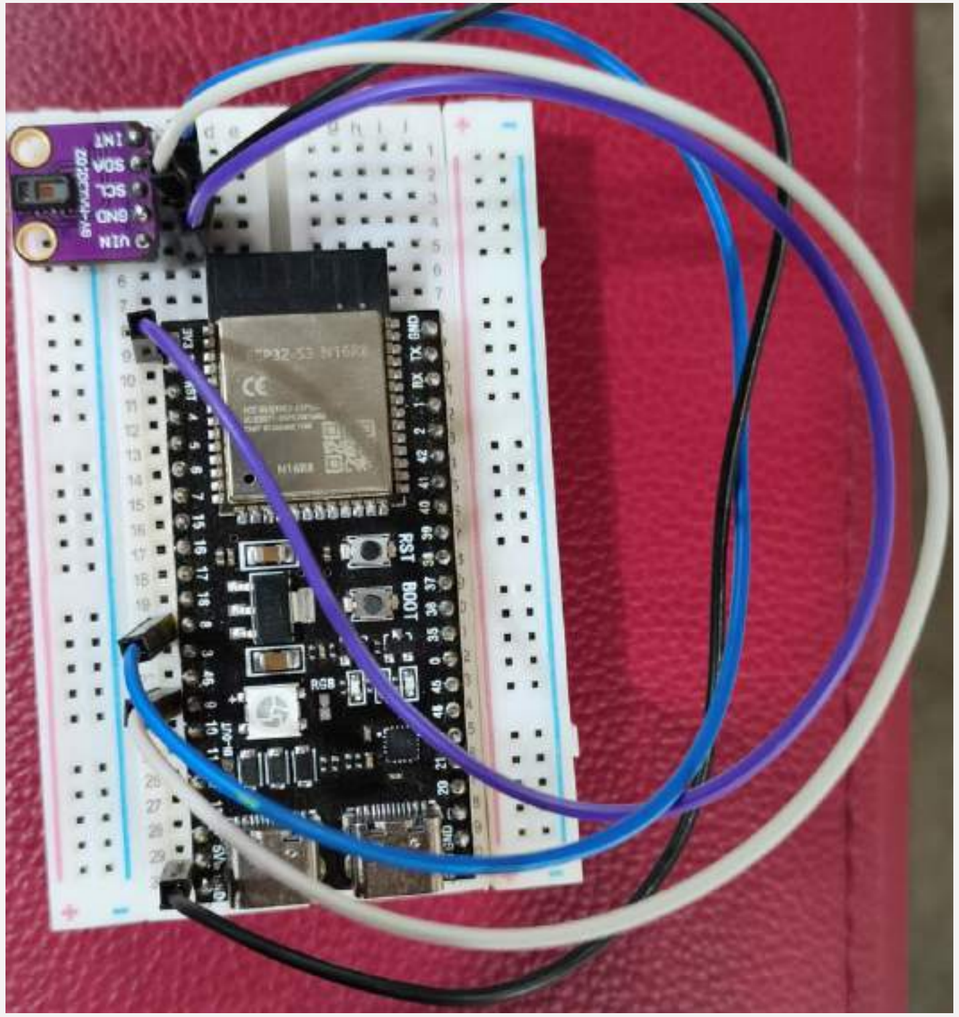
We have a working prototype that gives haemoglobin value in **20 seconds** with **93% accuracy** in comparison to gold standard

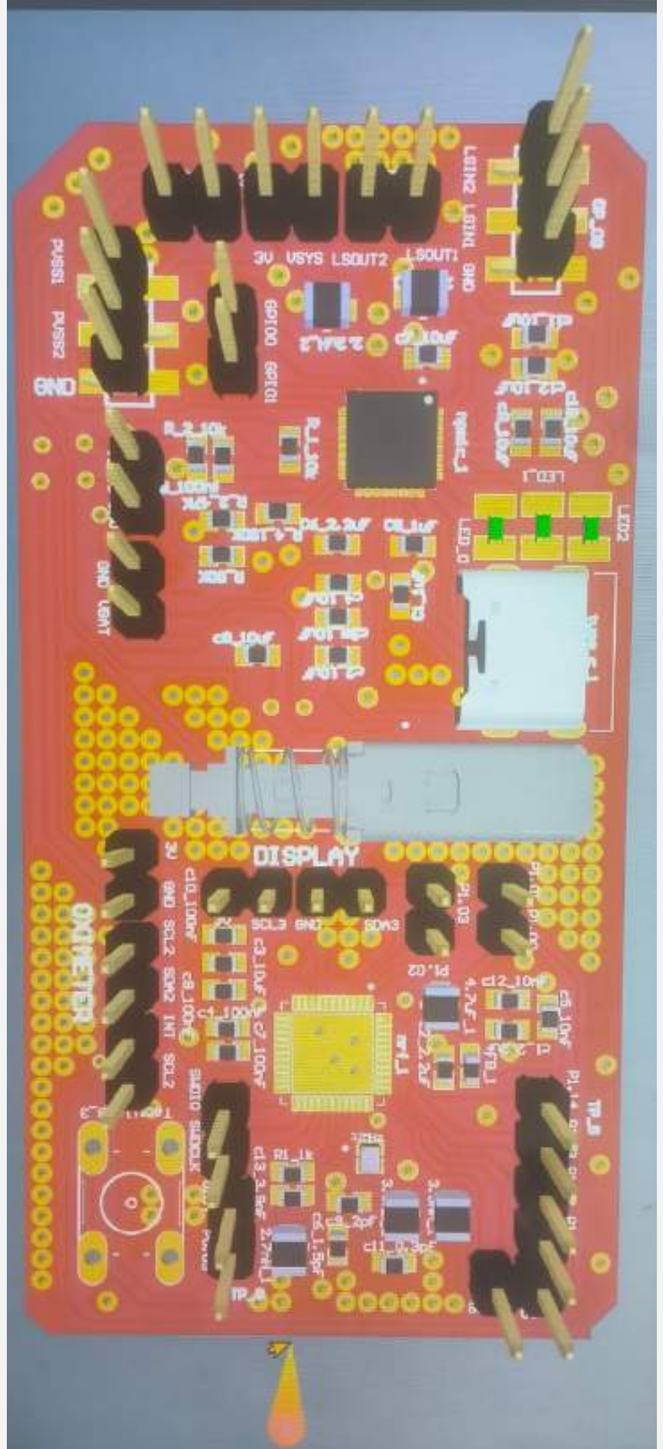




Validation

We have been to the JL Rahtogi Eye hospital and tested 15 patients, and the average accuracy was 85%


VIN
GND
SCL
SDA
INT
RST
BOOT
RGB


DISPLAY
GND
3V
VSYS
LSOUT2
LSOUT1

Milestone

PCB Designing → Data Validation → ReIterate

Market sizing

TAM

$3.55B (2024) → $6.1B by 2033.

SAM

$768M in 2024 → $3.05B by 2033 (16.5% CAGR).

5% of $3.05B ≈ $150M / year

online ≈ 20% × $150M ≈ $30M / year

SOM

Conservative (3%)

3% of $30M = $0.9M / year

Aggressive (10%)

10% of $30M = $3M / year

Why Now?

Indigenise

Deep Tech

Anaemia Mukt Bharat

The team

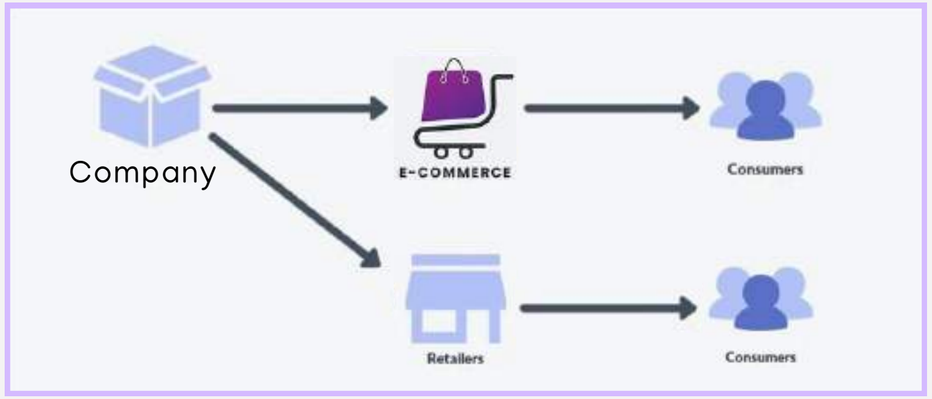
Ashirwad

Jaswanth

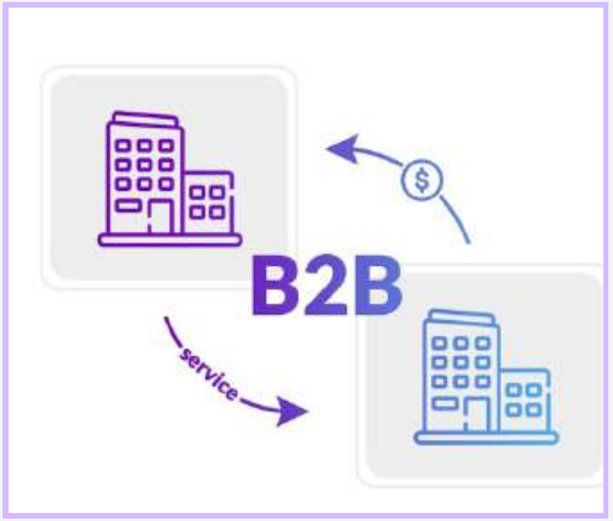
Rakesh

Buiness Model

Customers



Business



Unit Economics

Customers

Category	Amount ()	Percentage
GST*	150	5%
Raw materials*	1000	33.33%
Manufacturing & packaging *	500	16.6%
Testing & analysis*	43	2%
Warehousing & shipping*	180	6%
Payment gateway*	30	1%
Fixed costs#	217	8%
Marketing#	8	0.2%
Profit before tax	872	29.06%
Selling price	**3000**	

Business

GST*	750	5%
Raw materials*	1200	8%
Manufacturing & packaging *	1000	8%
Testing & analysis*	43	2%
Warehousing & shipping*	180	6%
Payment gateway*	150	1%
Fixed costs#	217	8%
Marketing#	2000	13.3%
Profit before tax	9460	63%
Selling price	**15000**	

Competition

Masimo pronto pulse	OrSense NBM-200	Masimo rad-67	Sysmex Astrim	Masimo Rad 57	Ezecheck	Ember
80000	85000	148000	240000	320000	2400000	12000000

source : Independent Landscape

*Assuming that the device runs for 5 years and does 1000 tests per month

GTM

out first 10 customers will be personal network of our mentors who are value conscious.

Next we will target goverment hospitals and primary care health centres as they need this device under anaemia mukt bharat programme.

MOAT

low cost

IIT kanpur infrastructure

regulatory support

Acknowledgments

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Arpit Sir

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MedTech Centre Team

Thank you!

Market sizing

TAM

*40M households

Top 5% → 2M

2M * 3k = 600cr

SAM

2M x 0.50 = 1M

15% of 1M ≈ 150K people

150k/10 years = 15k devices/year

15k devices/year x 3000rs = 4.5cr per year

SOM

Conservative (15%)

15% of 4.5cr = 67.5 lakh / year

Aggressive (40%)

40% of 4.5cr = 1.8cr / year

*40M = affluent ecommerce customers