Harvard Alumni ENTREPRENEURS

Belmont Solutions — Business Model & Founder Report

AI-Powered Cataract Screening Application

1. Business Model Overview (Matrix)

Element	Inputs / Assumptions
Customer Segments	**Primary:** Hospitals/clinics with eye departments; Health NGOs running large-scale screenings. **Secondary:** Individuals (via mobile self-screening).
Value Proposition	Detect cataracts faster, cheaper, and with fewer specialists. Cost ≈ $1.50 per screening (vs. $5–15 with specialists). Mobile, scalable, offline-capable, locally trained AI. For patients: peace of mind + referral guidance.
Offerings / Products	Smartphone app with AI-powered cataract detection. Features: instant results, PDF reporting, offline batch upload, referral guidance. Future: dashboards, EMR integration, telemedicine linkage, multilingual support, expanded diagnostics (glaucoma, DR).
Pricing & Revenue Model	**Individuals (B2C):** Freemium (1 free scan/month) + pay-per-use ($1.50). **Institutions (B2B):** Pilot = pay-per-use; Scale = hybrid license + discounted fees. Future: subscriptions, teleconsults, anonymized data licensing.
Cost Structure	AI development (model training, data labeling, cloud). App development & hosting. Sales/marketing (NGO & hospital outreach). Support/onboarding for institutions. Regulatory/ethics compliance.
Margins (TBD)	To be validated during pilots: cost per screening, CAC, LTV, conversion rates. Early signals suggest $1.50 price point viable for NGOs/patients.
Channels / GTM Strategy	Direct partnerships with NGOs and hospitals. Health innovation conferences & medical forums. Advocacy with government/Ministry of Health. Mobile app stores for individuals.
Competitive Advantage	Locally trained datasets; mobile-first; offline support; cost aligned with local willingness to pay. Network effect: more screenings → better model accuracy → stronger moat.
Scale Goals	Phase 1: Ghana pilots (hospitals + NGOs). Phase 2: Expand across West Africa (Nigeria, Côte d'Ivoire, Sierra Leone). Phase 3+: Pan-African and South Asia (India, Bangladesh).
Profitability Path	TBD after pilots. Key drivers: institutional adoption, B2C freemium-to-paid conversion, and data/teleconsultation services.

2. Investor Perspective

What investors will like:

- Large, urgent, and measurable problem: cataracts are a leading cause of blindness.
- Strong value proposition: <$2 screening cost, scalable across Africa.
- Impact story is powerful: early detection prevents blindness → societal ROI.
- Recurring revenue opportunity (per-screen + licenses + SaaS).
- Strong potential for strategic exits (telehealth, diagnostics, NGOs, device companies).

What they'll question:

- Regulatory hurdles: Is government approval required for broad rollout?
- Adoption risk: Will NGOs and hospitals integrate AI into workflows?
- Unit economics: CAC vs. LTV is not yet clear.
- Growth trajectory: How quickly can revenue scale beyond pilots?
- Competition: Can global AI screening startups enter Africa faster?

Investor fit:

- Best suited for **impact investors**, **global health funds**, and **strategic partners** (ophthalmology device makers, NGOs, telemedicine companies).
- Traditional VC may hesitate unless growth/ARR scales quickly.

3. First-Time Founder Considerations (Mapped to Business Model)

Model Element	Founder Focus
Customer	Validate *who pays* (NGO program directors, hospital procurement, or ministries). Map sales cycle length — institutional adoption may take 6–12 months.
Value Proposition	Gather **field validation data** on accuracy, time saved, and costs reduced. Get endorsements from ophthalmologists & public health champions.
Offering	Prioritize rugged, user-friendly design. Build IP protection (data, algorithm). Ensure offline-first reliability.
GTM	Secure **pilot partnerships** with 2–3 NGOs/hospitals. Develop impact case studies early. Vet local distributors/partners for scale.
Economics	Measure real CAC and usage patterns during pilots. Validate willingness-to-pay at both B2B and B2C levels. Explore donor-funded pilots to offset CAC.
Profit Path	Define interim milestones (e.g., 10,000 screenings in 12 months). Be transparent with investors that profitability depends on adoption curve.
Advantage	File IP (software, datasets). Build early moat with **exclusive NGO/government partnerships**. Create virtuous cycle: more users → better AI → more accuracy → harder to copy.
Scale	Start hyper-local (1–2 Ghana regions) before regional expansion. Build proof that scaling logistics and support is feasible.

4. Risks & Mitigation

Risk	Why It Matters	Mitigation Strategy
Regulatory barriers	Delays rollout, adds cost.	Engage Ministry of Health early, secure ethics clearance, build local champions.
Workflow adoption	Hospitals/NGOs may resist change.	Offer training, co-design features, integrate into EMRs.
CAC too high	Institutional sales cycles can be costly.	Use NGO networks for warm introductions, pursue grants for pilots.
Usage assumptions	Free-to-paid conversion may lag.	Test pricing tiers; build referral pathways; gamify B2C app.
Competition	Larger AI eye-screening companies could enter.	Differentiate with local datasets, offline-first design, government/NGO endorsements.

5. Action Plan (Next 24 Months)

0–6 Months (Validation)

- Secure ethics clearance and 2–3 pilot partners.
- Run small-scale screenings (~1,000 people) to validate accuracy in Ghana.
- Document outcomes: cost savings, speed, patient satisfaction.
- Start IP filings and branding work.

6–12 Months (Pilot Expansion)

- Scale pilots to 5,000–10,000 screenings.
- Publish first case study ("Screened 5,000 people at 1/3 the cost of traditional methods").
- Engage Ministry of Health, secure NGO endorsements.
- Begin exploring hybrid license models with institutional partners.

12–24 Months (Scale-Up Readiness)

- Expand to 2–3 Ghana regions; aim for 50,000 cumulative screenings.
- Add dashboard/analytics features for institutions.
- Refine B2C freemium → paid conversion strategy.
- Prepare fundraising round with validated unit economics and impact metrics.

6. Key Takeaways for the Founder

- **Anchor in validation**: Field pilots and case studies are your credibility currency.
- **Choose your investors wisely**: Lean into impact and strategic funders over traditional VC.
- **Prove unit economics early**: Track CAC, LTV, and usage patterns — investors need hard data.
- **Build trust**: Regulatory approvals, endorsements, and local data give you defensibility.
- **Think impact + sustainability**: Frame success as blindness prevented, costs saved, communities served — this resonates with both funders and partners.

Final Positioning Statement:
Belmont Solutions is building a **locally adapted, AI-powered cataract screening platform** that democratizes eye health across Africa. By reducing screening costs to $1.50 and enabling scale via mobile devices, it offers NGOs, hospitals, and patients a **trusted, accessible, and scalable** way to prevent avoidable blindness.

Competitive Landscape & Odds

Venture	Space / Buyer	Key Competitor Types (examples)	What Could Be Their Edge	Biggest Obstacles	Success Odds (Near / Long)
Belmont Solutions	AI cataract screening; NGOs/hospitals + B2C	Manual screenings; AI eye tools (Peek, Google/DeepMind research; startup pilots); ophthal devices	Mobile, offline, local data; $1.50 cost; NGO workflows	Accuracy/approval proof; integration into outreach; conversion from pilots to contracts	🟡 / 🟡 — fair; impact-fund fit; scale hinges on NGO/government adoption

Validation Priorities

1. **Conversion Funnel (B2C):**
    - Test free → paid conversion in Ghana.
    - If <5%, B2C model is weak → focus on B2B NGOs/hospitals.
2. **NGO Pilot ROI:**
    - Prove cost savings vs. manual screening (~$5–7 per person vs. $1.50 with Belmont).
    - Collect impact case studies (e.g., 5,000 screened at 70% lower cost).
3. **Regulatory Acceptance:**
    - Secure Ghana Health Service approval for community deployments.
    - Needed for hospital adoption & NGO credibility.
4. **Cost Validation:**
    - Confirm per-screening landed cost stays <$0.25 at scale.
    - Negotiate NGO volume contracts (20–30% discounts) without eroding margins.