



Haat Baran

FEASIBILITY STUDY DOCUMENT

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Introduction

A feasibility study evaluates the practicality of developing a proposed system. It helps determine whether the system is technically possible, financially viable, and beneficial to users. In the case of Haat Baran, this study aims to examine the feasibility of creating a digital platform that connects people living below the poverty line with donors willing to fund their small business ventures.

The purpose of this document is not to solve the problem immediately but to assess whether the proposed system can be realistically developed and implemented. It identifies potential challenges, evaluates alternative solutions, and ensures that the system will achieve its intended goals effectively and efficiently.

Background

The Problem

In Bangladesh, many citizens live below the poverty line, unable to access capital, financial services, or digital platforms. Despite their potential and determination, these individuals struggle to start small businesses due to a lack of funds and formal identification. Traditional donation systems often lack transparency, leading to misuse of funds and discouraging potential donors.

The Need

There is a growing necessity for a trusted, technology-driven funding system that allows the underprivileged to seek genuine financial assistance while ensuring transparency for donors. The system must verify applicants through field visits and biometric data collection since most of them are illiterate and do not possess government-issued identification.



The Opportunity

There are many reasons why a verified digital micro-funding system like Haat Baran is necessary in Bangladesh's socio-economic landscape.

Opportunities for Applicants

1. Provides easy access to verified funding without needing bank collateral or formal credit history.
2. Enables poor, homeless and underprivileged to start micro-businesses (e.g., tea stalls, tailoring, grocery shops) to achieve self-reliance.
3. Builds a digital record of applicants' profiles, improving their future eligibility for larger loans or grants.

Opportunities for Donors / Philanthropists

1. Allows donors to directly view verified and transparent applicant profiles before contributing.
2. Ensures funds reach genuine and verified individuals through on-site volunteer verification.
3. Builds donor trust by providing contribution history, receipts, and project impact tracking.

Opportunities for Volunteers and Field Workers

1. Creates local employment opportunities for volunteers in data collection and verification.
2. Empowers community engagement by letting volunteers identify real-world needs firsthand.
3. Develops digital literacy and field management skills among rural youth.



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Outline of the Software Project

The users of the system include entrepreneurs, donors, volunteers, and administrators who together maintain the flow of verified funding activities.

The existing process of helping poor entrepreneurs is mostly manual, unstructured, and non-transparent. Donations are often made through personal connections or informal groups, without proper verification or long-term tracking. This leads to misuse of funds, delays, and lack of accountability.

To solve this, Haat Baran introduces a digital, transparent, and verified funding system that connects all stakeholders in one platform. The proposed system divides users into four roles:

1. Applicants – register and submit applications with their details.
2. Volunteers – visit applicants on-site to collect biometric, photographic, and demographic data for verification.
3. Administrators – review applications, verify authenticity, and approve eligible profiles for public listing.
4. Donors / Philanthropists – browse verified applicant profiles, send request to donate, meet the applicant on-site or donate via app.

Through this structure, the system ensures efficiency, transparency, and trust among all parties. It minimizes the time and cost of verification, prevents fraud, and promotes financial inclusion by giving poor individuals access to verified funding opportunities.

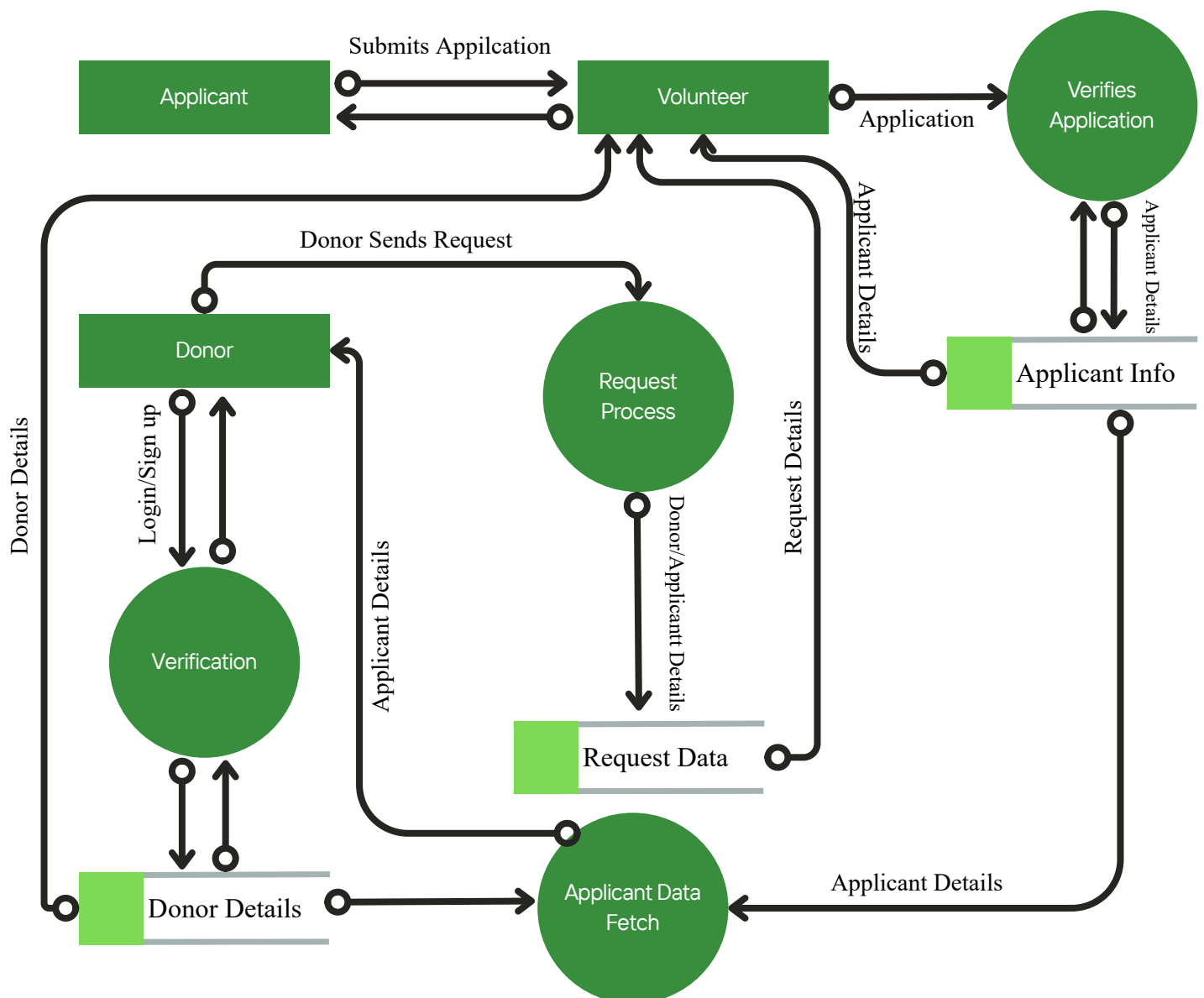
The main components of the proposed system are:

1. Getting Applicant Data
2. Login/Registration For Donors
3. Applicant data shows for donors to see
4. Donor sends request to get contact with applicant
5. Finalize the donation on-site/via app



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Data Flow Diagram (DFD) of the System





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Methodology

The feasibility of the Haat Baran system is analyzed based on three major aspects: Technical Feasibility, Operational Feasibility, and Economic Feasibility.

a) Technical Feasibility:

The system will use readily available technology such as Android mobile devices, biometric scanners, and cloud-based databases. Field volunteers will use mobile applications to collect applicant data, including GPS-tagged photos and biometrics, while administrators manage records through a secure web portal. The development requires standard web technologies (HTML, PHP, MySQL) and cloud hosting, making it technically feasible within the available infrastructure in Bangladesh.

b) Operational Feasibility:

The project heavily relies on human interaction at the grassroots level. Trained field volunteers will collect applicant data and assist them throughout the process, making the system accessible even for illiterate users. Donors and administrators will use an intuitive interface to interact and track progress. The proposed workflow is straightforward and can be easily adopted with minimal training, indicating strong operational feasibility.

c) Economic Feasibility:

The initial development and deployment cost is estimated at 3,50,000 BDT, covering app development, equipment, training, and cloud hosting. Considering the long-term social benefits, donor engagement potential, and low maintenance cost, the system is economically viable. Moreover, since the project serves a social cause, potential partnerships with NGOs, CSR programs, and government initiatives can help sustain the operation without financial burden.

Overview of the Alternatives

To solve the problem we have proposed 3 alternative systems.

Alternative 1: Community Funding Through Local NGOs

Alternative 2: Physical Donation Drives and Local Verification

Alternative 3: Digital Platform Haat Baran App

Overview of Alternative 1

a) Technical Feasibility:

This approach uses the existing NGO infrastructure for fund collection and distribution. Since no advanced digital technology is used, it is technically simple but lacks scalability and automation.

b) Operational Feasibility:

NGOs already have ground-level experience and trust within communities. However, manual verification and record-keeping may cause inefficiencies and inconsistencies, reducing operational effectiveness over time.

c) Economic Feasibility:

The investment table of alternative 1 is as follows:

| Serial no | Particular | Cost(BDT) |
|-----------|--|-----------|
| 1 | Office Setup & Coordination Expenses | 80,000 |
| 2 | Personel(Field staff and volunteer payments) | 1,20,000 |
| 3 | Material & Marketing Cost | 60,000 |
| 4 | Transport Cost | 90,000 |
| 5 | Administrative Cost | 50,000 |
| | Total | 4,00,000 |

The cost/benefit analysis of the alternative 1 is as follows:

| Cost | | Benefit | |
|------------------|----------|--------------------------------|-----------------------|
| Particular | Amount | Particular | Amount |
| Maintenance Cost | 70,000 | Support to 3 Communitites | 3x 12 x 2000 = 72,000 |
| Additional Cost | 40,000 | Better Coordination among NGOs | 30,000 |
| Total | 1,10,000 | Total | 102,000 |

The net return per year is = (102000 - 110000) TK
= -8,000TK

Overview of Alternative 2

a) Technical Feasibility:

This method relies primarily on physical events without digital tools. It requires minimal technical resources, but its lack of automation, tracking, and scalability makes it technically less feasible for long-term nationwide implementation.

b) Operational Feasibility:

Donation drives create strong social engagement between donors and beneficiaries. However, frequent organization of events, travel, and manual verification processes make it less efficient and time-consuming.

c) Economic Feasibility:

The cost/benefit table of alternative 2 is as follows:

| Cost | | Benefit | |
|------------------|----------|--------------------------------|------------------------------------|
| Particular | Amount | Particular | Amount |
| Maintenance Cost | 90,000 | Support to 2 Communitites | $2 \times 12 \times 3000 = 72,000$ |
| Additional Cost | 50,000 | Better Coordination among NGOs | 40,000 |
| Total | 1,40,000 | Total | 1,12,000 |

The net return per year is = $(1,12,000 - 1,40,000)$ TK
= -28,000TK

Overview of Alternative 3

a) Technical Feasibility:

This solution leverages mobile and web technologies, integrating biometric verification, GPS-based data collection, and secure payment gateways. The required technologies are readily available and easily implementable, making the system technically feasible.

b) Operational Feasibility:

Field volunteers handle data collection from applicants, making the system accessible even for illiterate individuals. Donors and administrators can easily use the platform through a user-friendly interface. The structured workflow and centralized data management make this system highly operationally feasible.

c) Economic Feasibility:

The investment table of alternative 3 is as follows:

| Serial no | Particular | Cost(BDT) |
|-----------|---|-----------|
| 1 | Systems (Server + Database + Basic Workstations) | 70,000 |
| 2 | Personel Cost (Designer, Developers, Project Manager) | 1,00,000 |
| 3 | DBMS | 50,000 |
| 4 | Marketing Cost | 40,000 |
| 5 | Administrative Cost | 40,000 |
| | Total | 3,00,000 |

The net return per year is = $(5,12,000 - 80,000)$ TK
= 4,32,000TK

The cost/benefit table of alternative 3 is as follows:

| Cost | | Benefit | |
|------------------|--------|-------------------------------------|--------------------------------------|
| Particular | Amount | Particular | Amount |
| Maintenance Cost | 50,000 | Funding support to 8 communitites | $8 \times 12 \times 4500 = 4,32,000$ |
| Additional Cost | 30,000 | Improved efficiency & digital reach | 80,000 |
| Total | 80,000 | Total | 5,12,000 |



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The cost/benefit table of alternative 3 yearly basis is as follows:

| Year | Saving | Present Value (20%) | Cumulative Value |
|------|--------|---------------------|------------------|
| 1 | 4.32 | 3.60 | 3.60 |
| 2 | 4.32 | 3.00 | 6.60 |
| 3 | 4.32 | 2.50 | 9.10 |
| 4 | 4.32 | 2.08 | 11.18 |
| 5 | 4.32 | 1.74 | 12.88 |
| 6 | 4.32 | 1.45 | 14.31 |
| 7 | 4.32 | 1.21 | 15.52 |

The Haat Baran App shows strong financial sustainability, even after accounting for a 20% inflation rate. The project generates a consistent annual net benefit of 4.32 lakh BDT, with a total cumulative present value of 15.57 lakh BDT over seven years. Compared to its initial investment of 3 lakh BDT, the project achieves a net present value of +12.57 lakh BDT, confirming its economic feasibility. The payback period occurs within the first year, indicating rapid recovery of investment costs. Despite inflation reducing the real value of future benefits, the platform continues to deliver substantial returns, making Haat Baran a financially sound, scalable, and impactful solution for sustainable poverty reduction in Bangladesh.

Recommendation

Considering the alternatives in different factors like technical, operational and economic analysis we need to recommend any one of them on the basis of different features.

The summary comparison between the alternatives is shown on the following table:

| Seial No | Feature | Alternative 1 | Alternative 2 | Alternative 3 |
|----------|------------------------|---------------|---------------|---------------|
| 1 | Investment | 4,00,000 | 5,00,000 | 3,00,000 |
| 2 | System Life Cycle | 5 years | 4 years | Continuous |
| 3 | Return Value | -4,000 | -28,000 | 4,32,000 |
| 4 | Payback Period | No | No | 1 year |
| 5 | Technically Feasible | Yes | Yes | Yes |
| 6 | Operationally Feasible | Yes | Yes | Yes |
| 7 | Economically Feasible | No | No | Yes |

Conclusion

Here, we have planned three alternatives

- Alternative 1: Community funding through local NGOs to distribute startup funds.,
- Alternative 2: Physical donation drives and local verification to connect donors and beneficiaries.,
- Alternative 3: Developing a digital platform Haat Baran App to manage funding, verification, and transparency

All of these alternatives are technically and operationally feasible to some extent. However, based on the economic analysis, we have found that Alternative 3 (Haat Baran App) is the most cost-effective, efficient, and sustainable solution compared to the other two. It ensures transparency, reduces operational cost over time, and offers scalability for future expansion. Therefore, we have finally selected Alternative 3, the Haat Baran App as the preferred solution for our project.

Contribution

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|---------------------|--|
| Mostofa Hasin Mahdi | Deep analysis into alternatives and managing investments of all alternatives |
| Talal Sharar Apurbo | Finding resources, defining and selecting alternatives |