



Vyuhaa Med Data

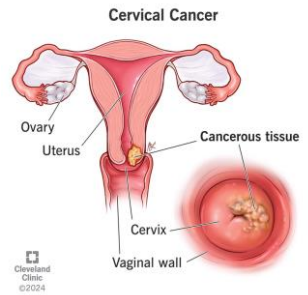
The Future of Cervical Cancer Screening

Dhritiman Mallick
Co-Founder and CEO

January 2025

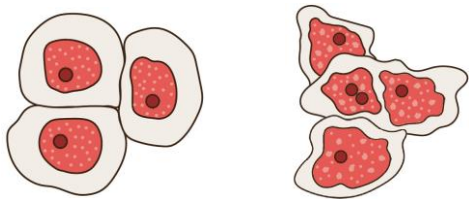
Cervical cancer burden is growing globally; **Over 350,000** women die annually, and early detection can save **90% of the lives**

What is Cervical Cancer?



Cervical cancer occurs at the opening of the womb and largely caused by Human Papilloma Virus

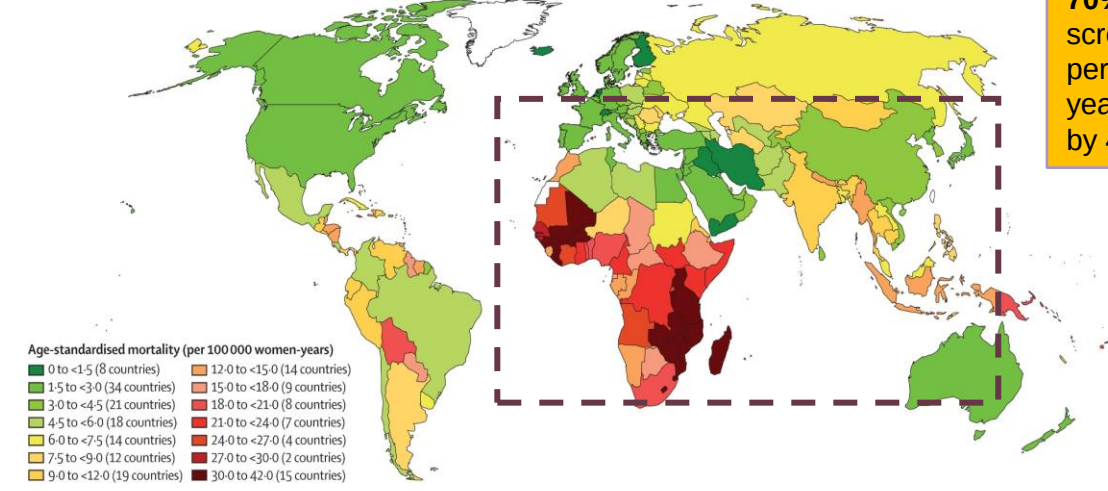
HPV has a long gestation period and transmitted by the male partner



Normal Cells
Cancer Cells

WHO Cervical Cancer Elimination Strategy Targets for 2030

Global Incidence



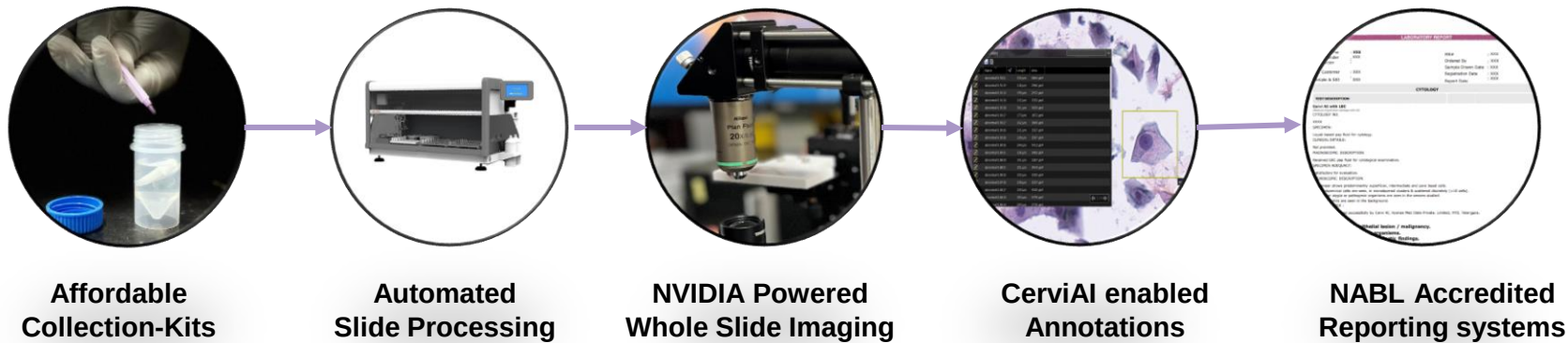
70% of women to be screened with a high-performance test by 35 years of age and again by 45 years of age

India is in dire need of a robust cervical screening infrastructure, our current primary health set-up doesn't have one



We aim to screen a Billion Women.....Leaving No-One Behind

CerviAI is an End-to-End AI Enabled Screening Technology using Liquid Based Cytology



Benefits and Impact

- ✓ Low cost and high effectiveness
- ✓ Improved Early Detection Accuracy
- ✓ Scalable Health Technology
- ✓ Interoperability of data and research
- ✓ Data-Driven Innovation for Diagnostics
- ✓ 10M+ possible beneficiaries annually by Y3

Performance Metrics

99.6%

Sensitivity in Pre-clinical testing and trials

60%

More affordable than a High-Performance HPV Test

0

False Negatives in 5000+ double blind tests

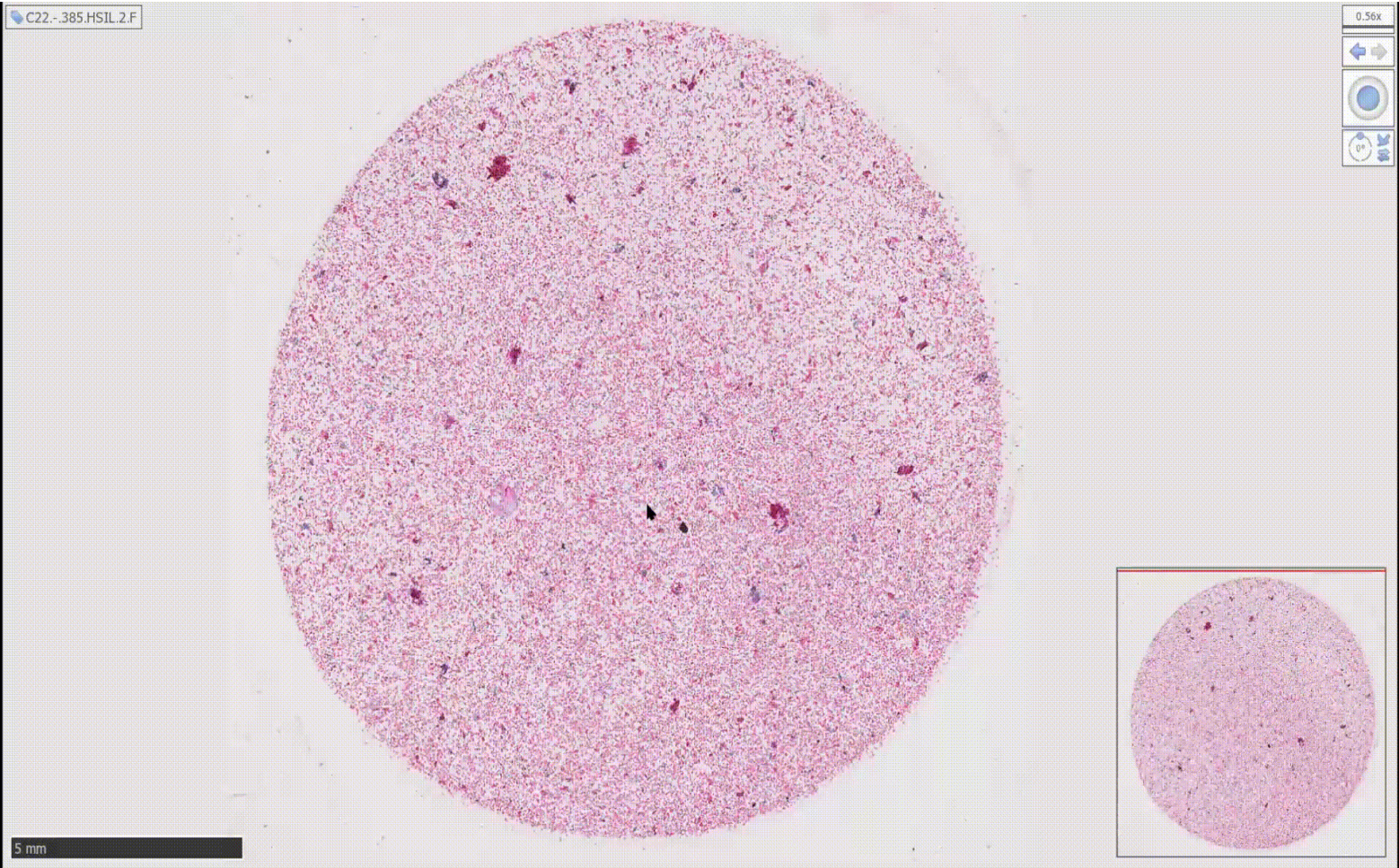
8X

Higher Throughput compared to manual system



NVIDIA Jetson Orin Accelerated AI Enabled Whole Slide Imaging System

Whole Slide Imaging (WSI) with CerviAI (200Nm/40X Zoom)



Features

- 
 Slide Acquisition: Automated Focus Adjustment
- 
 Whole Slide Image Stitching
- 
 AI Processing using Deep Learning Inference
- 
 Deep Zoom Image Storage with Compression
- 
 Visualization and GPU-Driven Pathologist Interface
- 
 Case Reporting with AI-Powered Report Generation



Jetson Orin Accelerated AI Enabled Whole Slide Imaging System

Whole Slide Imaging (WSI) with CerviAI (200Nm/40X Zoom)



Figure: Labelled abnormalities on the LBC PAP

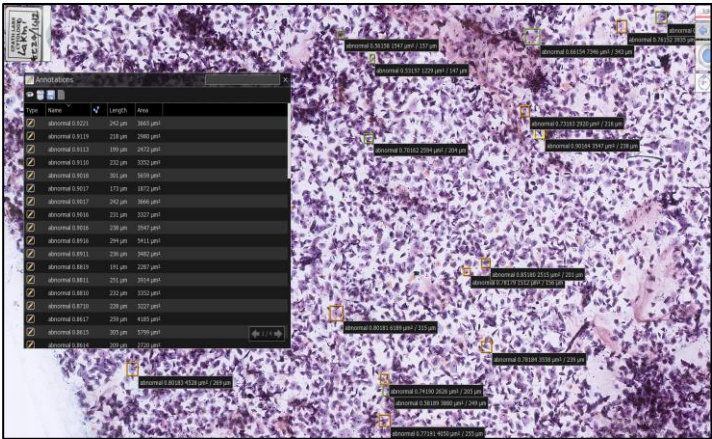


Figure: Labelled abnormalities on the LBC PAP

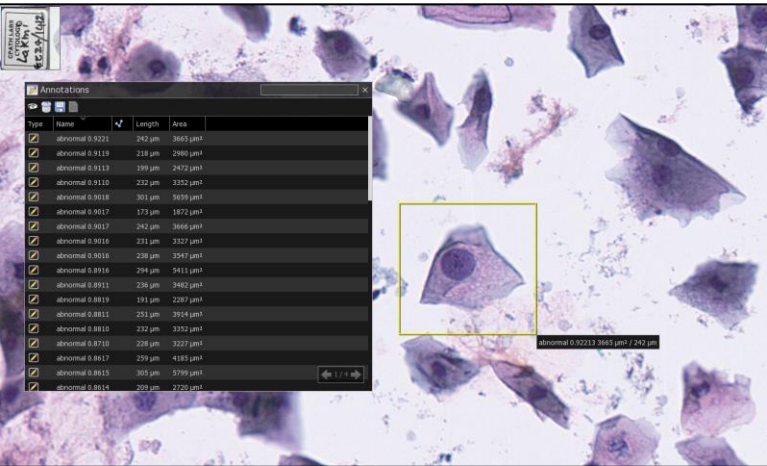


Figure: Magnified view of abnormalities

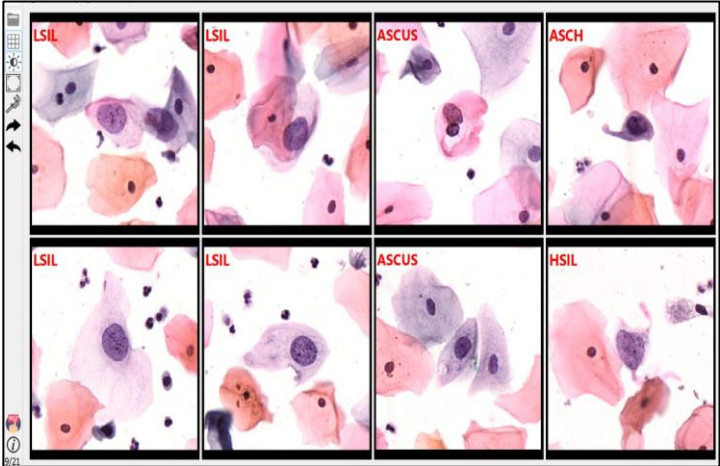


Figure: Grid view of the abnormal cells

Features

- 

Slide Acquisition: Automated Focus Adjustment
- 

Whole Slide Image Stitching
- 

AI Processing using Deep Learning Inference
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Deep Zoom Image Storage with Compression
- 

Visualization and GPU-Driven Pathologist Interface
- 

Case Reporting with AI-Powered Report Generation



Automated Slide Processing | High Throughput | Built for Large Scale Processing

Automated Slide Processing System with Robotic Automation and Consumables as a Service

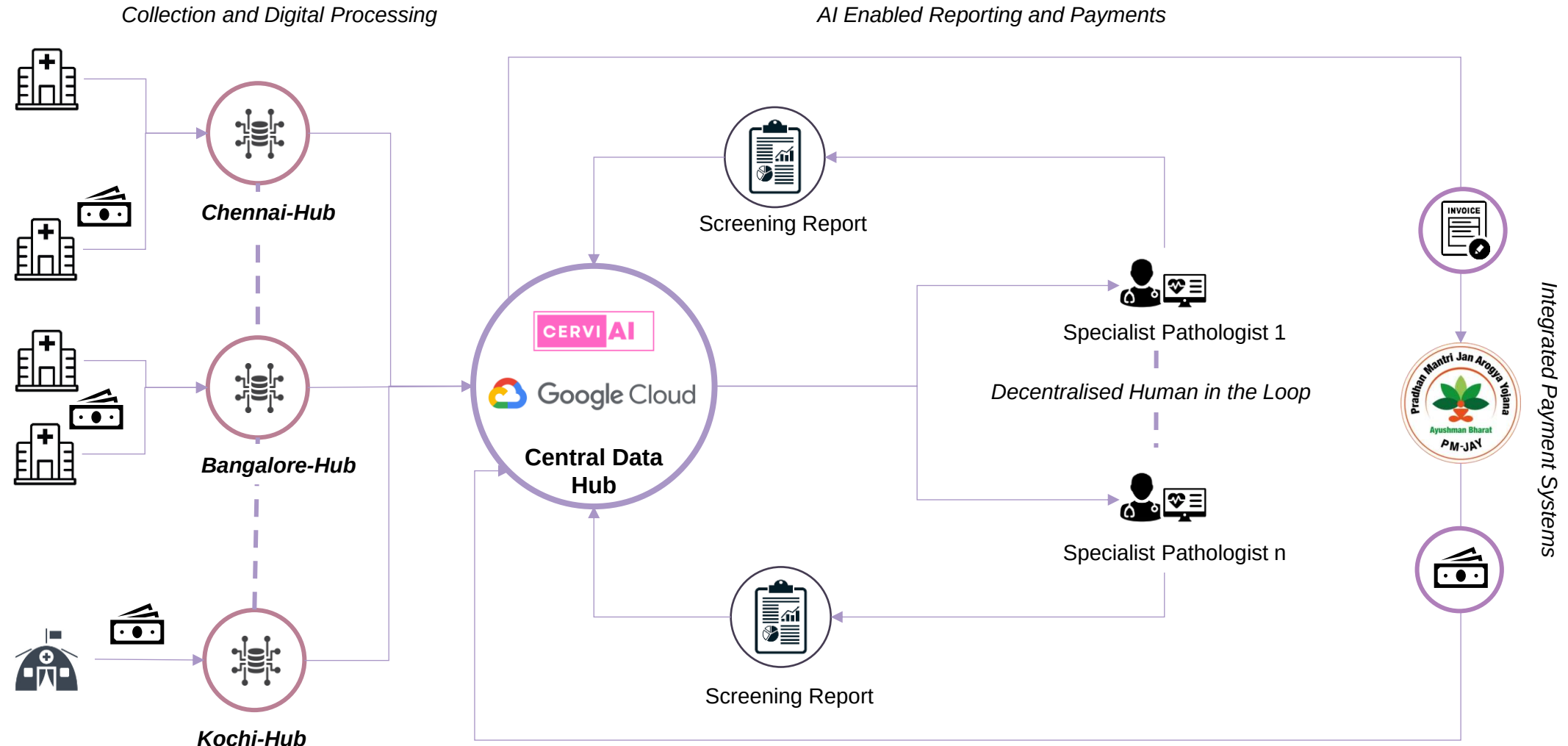


Features

-  Automated Batch Processing of 24-48 samples an hour
-  Proprietary reagents and staining cocktail
-  Robotic arm and equipment developed in-house
-  High margin Consumables



Google Cloud Processing Platform | Payer Integration | Modular Digital Hubs



B2B Digital Tech Stack | Go to Market Strategy | Price Points and Gross Margins

Digital Technology Stack					Target Customer	Model	Price Point	Margins
Reagent Cocktails/Consumables as a Service	Cytology Collection Kits	Digital Enablement as a Service	Automated Slide Processing Equipment	Digitizer with AI on EDGE	Government PHCs Large Hospital Chains	Digital Enablement	Rs. 30-35 Lacs	60%
		Software as a Service	CDSCO Approved Standalone Software as a Medical Device		Singular Pathology Labs Mid-Large Hospitals with high pathology lab expenditure	SaaS (Pay as you go)	Rs.25-50 per case	90%
		Digital Path as a Service	Payer Integration	Digital Pathology Platform	Singular Pathology Labs Mid-Large Hospitals with high pathology lab expenditure	Digital Enablement	Rs. 12-15 Lacs	80-90%
		Screening as a Service	Cervi AI: Screening	Remote Pathologists	Singular OB-GYN Non Profits Small Clinics/Providers	Pay as you go	Rs.500 per case	70%

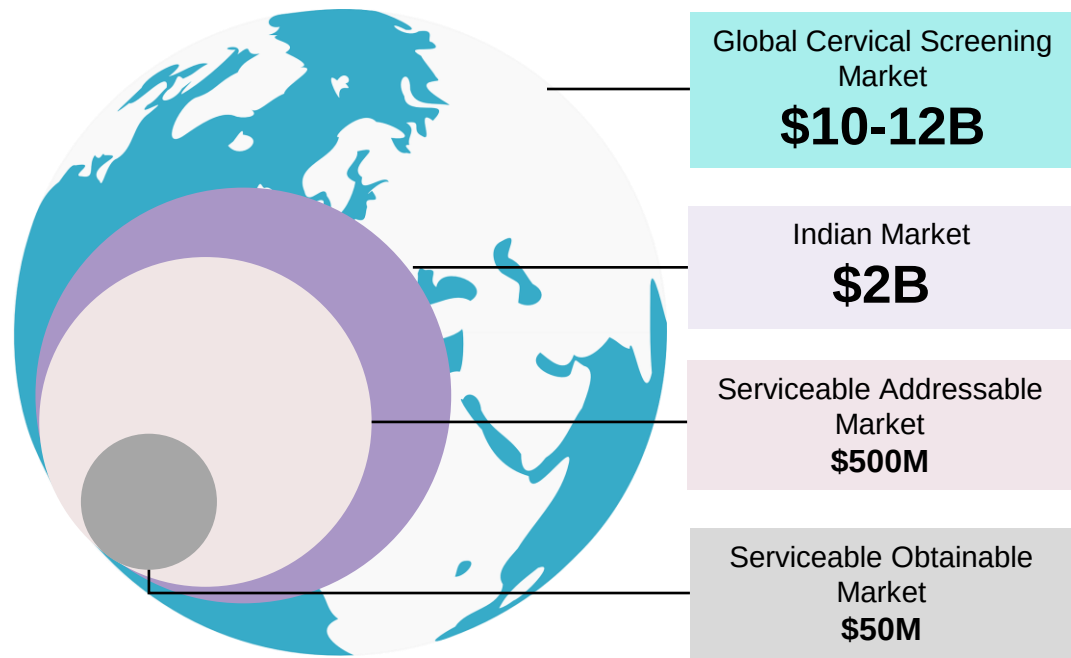
Existing

New Revenue Models



\$2B Indian Market | Lean-Digital Infrastructure | Integration with Universal Health Insurance (ABDM)

Market Size and Opportunity



Revenue Model

Service Offerings

Commercial Screening Services: Hospitals, OB-GYNs, Providers

Government and NGO Integration: Tech support for large scale camps

Our customers:



Our Competitors



We Capture significant externalities and build Health equity for Millions of Women worldwide

Business Impact:

- ✓ Estimated **ARR of INR 2-3 Cr.** (USD 0.3M-0.4M) per Digi-hub with AI screening trained on over 1 Million samples
- ✓ Screening ARR to be in the range of **Rs.100 Cr. (USD 8M-10M) In 3 years**
- ✓ Estimated inflow of Rs.500 Cr. (USD 50-70M) annually by GoI for Cervical Cancer Screening

Alignment with National Health Authority | United Nations Sustainable Development Goals



State of Art Lean Digital Infrastructure for Healthcare:

- ✓ SaaS and Digital Enablement across India and beyond
- ✓ **50+ AI-enabled digital hubs by 2026**, increasing diagnostic throughput by 5x compared to conventional methods
- ✓ Integration with Universal Health Insurance and other payers for service billings
- ✓ Tech-Platform can be extended to cover other products like Oral cancer screening, breast cancer screening along with Histopathology

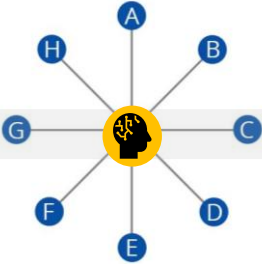
Human Development Impact

- ✓ **Screen over 10 million women** annually, potentially reducing cervical cancer mortality by **20-30%**
- ✓ **60-70% cost savings** for patients and government
- ✓ Alignment with WHO Mandates and National Health Mission



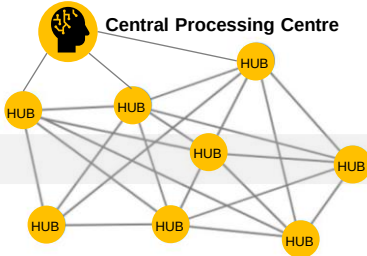
We are seeking Rs.1.5 Cr. (USD 125k) in bridge funding for Digital hubs with ABDM Integration PoC

Cost Head	Investment	Sources/Remarks	Current Cap Table as Of 30th August 2024	
Digi-Hub and Infrastructure Set-up	Rs. 0.5 Cr.	1-2 Centers as PoC, 1Y runway	Stakeholders	Percentage (%)
Product Development, Field Testing and Regulatory approvals	Rs. 0.5 Cr.	Additional Rs.1.5 Cr. by ICMR for clinical trials and Rs.1.3 Cr. by Institut Pasteur	Krishna Mohan Reddy	29.0
OPeX (Marketing, R&D, Business Development, Service and Logistics)	Rs. 0.5 Cr.		Madhusudan CP	29.0
			Dr. Ranjani CP	14.7
			Dhritiman Mallick	19.8
			Others (CFHE, IIT Hyderabad)	7.5
Total Investment Required	Rs. 1.5 Cr.		Total	100



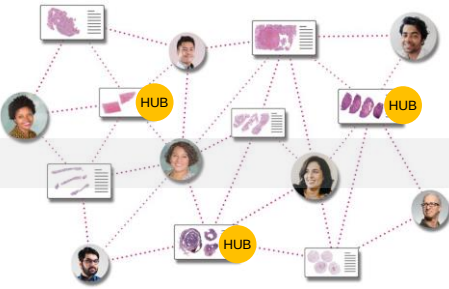
Year 1

Set-up state wise local digital hubs for remote diagnostics and obtain critical mass for samples (4-5 Remote Digital Hubs) with ABDM integration



Year 2-3

Expand to 50 Digital hubs by Year 3 with Cytology+ capabilities with Digital Enablement + SaaS model for further expansion with remote pathologists enablement



Year 4-5

SaaS and Digital Enablement as a service model as cervical screening picks up pace across APAC and Africa to meet the WHO mandates (2029-2030)



Our Team| Experience across Clinical Research, Artificial Intelligence and Management Consulting

Our Team



Dhritiman Mallick
CEO, Operations and Strategy

Deloitte.



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భారతీయ సాంకేతిక విజ్ఞాన సంస్థ హైదరాబాద్
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Indian Institute of Technology Hyderabad

Technology Partners



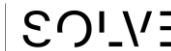
Institutional and Research Partners



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Awards and Accolades



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