HemoVisionAI By Optymum SS (UK) Ltd

(Tapping Into a £12B Global Market Growing Exponentially)

Revolutionising Access to Haematology Diagnostics with an AI-Powered, Smartphone-Integrated Telehaematology Solution.

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HemoVisionAI

Introduction

Haematology is the study of blood in relation to health and disease.

Blood morphology is the study of the appearance of blood cells, traditionally done by examining snapshots of the blood on a glass slide (blood film) under a microscope.

The most frequently requested blood test is the haematology FBC and about 10M tests are performed each day. Of these 10-20% will require a manual blood film.

The blood film report is one of the most indispensable tests with microscopic blood film examination remaining the gold standard for diagnosing several critical diseases.

Examination of the millions of films is done daily by blood film morphologists, including haematologists, scientists, and lab technicians. It is a tedious, time-consuming process subject to human error.

The future of blood film morphology diagnostics is the digital slide and artificial intelligence (AI).

AI does better at analysing blood films with cheaper, faster and more accurate outputs!
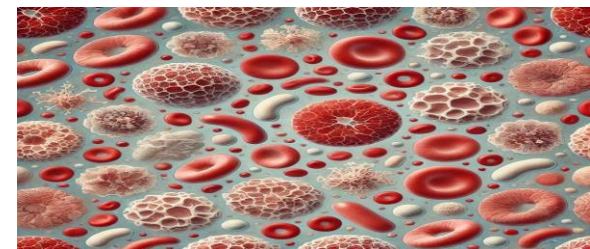
Mission & Vision

Mission:

- To revolutionise haematology diagnostics using AI-driven, mobile telehaematology to expand high-quality care for research labs, hospitals, especially in underserved health facilities, and resource-limited settings worldwide.

Vision:

- To become the global leader in affordable, digital haematology solutions, bridging gaps in diagnostic capabilities and reducing healthcare inequities for all.
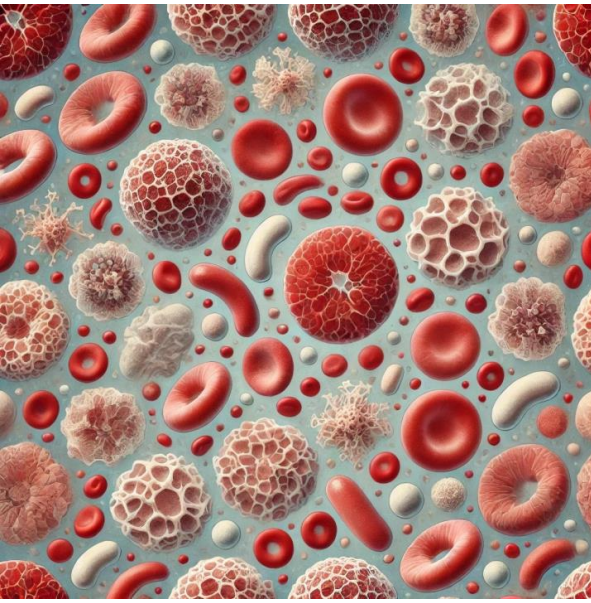
The Problem

2.5 billion people are affected by haematological conditions worldwide. Yet there's a global shortage of haematologists & morphologists leading to preventable suffering & death.

The haematologist-to-patient ratio is less than 1:1,000,000 in developing economies.

In many advanced nations like the UK, haematology is facing a shrinking workforce problem, with demand for haematological services exceeding supply (British Society for Haematology, 2020).

Existing solutions are few & prohibitively expensive. In addition, almost all AI-enabled digital pathology systems focus on (histo)pathology (i.e. telepathology), not haematology-specific needs (i.e. telehaematology).

News > News > 2022 News >
Death of Katie Wilkins prompts call to address national shortage of haematologists

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A coroner has written to Health Secretary Sajid Javid to ask to take action to address a national shortage of haematologists following the death of 14-year-old Katie

SHORTAGE OF HAEMTOLOGISTS & BLOOD FILM MORPHOLOISTS
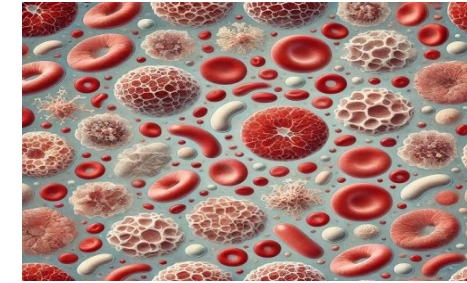
Solution Overview

HemoVisionAI: An affordable, AI-enabled, smartphone-integrated telehaematology solution to improve accessibility and precision in diagnostic care globally.

- **Rolled out in 3 phases.**

- Phase 1: VisionGo

Manual Whole Slide Imaging (WSI) software allows users, using a smartphone camera, to digitise, annotate, and share high-resolution blood film images securely via the cloud as well as live streaming of images. Will be designed for haematology research, education, and training (no clinical use).

- Phase 2: MaaS and Telehaematology

Introduction of Morphology-as-a-Service (MaaS) model. This connects healthcare providers with a global network of expert haematologists for second opinions, complex case reviews, and case consultations. It incorporates telehaematology functionality for seamless clinical diagnostic use.
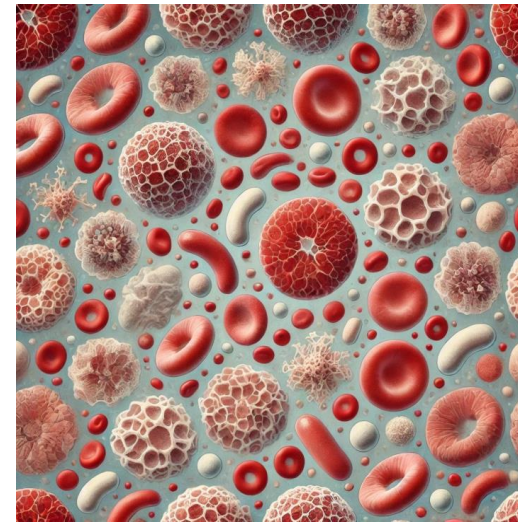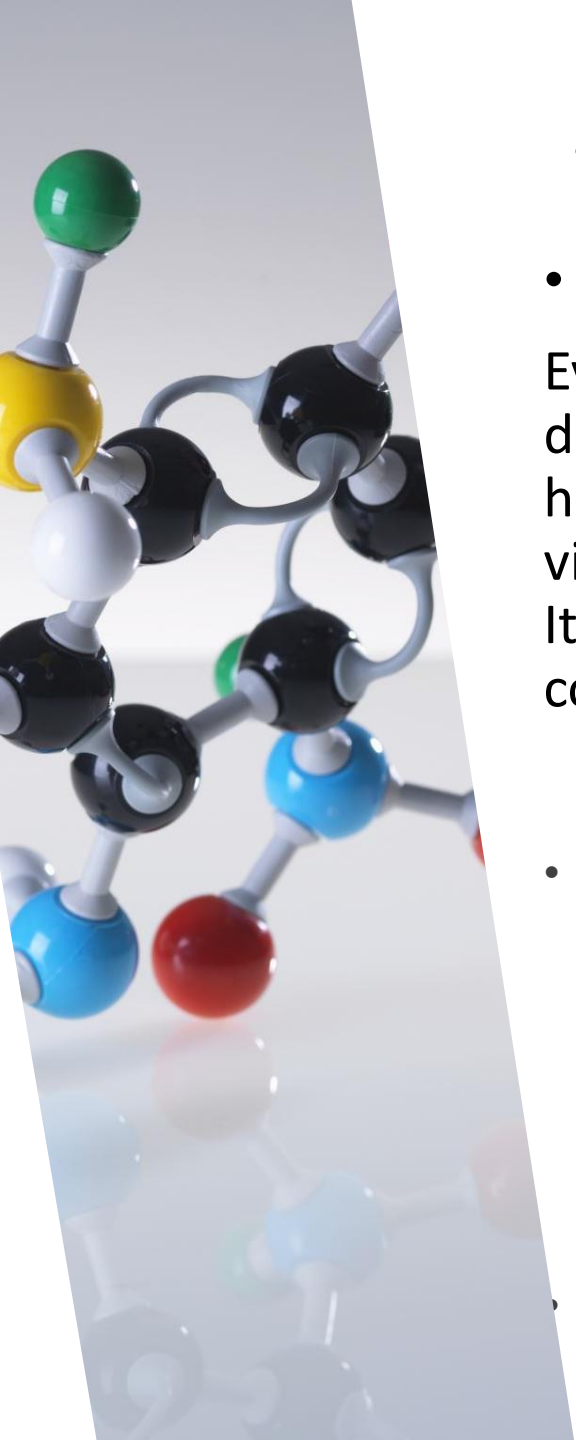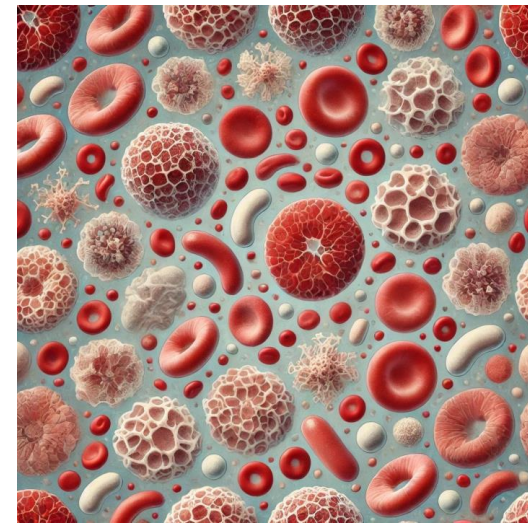
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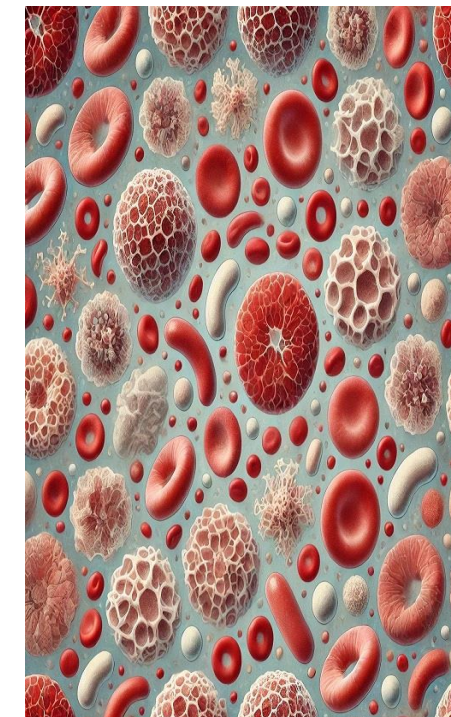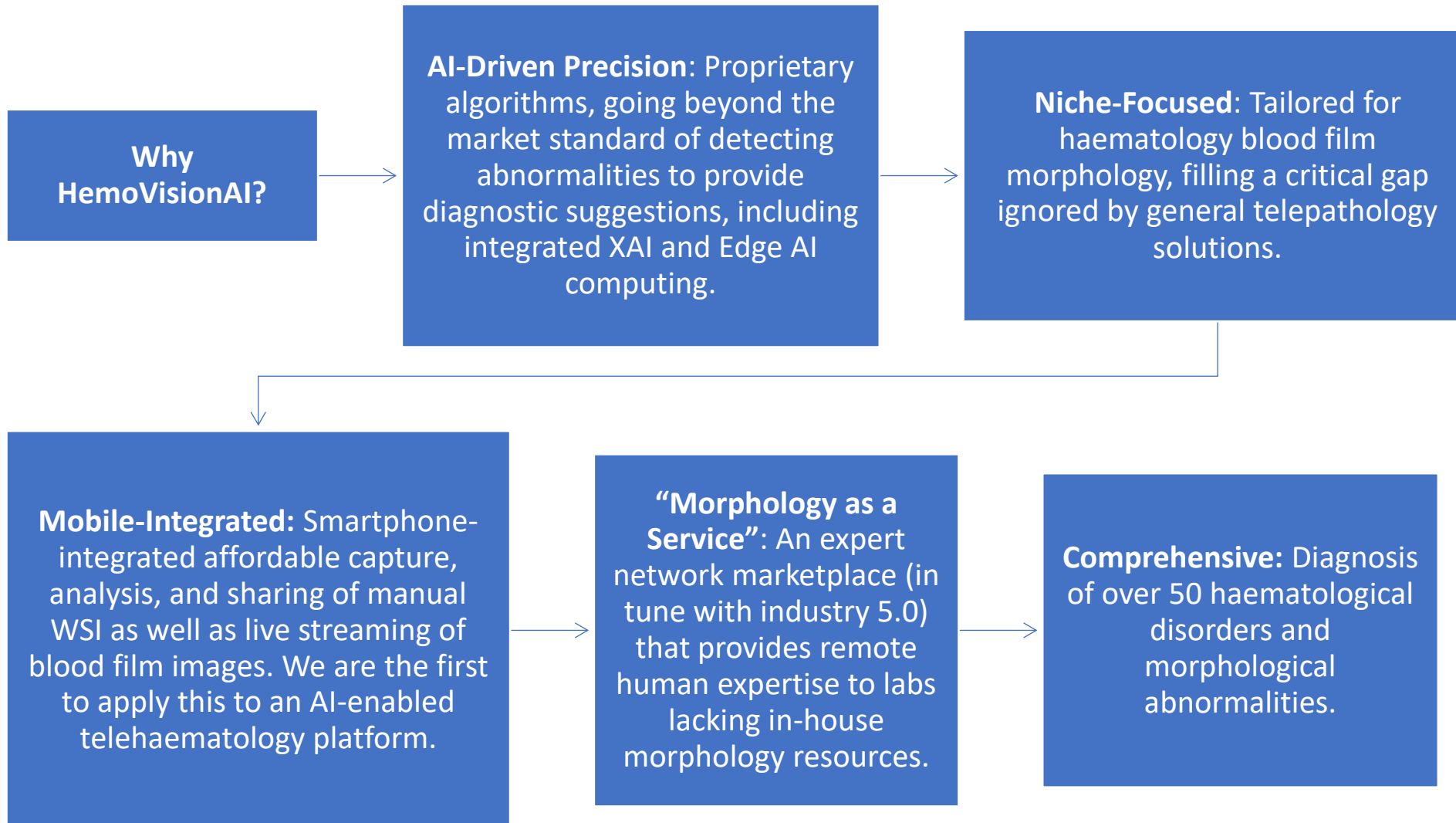- Phase 3: AI-Powered Diagnostics

Evolution into an advanced AI-powered model capable of diagnosing over 50 morphological abnormalities and haematological disorders. Using cutting-edge computer vision algorithms, the system automates blood film analysis. It will also integrate explainable AI (XAI) and Edge AI computing.

- Our offerings are suited for both developing economies (for their cost-effectiveness) as well as advanced economies (who gain AI-powered automation without significant infrastructure investments).

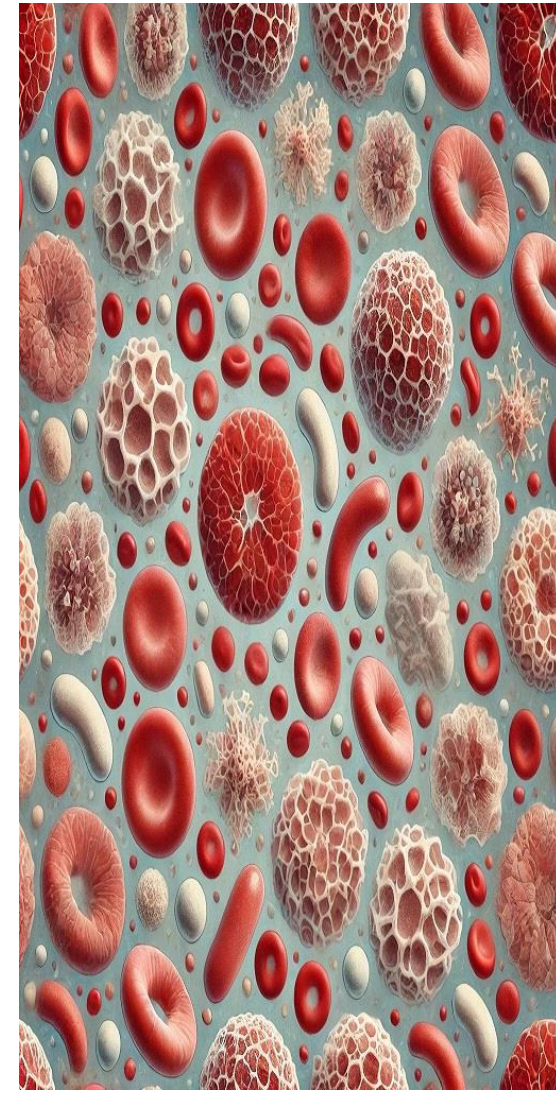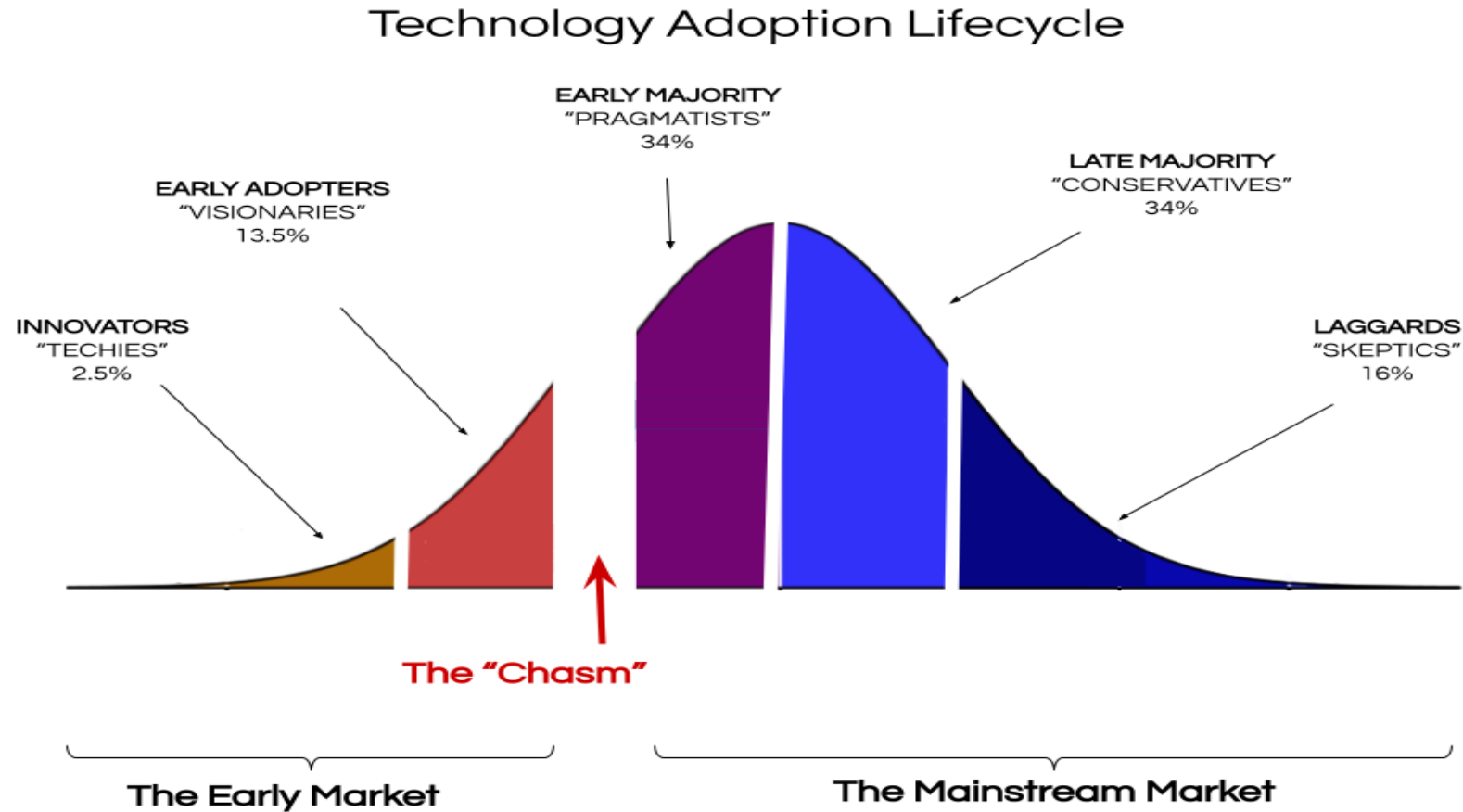- The phased roll-out ensures quick market entry and immediate impact.

Unique Value Proposition

Why HemoVisionAI?

AI-Driven Precision: Proprietary algorithms, going beyond the market standard of detecting abnormalities to provide diagnostic suggestions, including integrated XAI and Edge AI computing.

Niche-Focused: Tailored for haematology blood film morphology, filling a critical gap ignored by general telepathology solutions.

Mobile-Integrated: Smartphone-integrated affordable capture, analysis, and sharing of manual WSI as well as live streaming of blood film images. We are the first to apply this to an AI-enabled telehaematology platform.

"Morphology as a Service": An expert network marketplace (in tune with industry 5.0) that provides remote human expertise to labs lacking in-house morphology resources.

Comprehensive: Diagnosis of over 50 haematological disorders and morphological abnormalities.
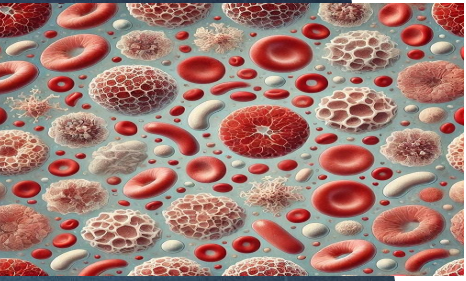
Why Now?

AI-enabled telehaematology is in the Early Market, yet to cross the "Chasm" and see its peak in the coming years! This potential will make HemoVisionAI a "soonicorn".

Technology Adoption Lifecycle

INNOVATORS "TECHIES" 2.5%

EARLY ADOPTERS "VISIONARIES" 13.5%

EARLY MAJORITY "PRAGMATISTS" 34%

LATE MAJORITY "CONSERVATIVES" 34%

LAGGARDS "SKEPTICS" 16%

The "Chasm"

The Early Market

The Mainstream Market

Market Opportunity

The potential of AI-enabled telehaematology is seen in the growth of the related/aligned telehealth and AI in healthcare markets.

- Traditional haematology market size: $21.30 Billion in 2024 and expected to grow with a CAGR of 7.3% from 2024 to 2032 (Source: Future Data Stats, 2024).

- Telehealth market size: $101.15 billion in 2023, projected to grow at a CAGR of 24.3% from 2024 to 2030. (Source: Grand View Research, 2024).

- AI in healthcare market: $19.54 billion in 2023 and expected to grow at a CAGR of 43.2% from 2024 to reach $490.96 billion by 2032 -with diagnostics being a key growth area (Source: Fortune Business Insights, 2024).

- The estimated total addressable market (TAM), Serviceable Obtainable Market (SOM) and Beachhead Market (i.e. haematology labs and professionals in the UK only) are £12B/year, 750M/year and 60M/year respectively.

- It includes:

- ~1,200 haematology labs in the UK, each processing ~10-20M blood films annually.

- 260,000+ labs across the US, Europe, Africa, and Asia.

- 25,000+ haematology professionals (US & UK)

Competitive Landscape

Many competitors offering general telepathology. One recent direct competitor, Scopio Labs, a new market entrant that lacks cost-effective mobile integration, the capabilities of our proprietary AI or our expert human network.

|	Mobile-Integrated	AI-Integrated	Expert Network	XAI	Haematology-Specific	Edge AI
HemoVisionAI	✓	✓	✓	✓	✓	✓
Leica Biosystems	✗	✗	✗	✗	✗	✗
PathAI	✗	✓	✗	✓	✗	✓
Virasoft	✓	✓	✗	✗	✗	✗
ROSEAId	✓	✓	✓	✗	✗	✗
Scopio Labs	✗	✓	✗	✗	✓	✗
Cancer Center.AI	✓	✓	✗	✗	✗	✗
Philips IntelliSite Pathology Solutions	✗	✗	✗	✗	✗	✗
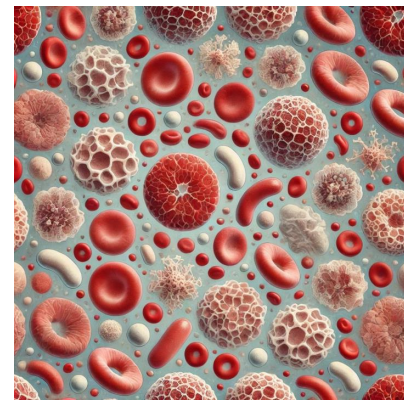
Business Model

Sustainable and Scalable Revenue Streams

- **Subscription Model for Individuals:** Monthly or Annual Subscriptions — A recurring fee for continuous access to tiered features, such as edge AI, cloud access, basic/advanced AI-powered analytics, and expanded analytics tools.

- **Enterprise Licensing for Facilities:** Monthly or Annual Subscriptions — Academic & research labs, hospitals & clinics will make an ongoing investment to purchase HemoVisionAI, allowing them full access to the platform.

- **Morphology as a Service:** Pay-Per-Use — Enables a flexible, scalable model. Each analysis session incurs a fee, ideal for users requiring remote human morphology expertise. We take 20% of transaction fee.
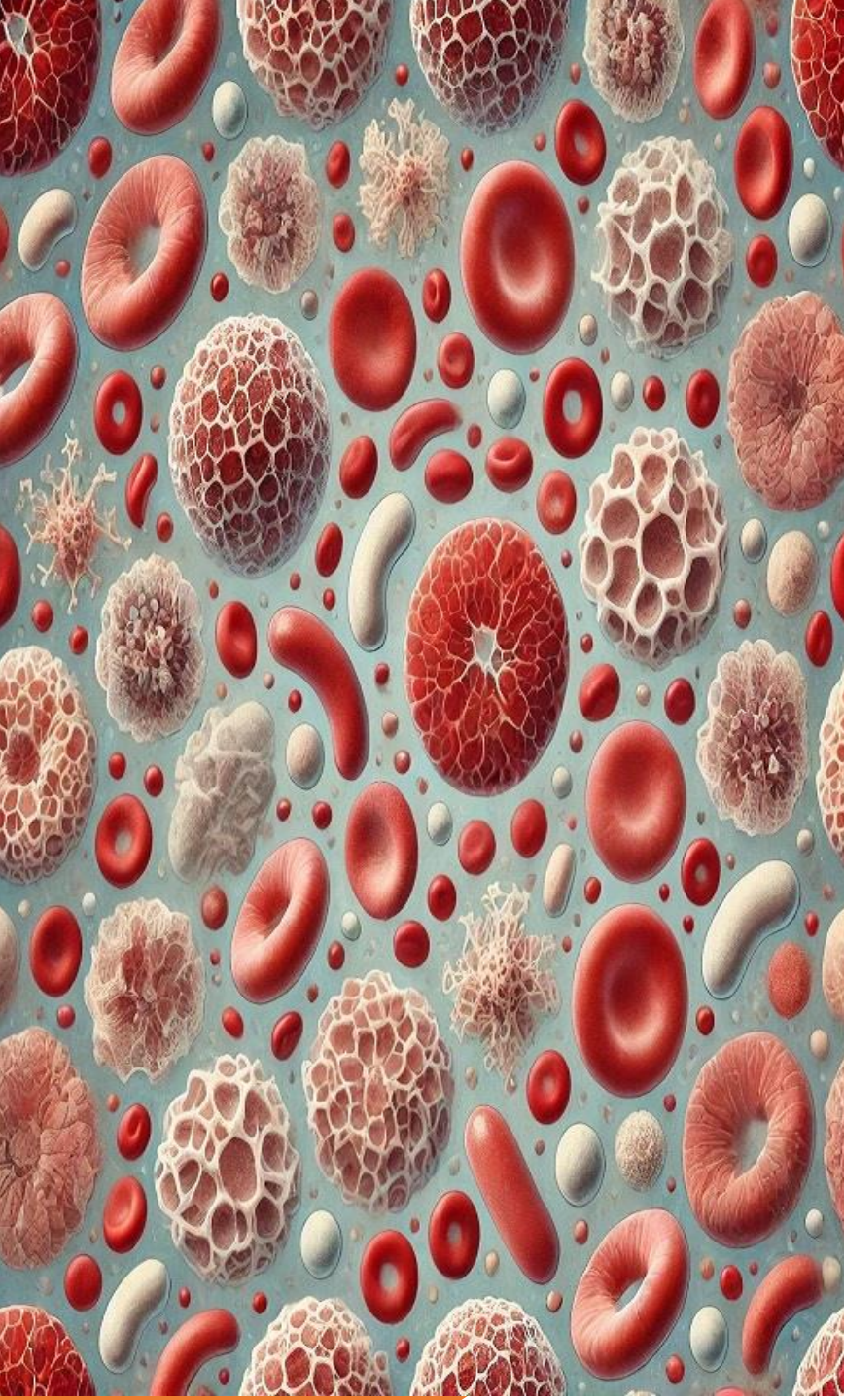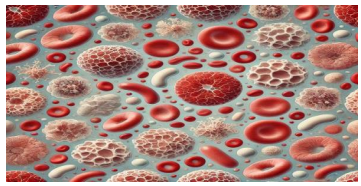
The Go-To-Market

1

Start with a focus on UK SME labs seeking cost-effective automation & remote/rural labs which often struggle with haematology experts. Piloting and partnerships with hospitals & labs to secure an initial user base.

2

Expand to healthcare & lab networks in emerging markets such as South Asia and Africa where the shortage of haematologists is a critical problem.

3

Market to UK/EU/US working lab professionals who seek second opinions or general blood film morphology assistance.

4

Finally target US/EU/Global universities, research centres, hospitals, and pharmaceutical companies.

HemoVisionAI

The Team

Daniel Mamphey, CEO & Co-founder.
A seasoned haematology scientist with over a decade of hands-on experience in clinical haematology labs. He combines deep domain expertise with a track record as a life science and healthcare entrepreneur. His extensive skill set spans business operations and strategy, business development and marketing and sales.


Hector Edu Nseng, AI/ML lead.
A specialist in AI, machine learning, and scalable systems for healthcare. He has spent years optimising diagnostic accuracy, automated workflows, and accelerated data analysis for organisations like the NHS, Visionary HealthTech, and BenevolentAI where he helped develop a computer vision model, cutting pathologists' manual review time by ~ 70%.

Subrahmanya BA, CTO & Co-founder.
A talented software/cloud engineer. He brings 12 years of software development and entrepreneurial experience, including co-founding three startups. With expertise in MLOps, DevSecOps, and cloud infrastructure, he leads the technical development of our scalable, secure AI-driven solution for innovative haematology diagnostics.
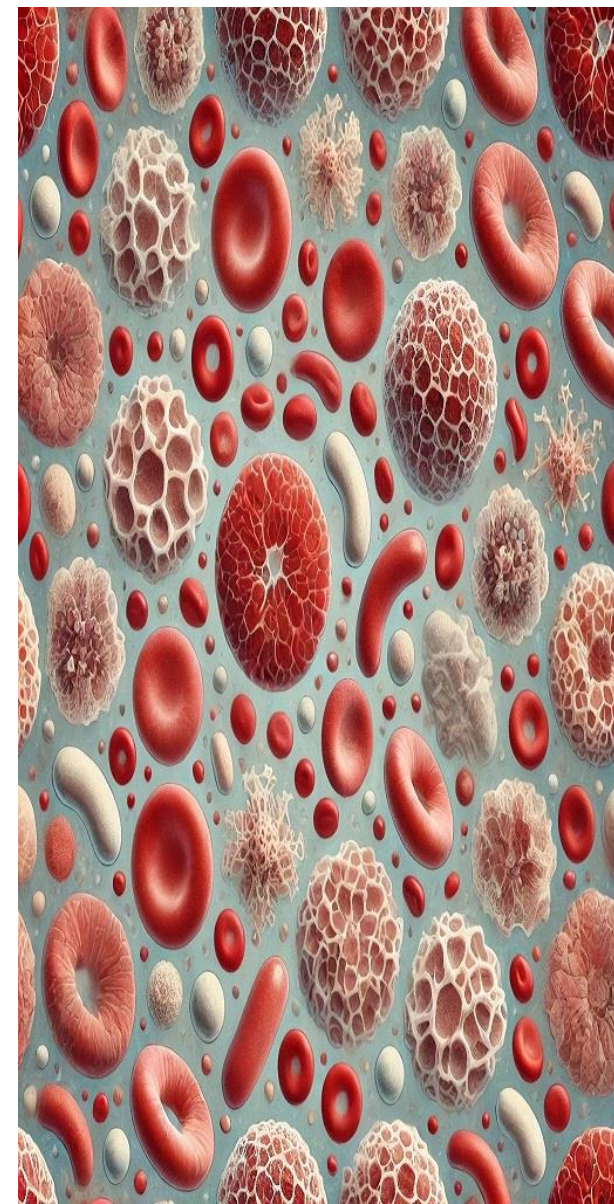
The Financials & Projections

**Conservative Revenue & Projections Scenario (5-Year Projection)**

Assuming HemoVisionAI sells its offerings at a monthly subscription of around £25 - £2000 per individual/laboratory depending on usage and facility size—MaaS at a per use/case fee of 20% of the transaction value.

Phase 1 (6 months): Develop VisionGo; secure initial user base and partnerships—Revenue target: £600k/year (based on 1,000 users @ £50 average/month).

Phase 2 (1.5 years): Launch MaaS and telehaematology for clinical diagnostic use; expand user base—Revenue target: £2.9M/year (based on 3,000 users @ £75/month; £200k MaaS fees).

Phase 3 (1.5 years): Year 3: Introduce full AI diagnostics platform; scale globally—Revenue target: £72M/year (based on 2500 high-end enterprise users @ £2,000/month, and 10,000 individual users @ £100/month).

TOTAL REVENUE AT THE YEAR-END AFTER PHASE 3 (i.e. Year 4): £75.5M/year. It is projected to rise to over 300M/year in Year 5. These projections are extremely conservative. It is worth noting that as AI-powered telehaematology crosses the "Chasm" of the technology adoption curve to become mainstream, its revenue will go exponential.
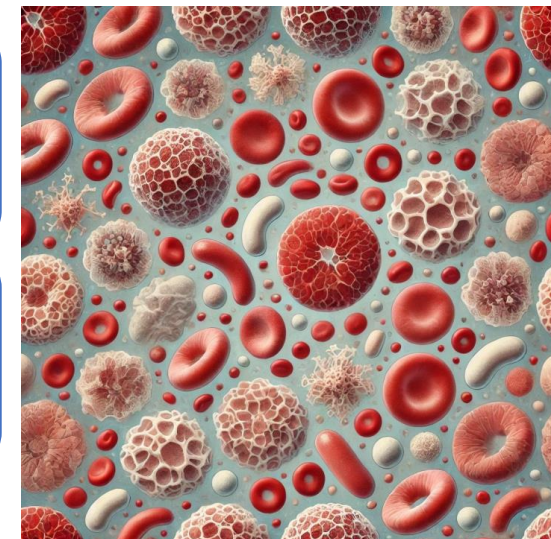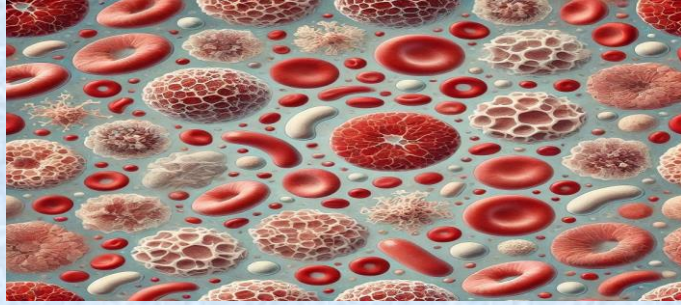
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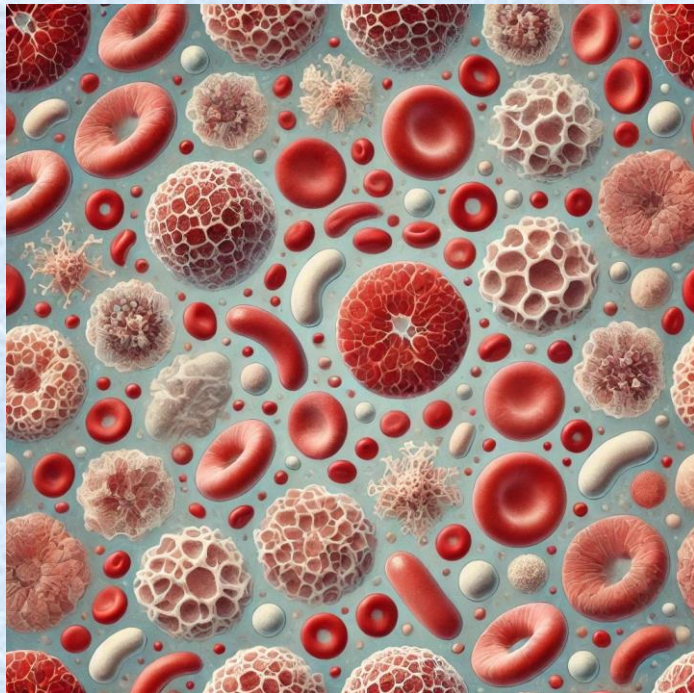
Raise **£500k** in early-stage funding to fuel product development, marketing, and platform deployment.

Investor Support

Allocation of Funds:

Technology Development (Platform development, AI and ML Algorithms, Data Security & Regulatory Compliance/Certification - (60%)

Operational Setup: Clinical Testing and Validation, Lab Partnerships & Integration – (20%)

Marketing & Market Entry: - (15%)

Administrative Costs & Miscellaneous: Legal Costs, General Operations, Etc - (5%)