Shurokkha

AI-Powered Transparent Donation Platform

AlphaVerse Team, BUET CSE'20

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SOLVIO AI Hackathon 2025

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BUET CSE Undergraduate Team

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Team Verification
ID Documents: Google Drive Link (Click Here)

The Problem: Bangladesh's Humanitarian Aid Crisis

1. Zero Transparency

- Donors cannot track donations
- No visibility tracking into fund allocation
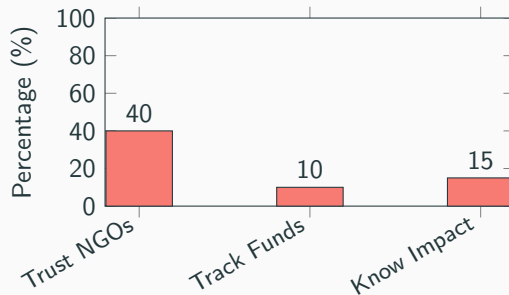- 60% donors hesitate to give

2. Rampant Fraud

- Up to 30% of aid diverted
- Fake NGOs and ghost beneficiaries
- Duplicate applications

3. Inefficient Systems

- 45-day average delivery time
- Manual verification processes
- Poor coordination

Impact of Trust Deficit:

Real Consequences:

- Billions in lost donations
- Reduced disaster response
- Growing public mistrust
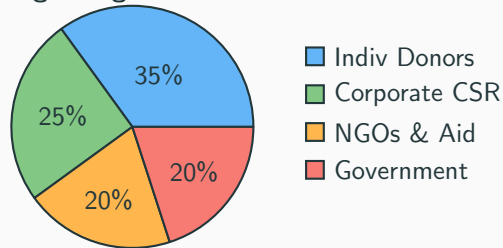- Victims suffer most

Market Opportunity: Massive Potential

Bangladesh Humanitarian Aid Market:

- **Tk. 10,000+ crore** annual humanitarian aid
- **40+ disasters** annually (floods, cyclones, fires)
- **170M population** with 20M+ disaster-affected
- **1,000+ active NGOs** seeking technology
- **$21B remittances** from diaspora wanting transparency

Digital Readiness:

- 120M+ mobile users
- 60M+ mobile financial service users
- 80M+ internet users
- Government Digital Bangladesh initiative

Target Segments:

- Indiv Donors — 35%
- Corporate CSR — 25%
- NGOs & Aid — 20%
- Government — 20%

Market Potential
Year 3 Target: Tk. 500 crore donations
Platform revenue: Tk. 12.5 crore (2.5%)

Triple-Layer AI Verification

End-to-end transparent donation ecosystem

Layer 1
Crisis Validation

- Satellite imagery
- News scraping
- Social media
- Weather data

Layer 2
Provider Auth

- Trust scores (0-100)
- Background checks
- Performance history
- License verification

Layer 3
Beneficiary Verify

- NID database check
- Face matching (95%+)
- GPS validation
- SMS confirmation

Result: <1% fraud rate | 5–7 day delivery | 100% transparency

AI Integration: Complete Suite

1. Crisis Detection & Validation

- **Models:** U-Net CNN + BERT NLP
- Satellite image analysis
- News scraping (50+ sources)
- Social media sentiment
- **Accuracy:** 92%+ crisis detection

2. Document Verification

- **Models:** Tesseract OCR + DeepFace
- NID govt. database check
- Deepfake detection (95%+ accuracy)
- Metadata tampering detection

3. Fraud Pattern Detection

- **Models:** Isolation Forest + GNN
- Duplicate beneficiary detection
- Cost outlier flagging
- **Accuracy:** 94% fraud prevention

4. Smart Matching

- **Model:** XGBoost + Collaborative Filtering
- Preference alignment
- Provider capacity optimization
- Urgency-based prioritization
- **Satisfaction:** 91%

AI Benefits
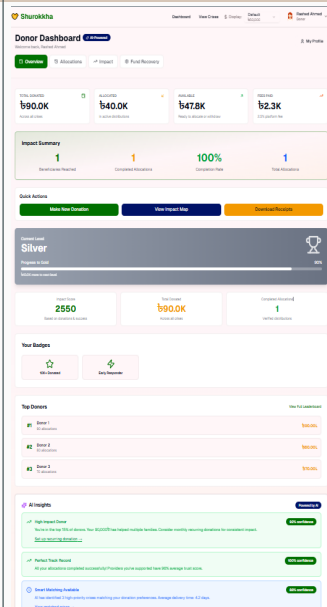**25x faster** verification | **99%+** fraud prevention | Real-time detection

Crisis Dashboard (Public):

- AI-detected crises with severity
- Real-time funding progress
- Satellite imagery integration

Donor Dashboard:

- Complete wallet tracking
- GPS impact map
- Proof of delivery with photos

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Product Demo: Provider & Beneficiary Experience

Provider Interface:
- Trust score (0–100)
- Beneficiary management
- GPS distribution workflow

Beneficiary Interface:
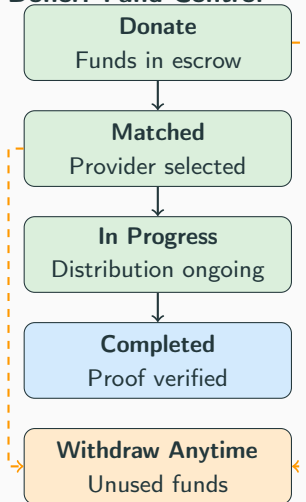- Easy registration process
- Privacy controls (3 levels)
- SMS-based confirmation
- Direct feedback system

Platform Features: Brief Overview

Donor: Fund Control

Donate
Funds in escrow

↓

Matched
Provider selected

↓

In Progress
Distribution ongoing

↓

Completed
Proof verified

↓

Withdraw Anytime
Unused funds

Provider Workflow:

1. Registration & verification
2. View available donations
3. Submit beneficiary list
4. AI screening
5. 50% fund release
6. GPS-tagged distribution
7. AI validates delivery
8. Remaining 50% released
9. Feedback & rating

Trust Score (0–100):

30% Completion + 25% Rating
+20% Speed + 15% Zero Fraud
+10% Longevity

Beneficiary Registration:

- Multi-step profile creation
- NID verification (AI + manual)
- Document upload
- Phone verification (SMS)

Privacy Controls:

- 3 levels of data sharing
- Anonymous donations
- Profile visibility control
- Data protection compliance

Protection
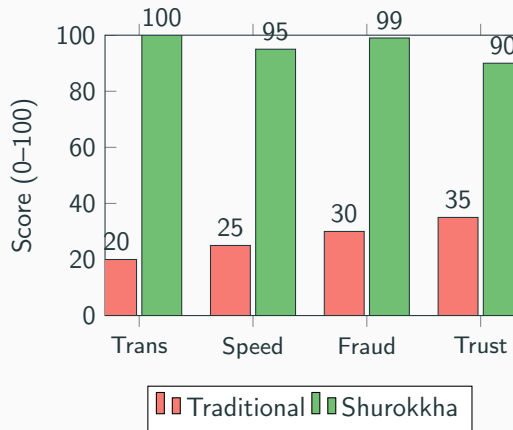No fees | Privacy | Fraud reporting

Unique Value Proposition

Industry-First Features:

- **Only platform** with govt. NID integration
- **Real-time** satellite crisis detection
- **Refundable** unused donations
- **100% transparency** with GPS proof
- **5–7 day delivery** vs. 45-day average
- **<1% fraud rate** vs. 20–30% traditional

Technology Differentiators:

- AI models (CNN, BERT, XGBoost, GNN)
- Deepfake detection & liveness checks
- Graph neural networks for fraud rings
- Next.js 16 with React Server Components

Competitive Comparison:

9x faster | 30x lower fraud | 100% traceability

Business Model & Revenue Strategy

Revenue Streams:

1. Transaction Fees (75%)
2.5% per donation (transparent), Covers payment gateway, operations, AI

2. Corporate CSR (15%)
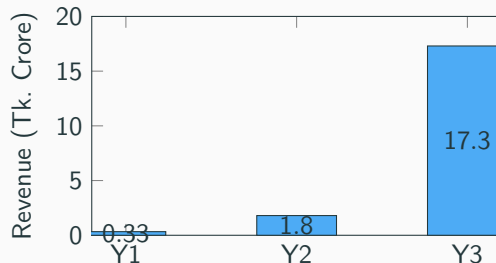Custom matching programs, Tk. 5–50 lakh per company

3. API Licensing (7%)
Banks: bKash, Nagad, Rocket, Telecom & Government systems

4. Premium Features (3%)
Priority matching, Advanced analytics

3-Year Revenue Projections:

Unit Economics:

- Avg donation: Tk. 5,000
- Platform fee: Tk. 125 (2.5%)
- Cost per transaction: Tk. 40

Phased National Expansion

Phase 1: Foundation
(Months 1–6)

- 50 NGO partnerships
- 5 disaster-prone districts
- 10K donors
- Tk. 10 crore distributed

Phase 2: Scale
(Months 7–12)

- All 64 districts
- 500+ providers
- Mobile app launch
- Tk. 50 crore distributed

Phase 3: Ecosystem
(Year 2+)

- Govt. integration
- International support
- Regional expansion
- Tk. 500 crore distributed

Customer Acquisition:

- **Digital (40%):** Facebook, Instagram, YouTube, SEO/SEM
- **PR & Media (25%):** Disaster coverage, tech innovation press
- **Campus Ambassadors (20%):** 50+ universities, student networks
- **Partnerships (15%):** bKash/Nagad, telecom, bank CSR programs
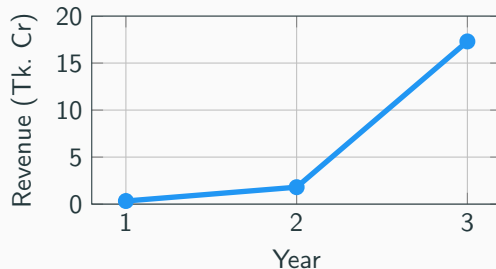
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Financial Projections & Milestones

3-Year Financial Overview:

Metric (Crore)	Y1	Y2	Y3
Donations	10	100	500
Revenue	0.33	1.8	17.3
Costs	0.5	1.2	8.5
Net Profit	-0.17	0.6	8.8
Donors (K)	0.5	5	10
Providers	20	100	200+
Beneficiaries (K)	5	50	100+

Key Milestones:

- **Y1:** MVP launch, 20 NGOs, pilot 3 crises
- **Y2:** Mobile apps, govt. partnerships
- **Y3:** National coverage, regional expansion

Revenue Growth Trajectory:

Performance vs Traditional:

- **9x faster** delivery (5 vs 45 days)
- **30x lower** fraud (<1% vs 30%)
- **85%+** donor retention rate
- **100%** traceability

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Next Steps & Our Ask

What We Need?

1. Seed Funding: Tk. 50 Lakh

- Complete MVP development
- AI infrastructure setup
- Team expansion & operations

2. Technical Resources:

- AWS/Cloud credits
- Satellite API access (ESA/NASA)
- Payment gateway integration

3. Strategic Partnerships:

- NGOs (BRAC, ASA, Grameen)
- Government agencies (Disaster Mgmt.)
- Financial partners (bKash, Nagad)

6–12 Month Roadmap:

M1–2: Finalize MVP
- AI modules
- Mobile PWA

M3–4: Pilot Launch
- First crisis
- 20 NGOs

M5–6: Integrations
- Payments
- Satellite feeds

M7–9: Scale
- 5 districts
- 500 donors

M10–12: Milestone
- **1K donors**
- **10K+ beneficiaries**

"Every Taka Reaches Its True Destination"

Building trust and transparency in Bangladesh's humanitarian sector

Social Impact Goals:

- Restore public trust in humanitarian aid
- Reduce fraud by 95%+
- Cut delivery time from 45 to 5–7 days
- Reach 100K+ beneficiaries by Year 3

Long-Term Vision:

- Become Bangladesh's trusted digital aid platform
- Set global standards for transparent giving
- Expand to regional markets (South Asia)

Donate with Confidence. Track with Precision. Impact with Certainty.

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Shurokkha

AI-Powered Transparent Donation Platform

🌐 shurokkha.vercel.app

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- ⌗ AlphaVerse-BUET/Shurokkha
- ▶ YouTube/Prototype-Presentation

Thank You!