
PROBLEM STATEMENT

**REFUGEES DO NOT OWN
THEIR OWN IDENTITY**

By BUET GRC

Problem

Solution

Technical

Business Model

ATK

Impact & Risks

PRESENT TECHNOLOGY FOR REGUGEE IDENTITY MANAGEMENT SYSTEM (BIMS)

PROCESS

BIOMETRIC SCAN

Fingerprints, facial, iris and other unique physiological characteristics

BASIC BIODATA

Basic biodata and other information, including on family links is registered

Problem

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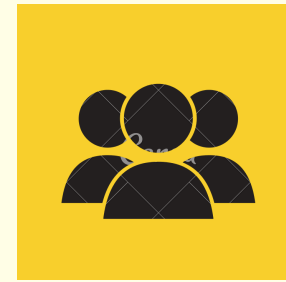
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PRESENT REFUGEE IDENTITY MANAGEMENT SYSTEM (BIMS)

MAJOR PROBLEMS



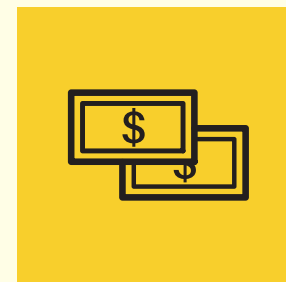
Identity Theft (Database can be hacked or sold to outsiders)



Lack of awareness of risks



No consent (Luxury, obligation for Survival)



Costly (Both Time consuming and Expensive)



Restricted Access (Cannot update Info)

Problem

Solution

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MOST TYPICAL APPROACH:

**Swapping the Database system
with Blockchain Technology**

Problem

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WHY THIS APPROACH WILL NOT WORK?

Problems with swapping the database system with blockchain technology

Problem

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IMMUTABILITY

To rewrite and potentially reverse all transactions on the public blockchain, 51 percent or more of the network's mining power is necessary. 400 million dollars will buy enough mining equipment for a state actor to equal the total mining power existing on the bitcoin network. This is a small cost to destabilise a public blockchain.



VULNERABLE SECURITY

Because blockchain technology needs the database to be spread over several computers, hackers may simply attack any one of them and have access to all the data.

Problem

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IDENTITY VERIFICATION

Blockchain enthusiasts will almost certainly refer to the popularity that a public-private key pair representing an identity may develop over time, however this capability is not novel, does not require blockchain, and can be achieved today with a hashing repository. What happens if the user loses their phone/private key or obtains a new phone? Of course, they will have to start all over again, going through identity proofing – validation, resolution, and verification – from the beginning in order to reclaim their identity on the blockchain as the owner of the private key that represents the identity.



STANDARDIZATION

Many organisations do not trust other organisations to follow approved processes and procedures. The demographic constraints of identity proving and verification make credential issuing uniformity challenging. It is necessary to re-verify the identity of lost authenticators to the network. If something goes wrong, there is no legal framework in place to regulate culpability on a large scale.

Problem

Solution

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BIG IDEA

ASTHA

ENSURING THE I IN IDENTITY

Problem

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THE STRUCTURE OF IDENTITY SYSTEMS



STEP 1

The user presents a set of attributes to a third party



STEP 2

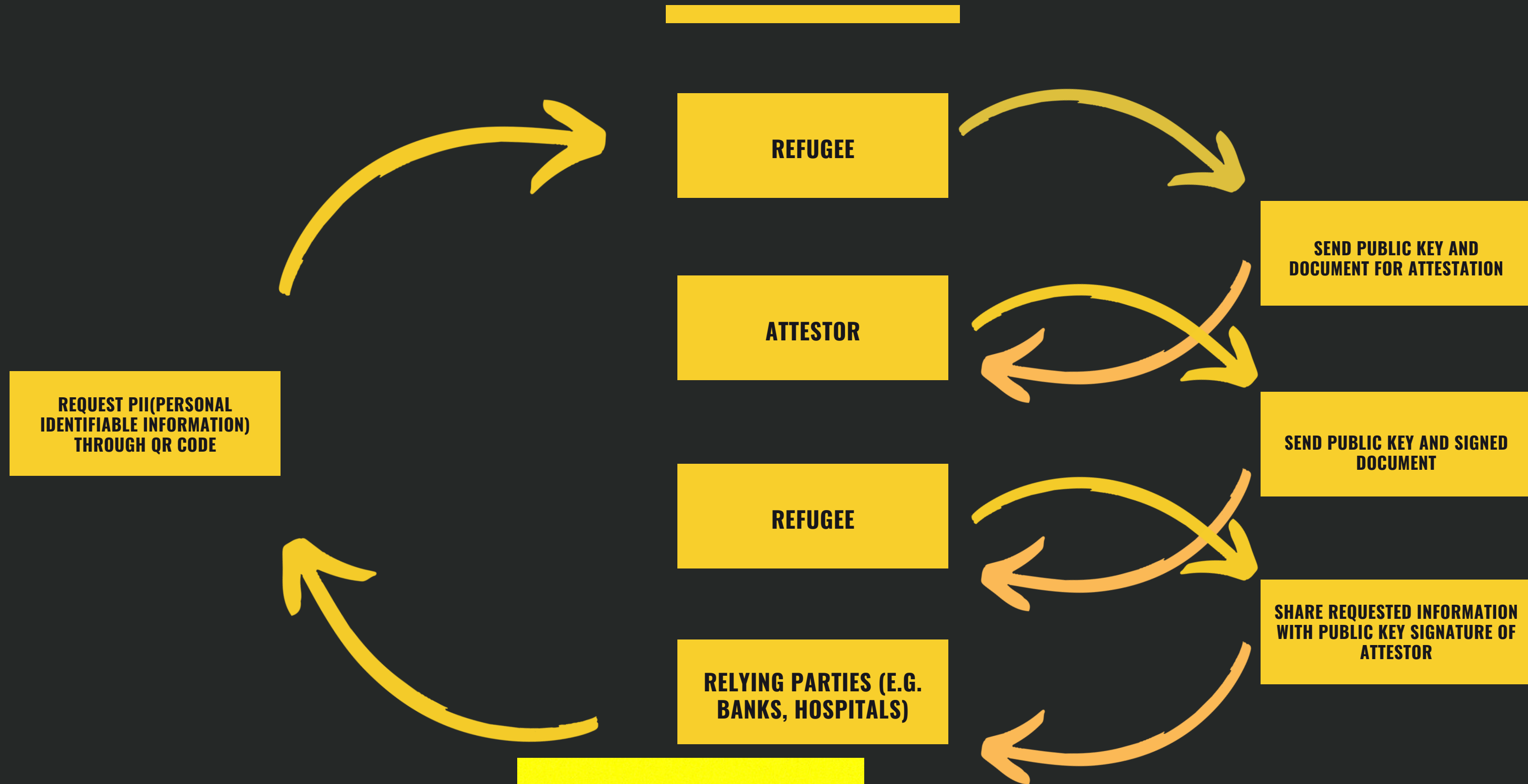
The attester verifies the attributes and attaches its attestation to the attributes, becoming an identity provider for the user



STEP 3

The user then uses the credential from the identity provider in transactions with relying parties

How ASTHA Works



Problem

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Features of ASTHA

MAINTAINS REFUGEE STATUS IN BLOCKCHAIN

DOES NOT STORE ANY PERSONAL IDENTIFIABLE INFORMATION(PII) OF THE REFUGEES

REFUGEES MANAGE THEIR OWN PIIS

KEEPS A LEDGER OF ATTESTATION LINKED TO REFUGEES' DOCUMENTS WHICH IS UNBACKTRACKABLE

REFUGEES CAN REQUEST ATTESTATIONS ON ANY PII AT THEIR WILL AND SEND SIGNED INFORMATION TO RELYING PARTIES

REFUGEES CAN REVEAL ONLY THE REQUIRED PII FOR CERTAIN SERVICE

Problem

Solution

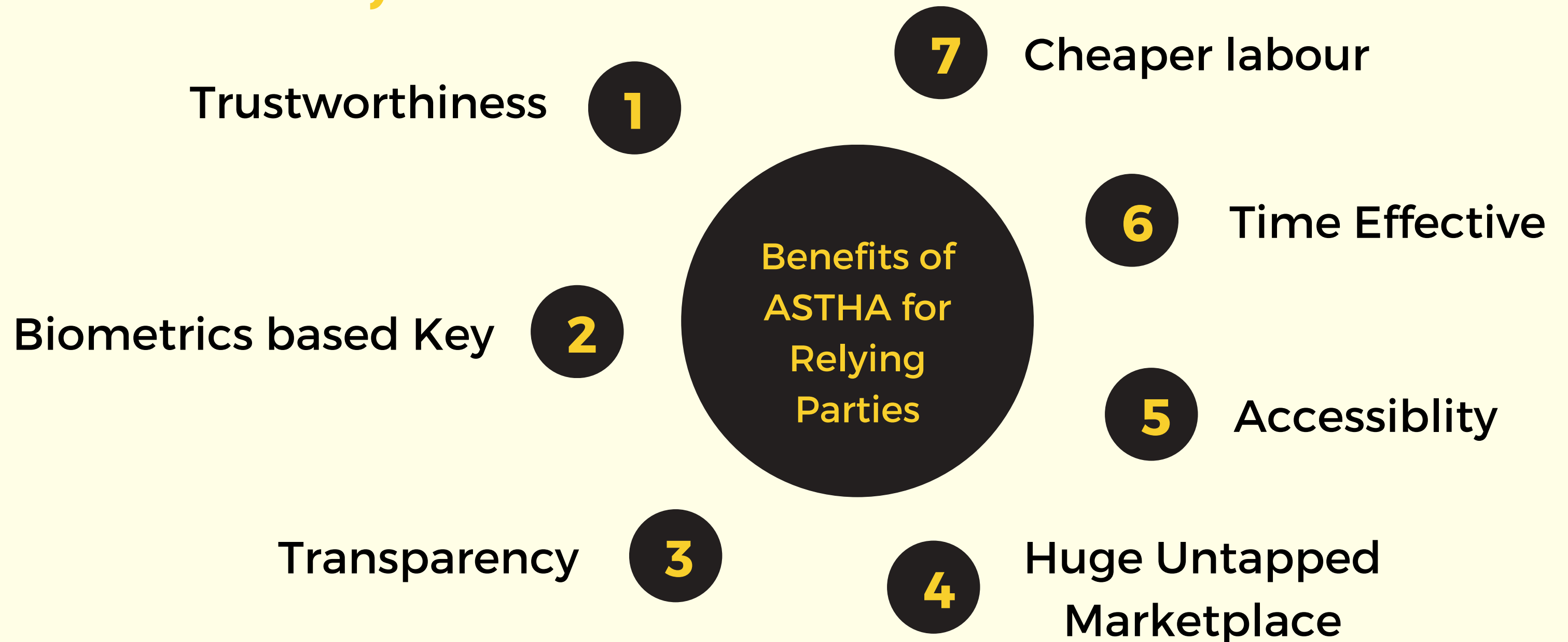
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BENEFITS OF ASTHA (RELYING PARTIES)



Problem

Solution

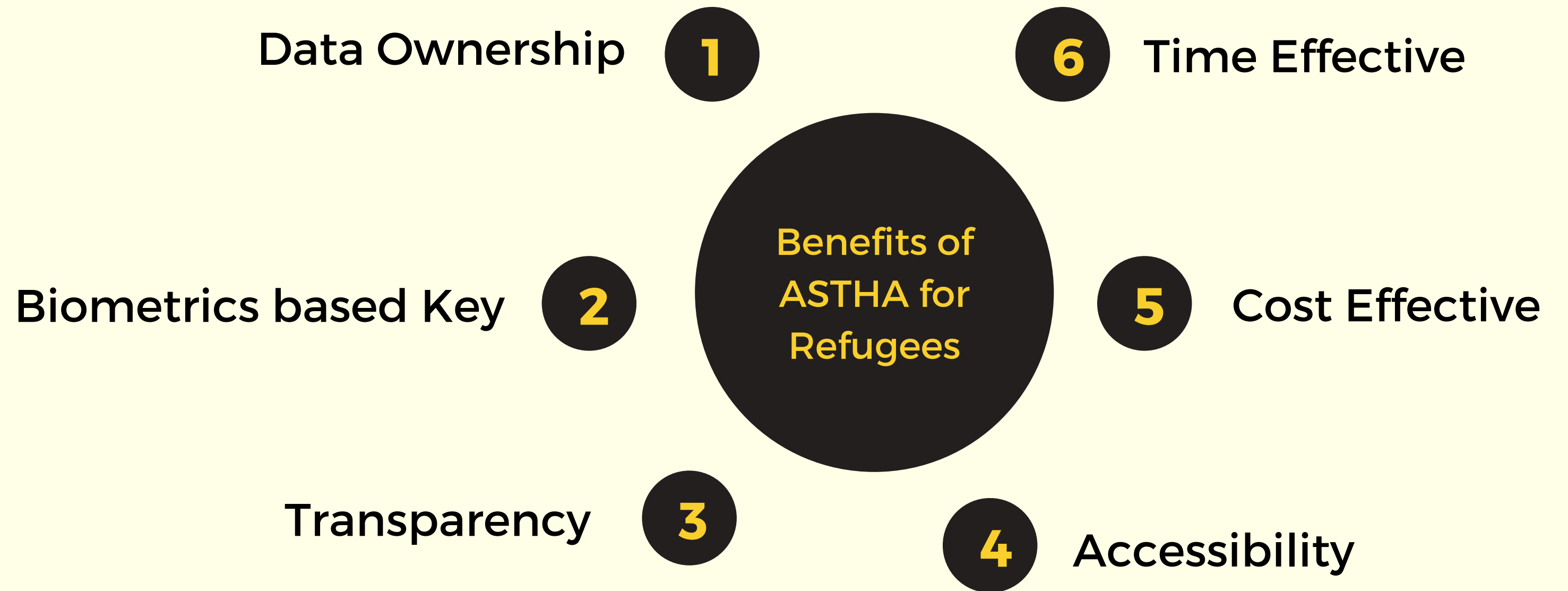
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BENEFITS OF ASTHA (REFUGEES)



Problem

Solution

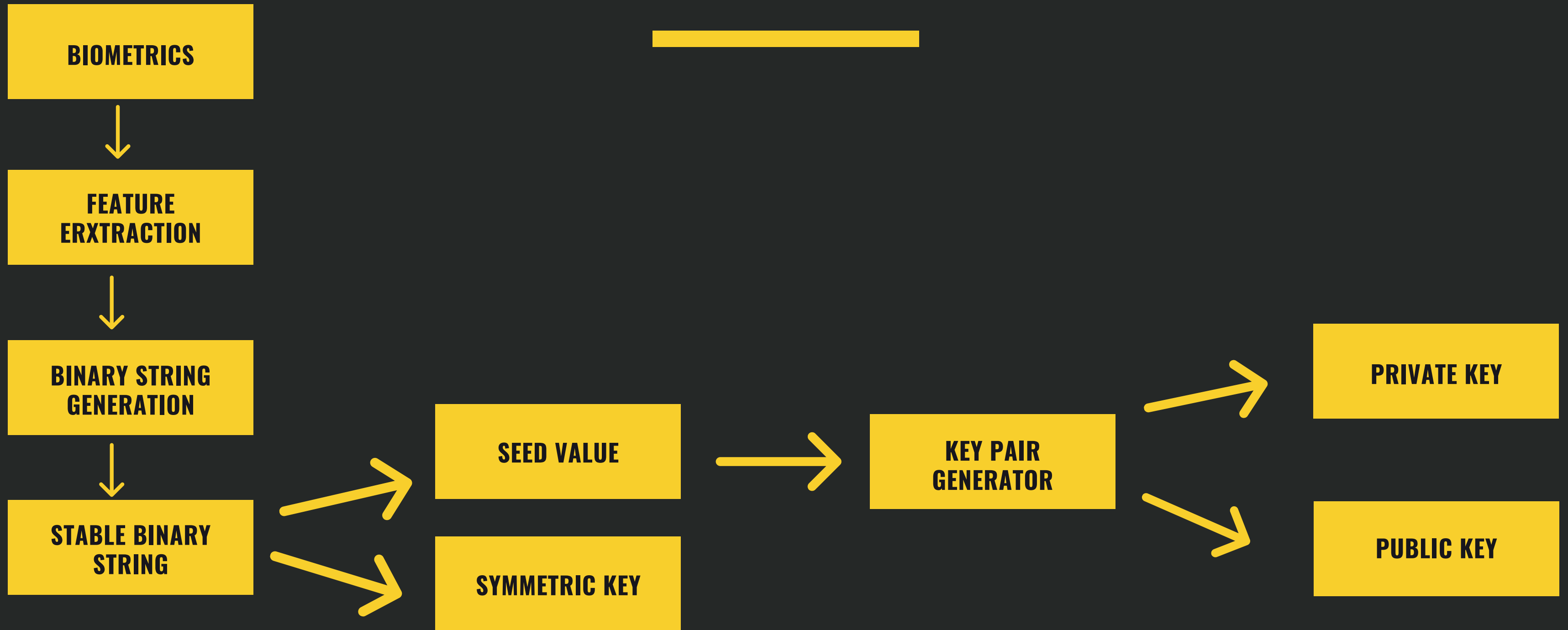
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Our X Factor



Problem

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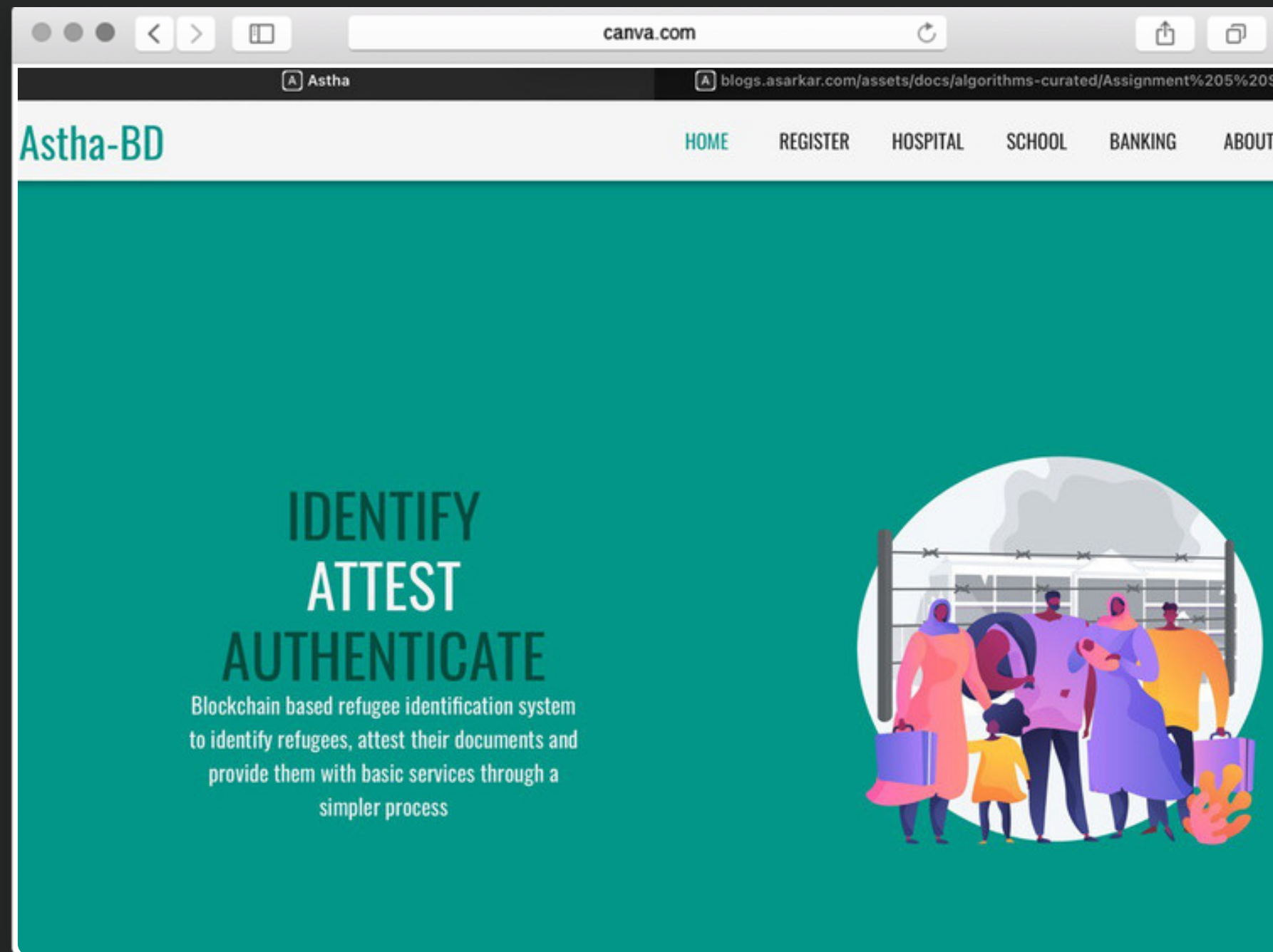
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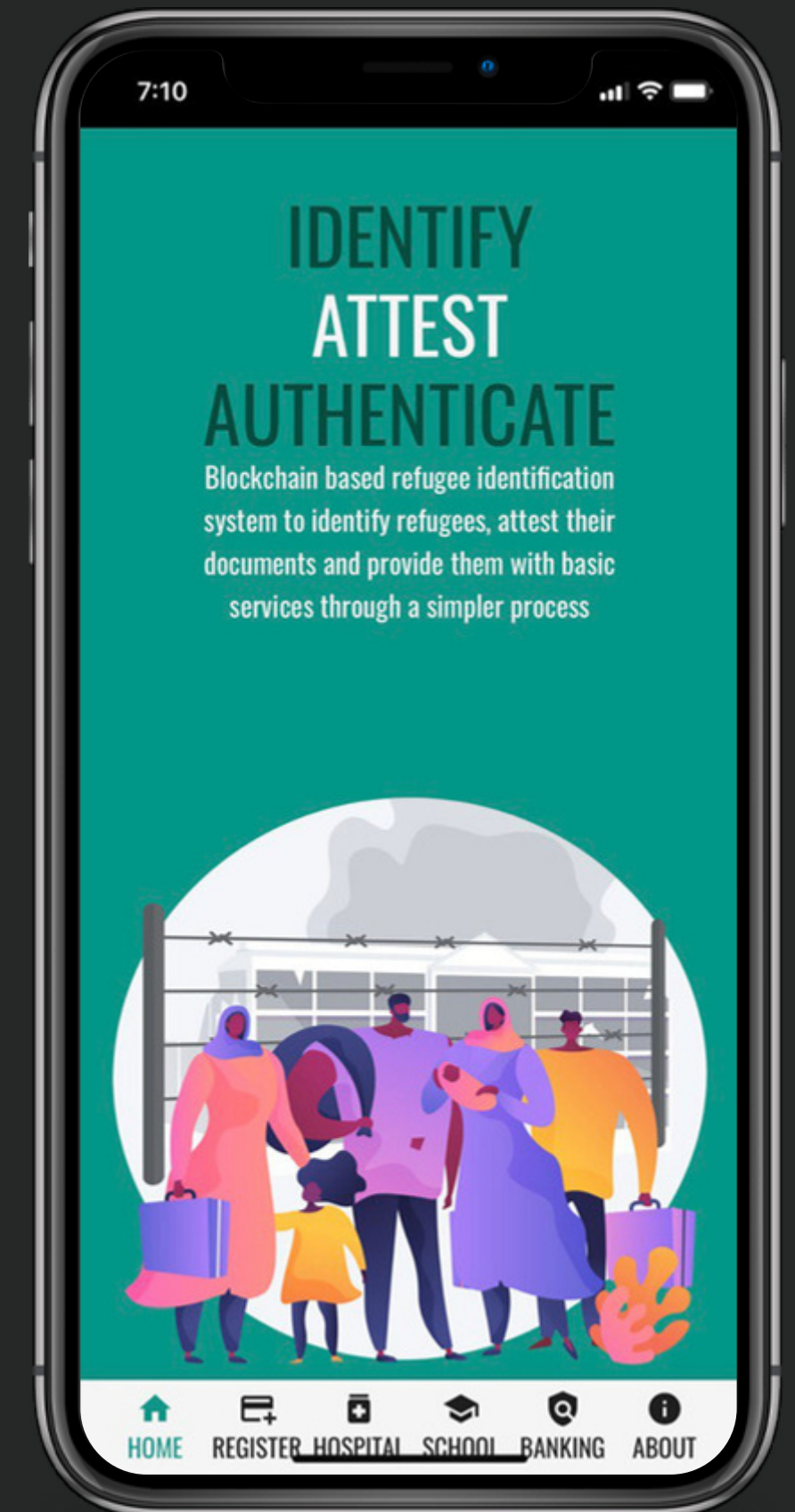
Impact & Risks

Astha Homepage



Website

Mobile App



Problem

Solution

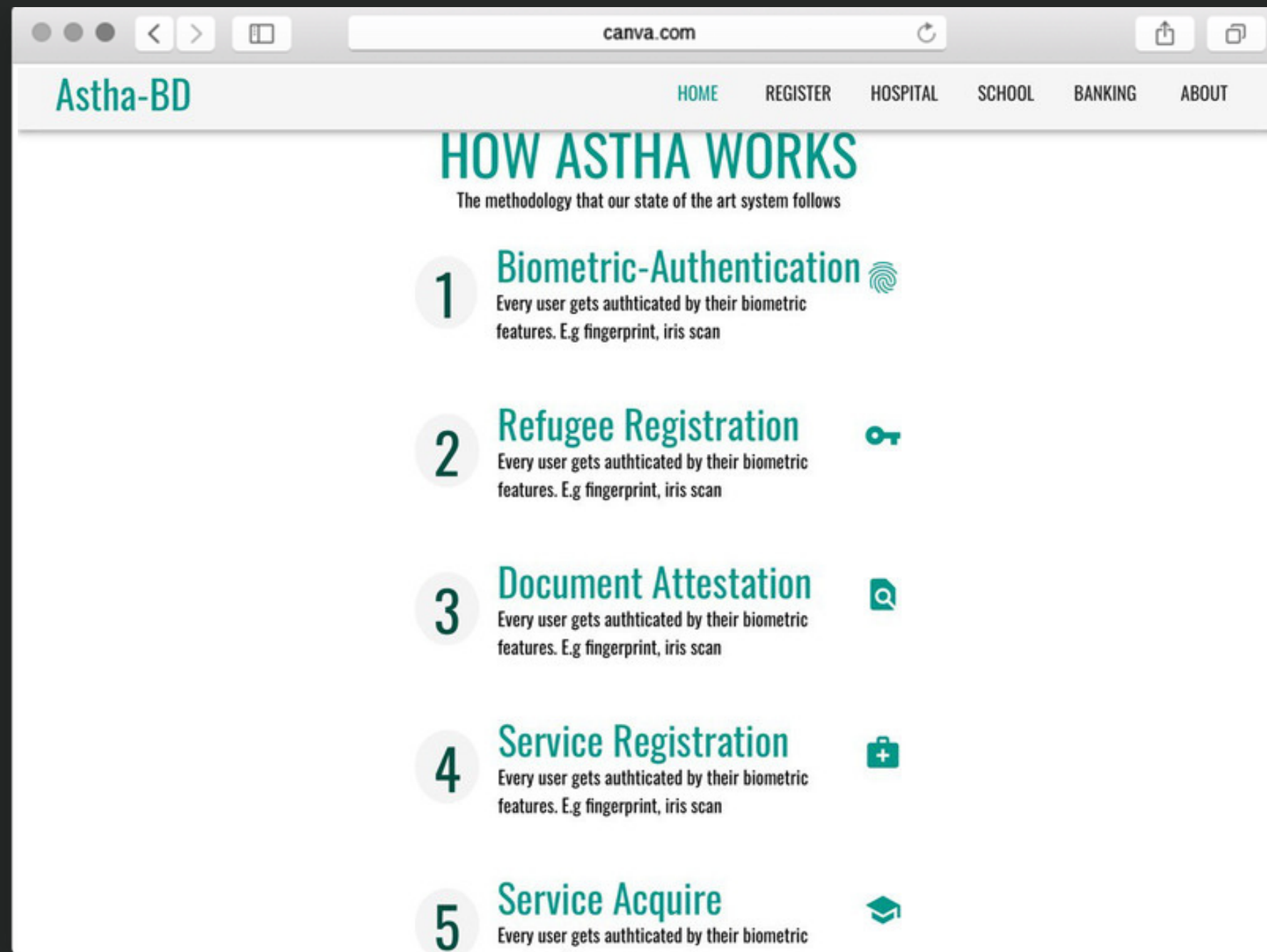
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Astha Process



Website



Mobile App

Problem

Solution

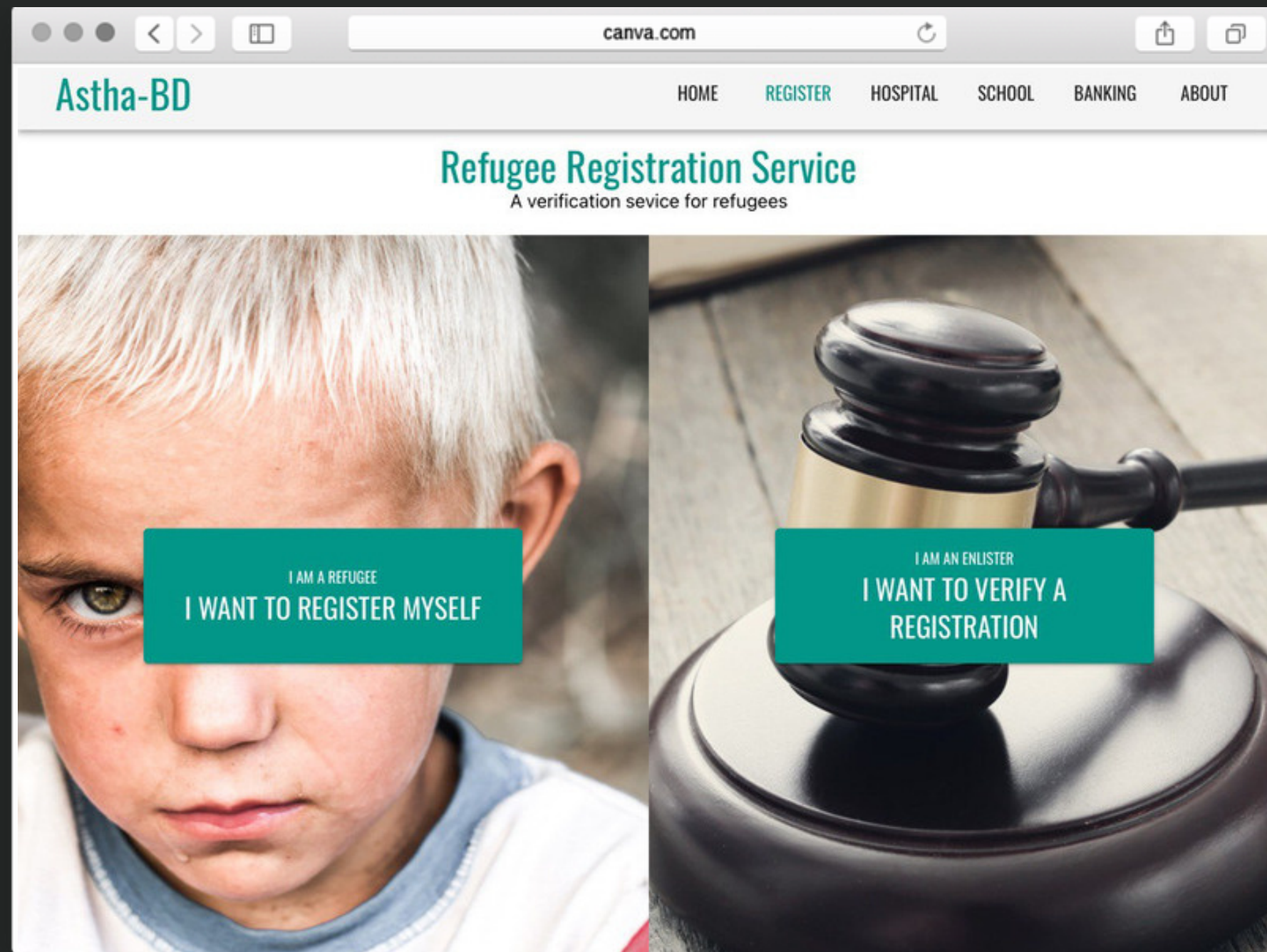
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Astha Registration Home



Website

Mobile App



Problem

Solution

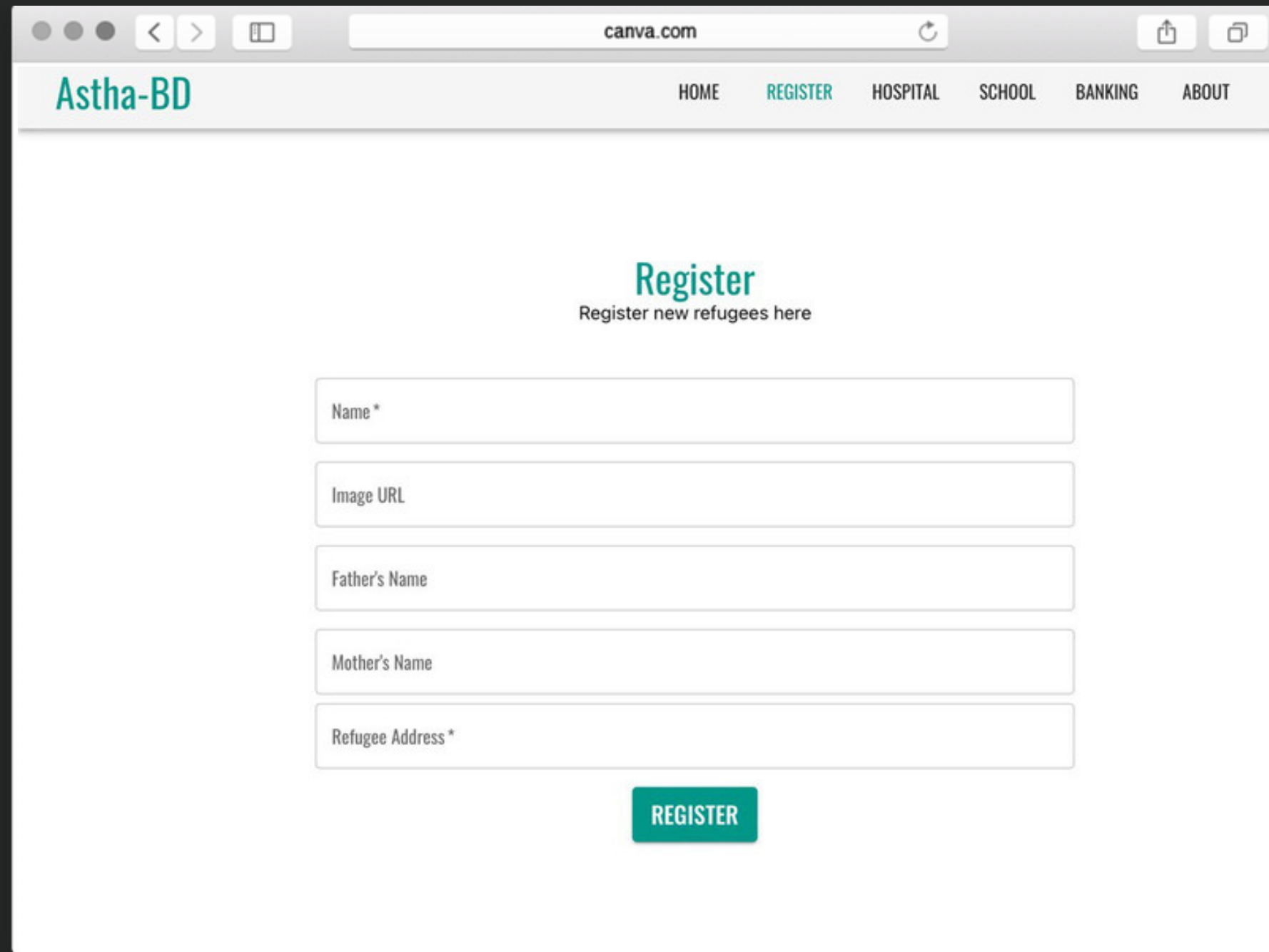
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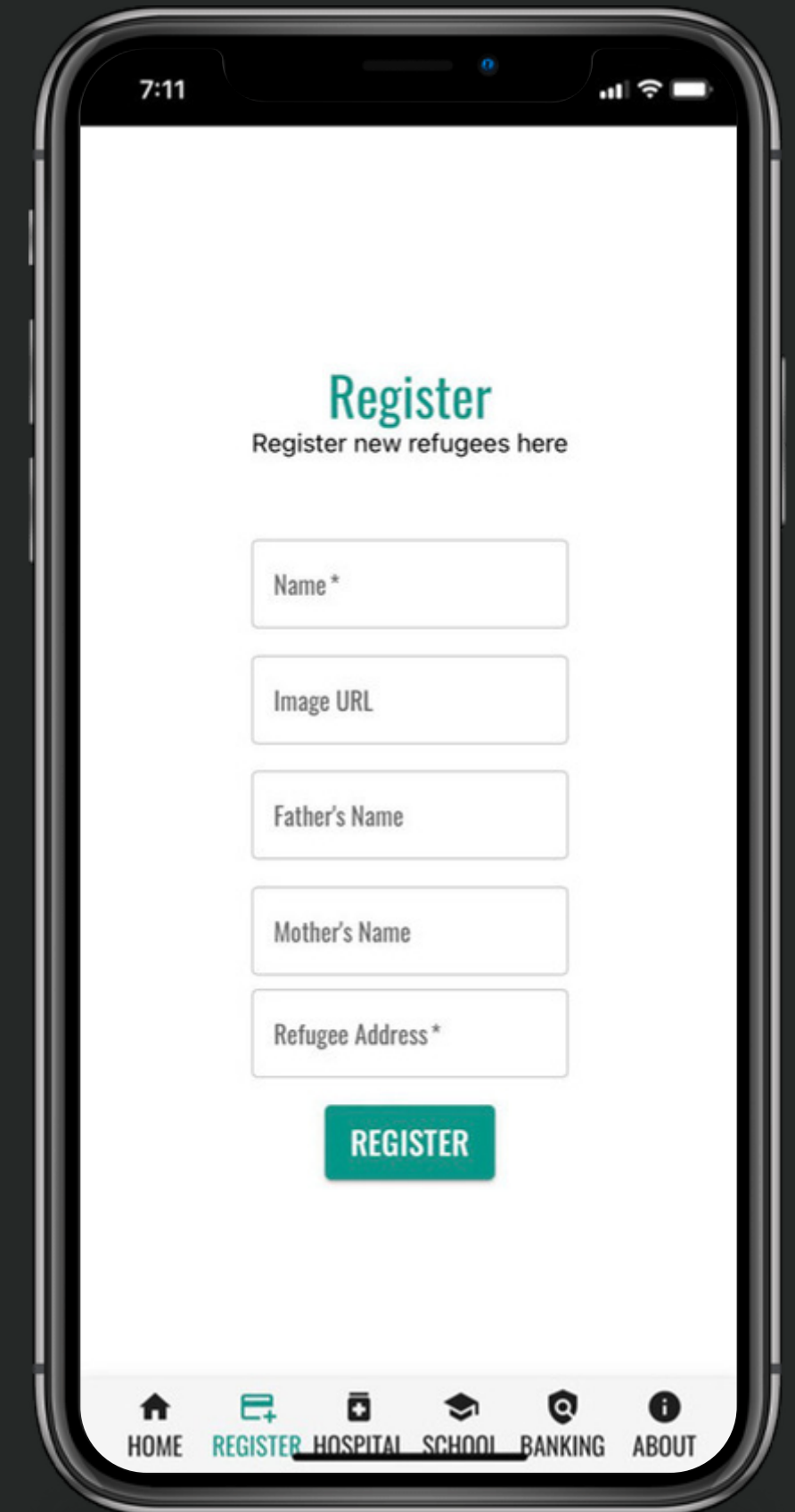
Astha Registration Request



The screenshot shows a web browser window with the URL 'canva.com'. The website header includes the logo 'Astha-BD' and navigation links: HOME, REGISTER, HOSPITAL, SCHOOL, BANKING, and ABOUT. The main content area features a 'Register' heading with the subtext 'Register new refugees here'. Below this, there are five input fields: 'Name *', 'Image URL', 'Father's Name', 'Mother's Name', and 'Refugee Address *'. A green 'REGISTER' button is positioned at the bottom center of the form.

Website

Mobile App



The screenshot shows a mobile app interface with a 'Register' heading and the subtext 'Register new refugees here'. The form contains five input fields: 'Name *', 'Image URL', 'Father's Name', 'Mother's Name', and 'Refugee Address *'. A green 'REGISTER' button is located at the bottom of the form. The app's bottom navigation bar includes icons and labels for HOME, REGISTER, HOSPITAL, SCHOOL, BANKING, and ABOUT. The status bar at the top shows the time as 7:11 and signal strength indicators.

Problem

Solution

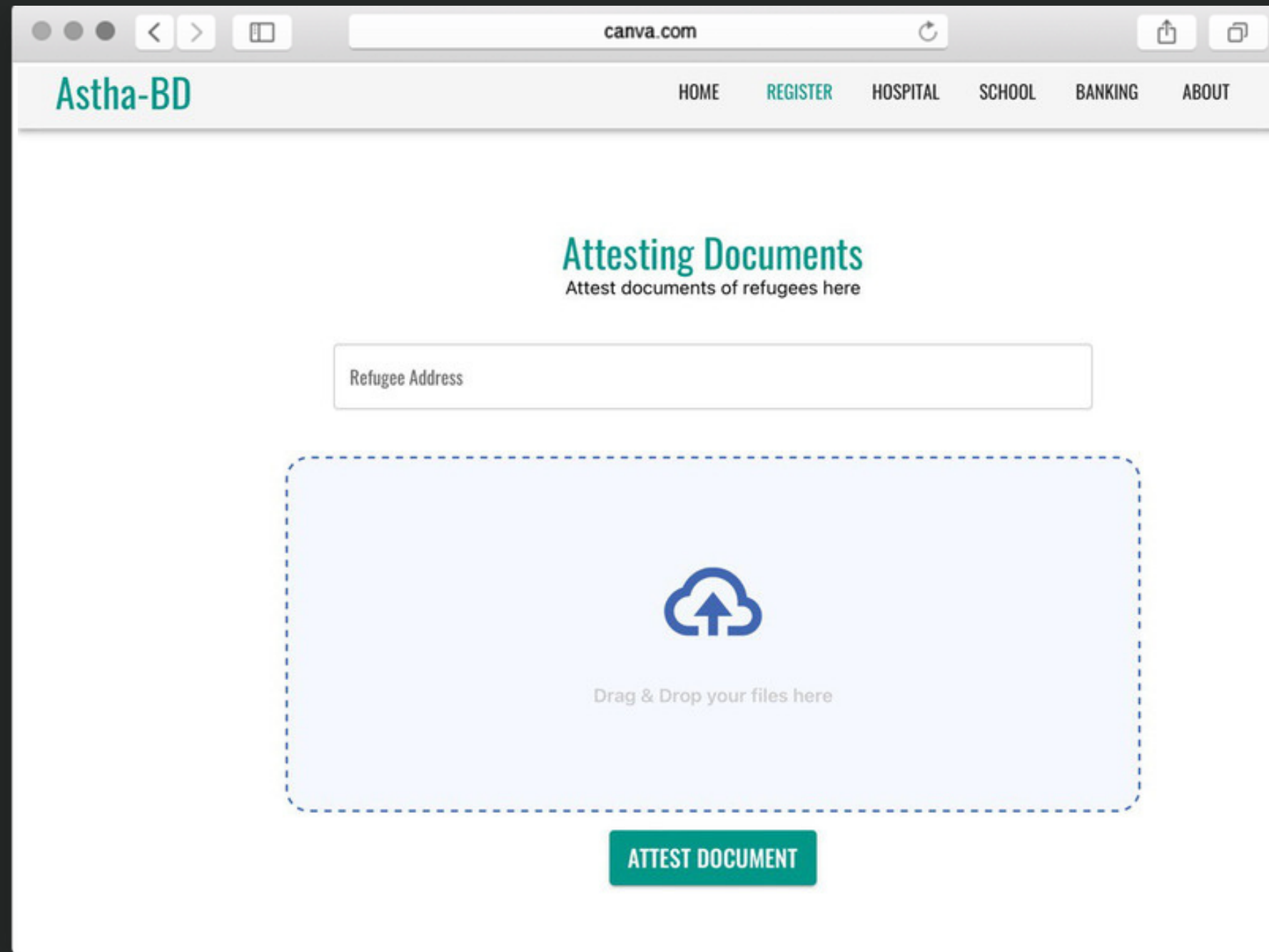
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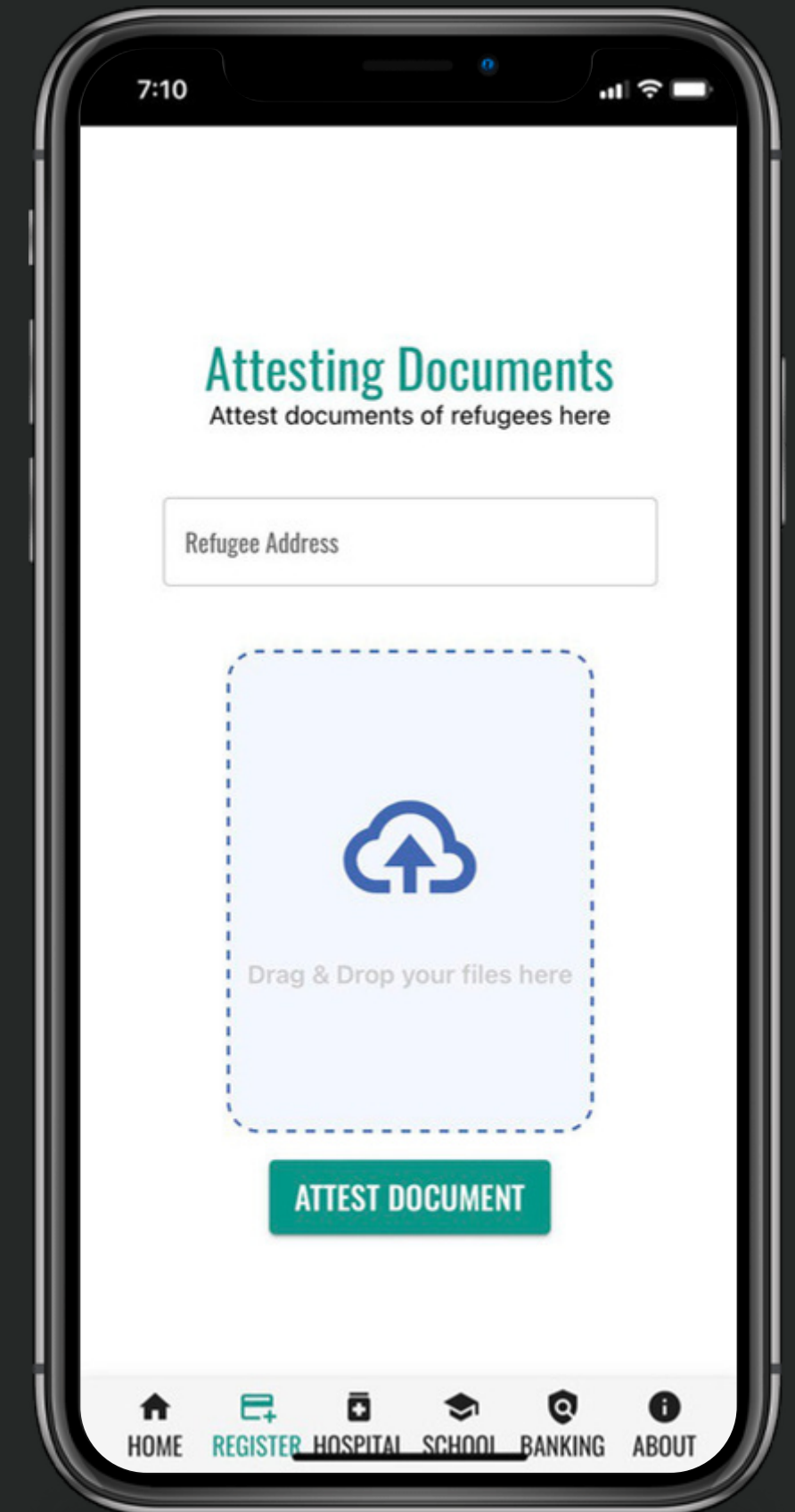
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Astha Verification



Website

Mobile App



Problem

Solution

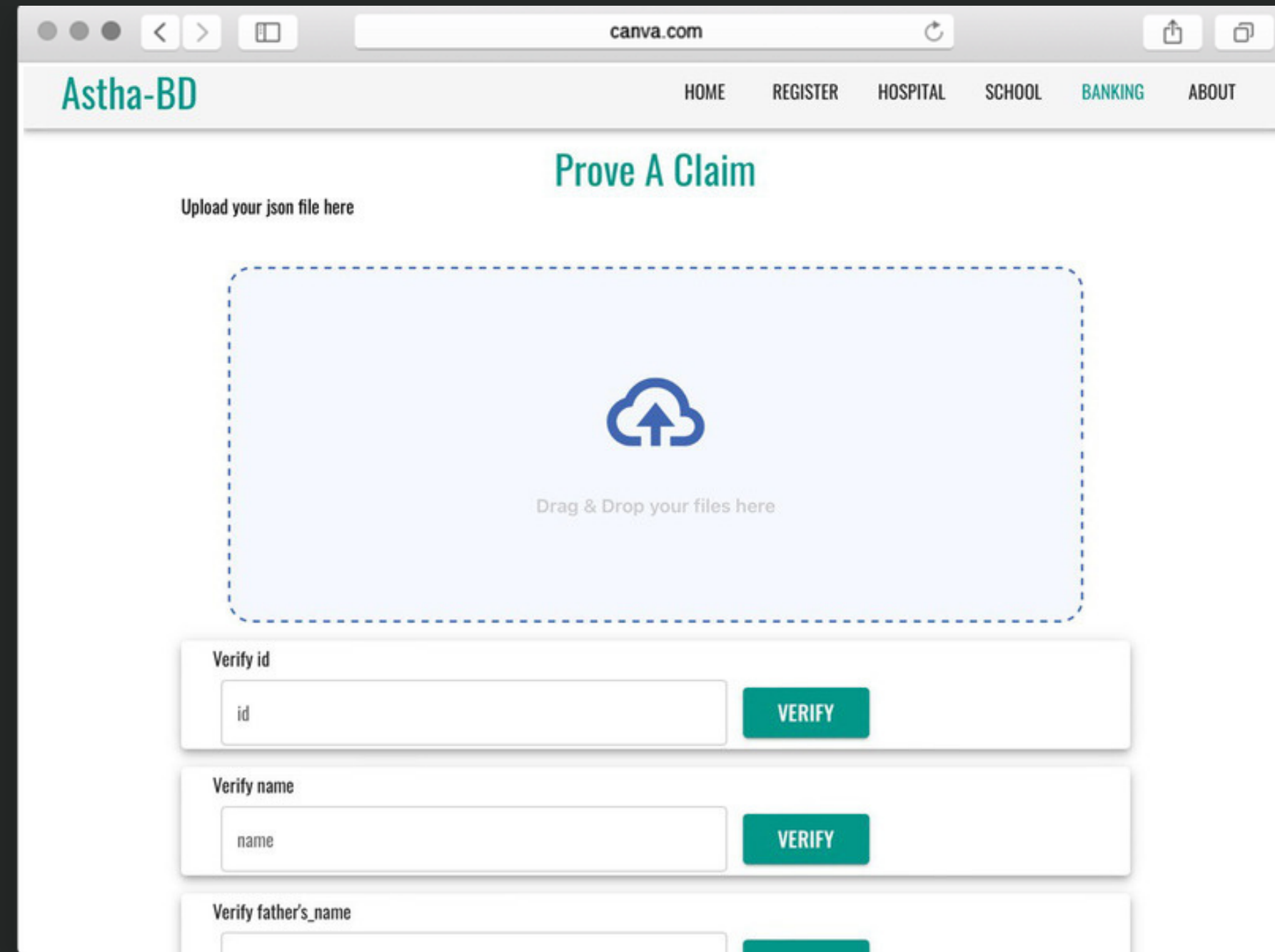
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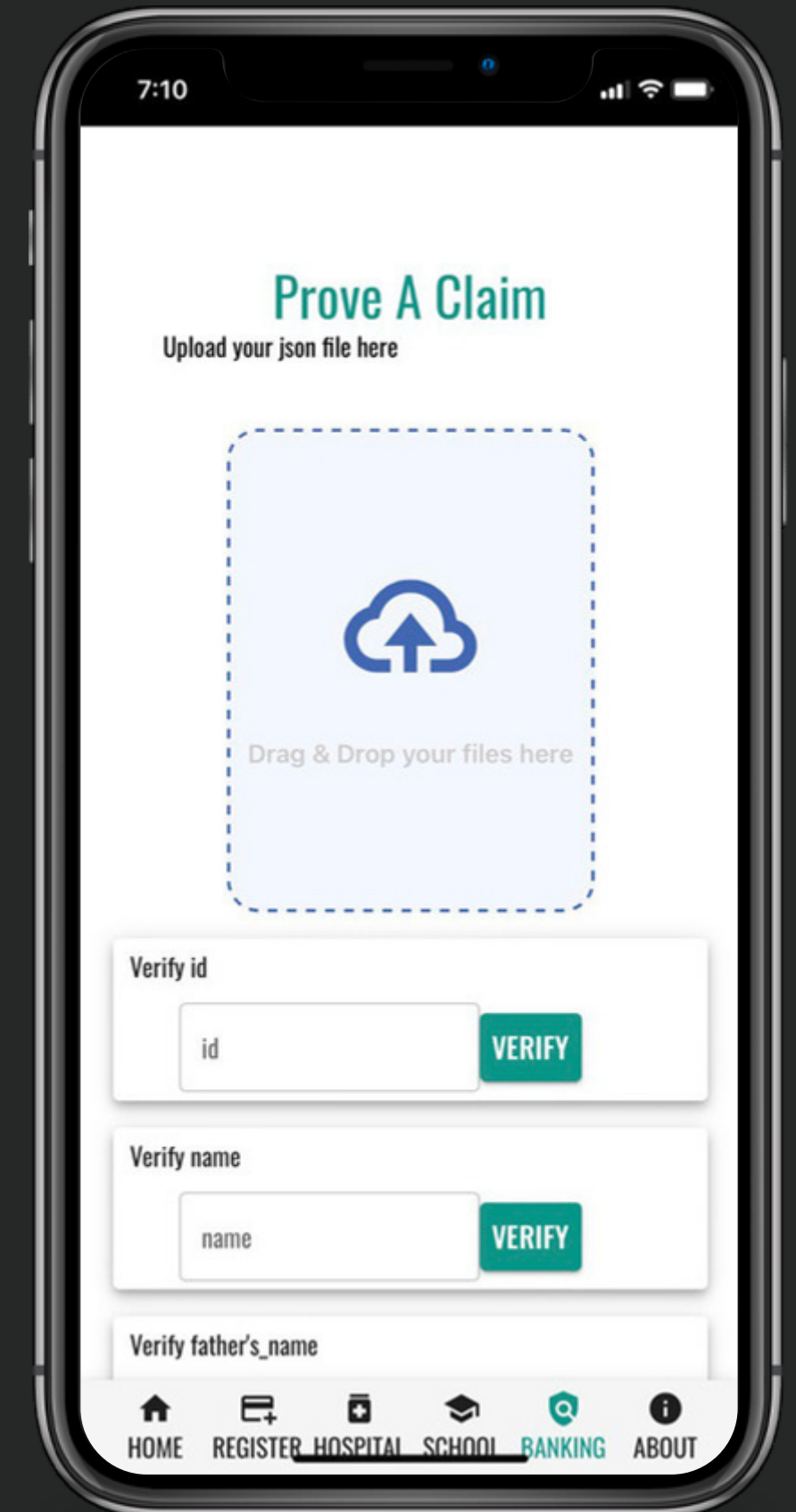
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Astha Bank Attestation



Website

Mobile App



Problem

Solution

Technical

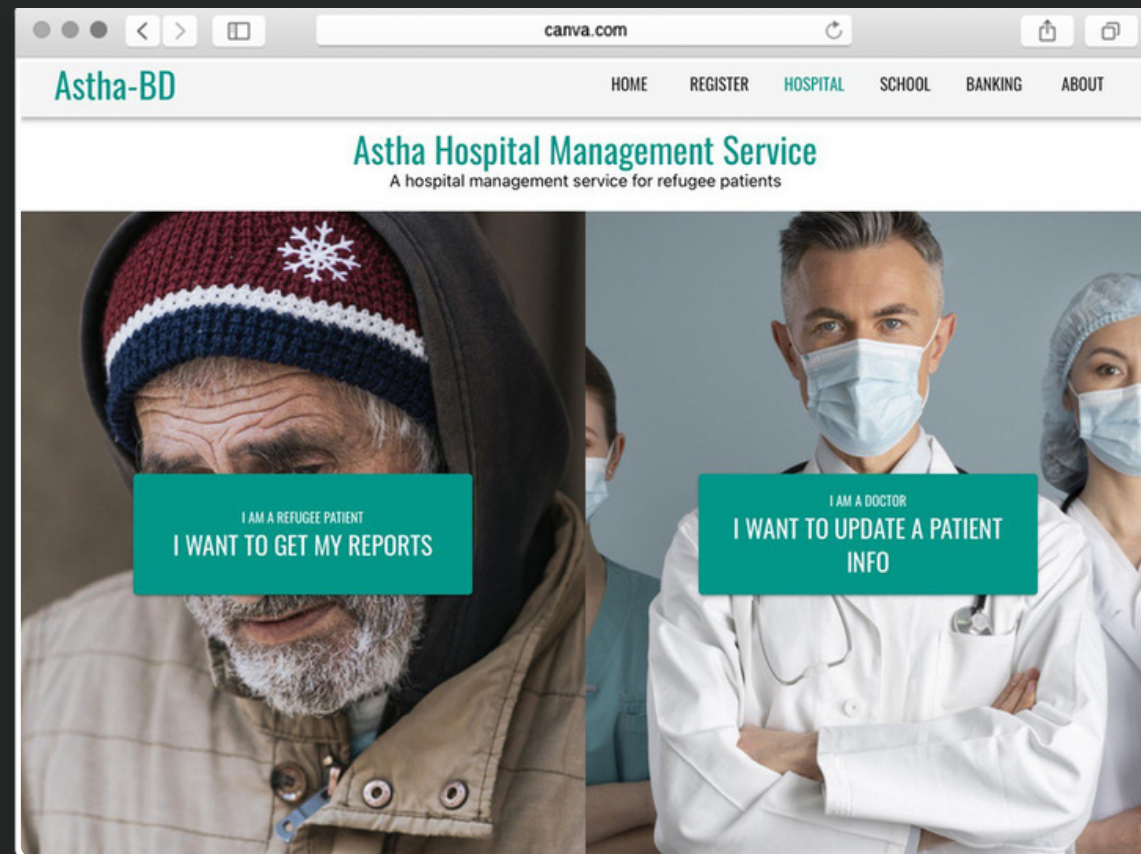
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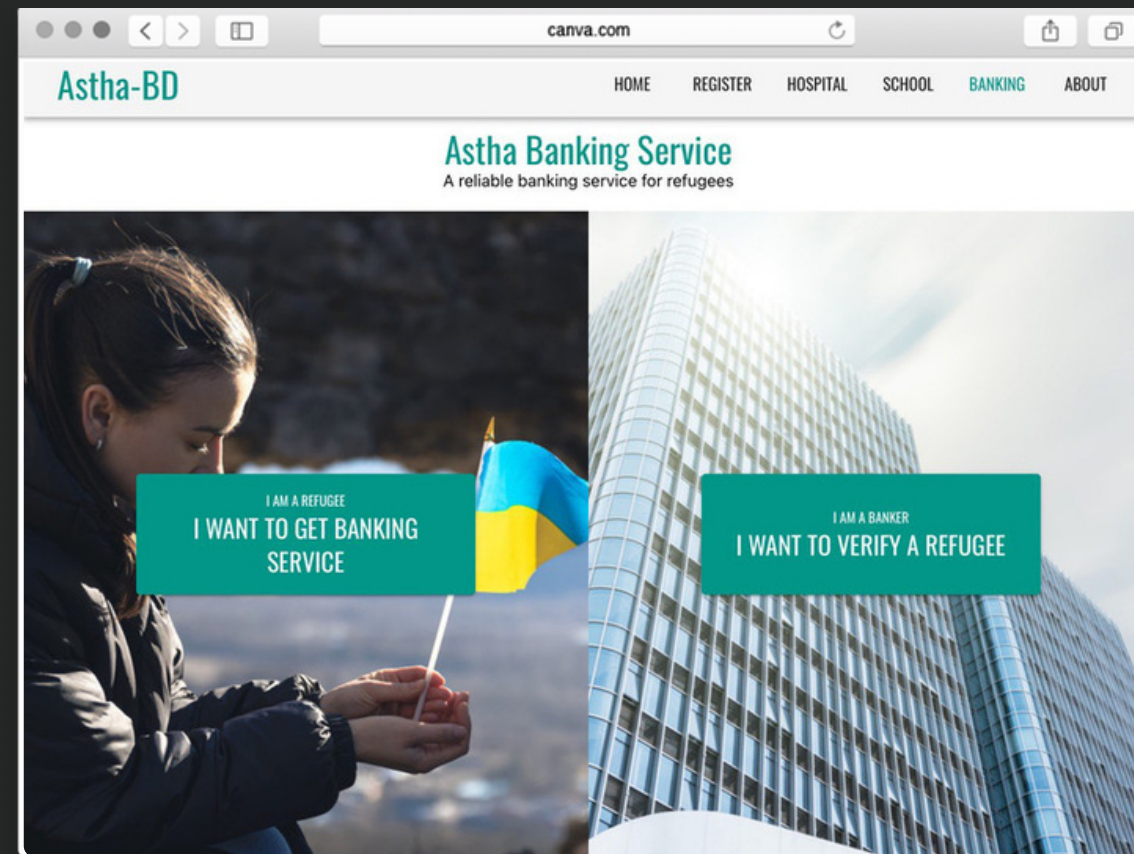
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Astha Service Homepage

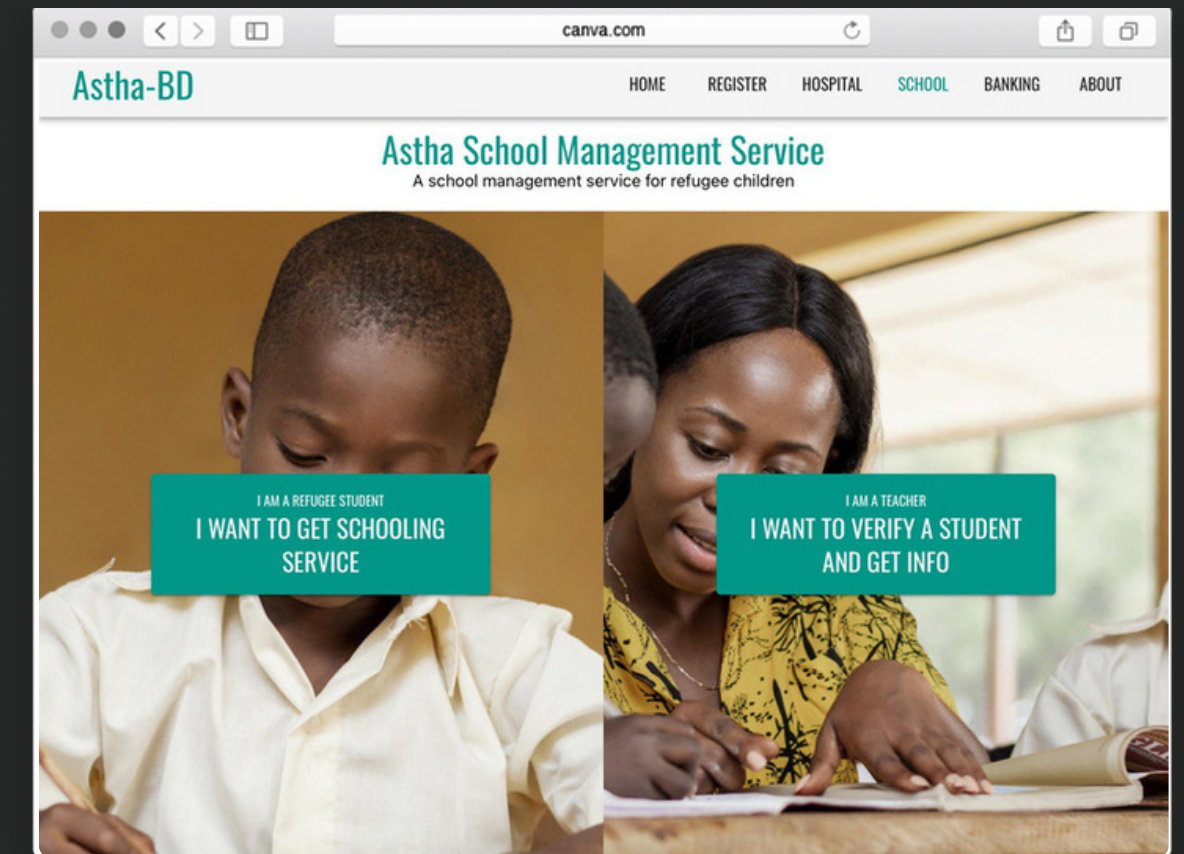
Webpage View



Hospital



Bank



School

Problem

Solution

Technical

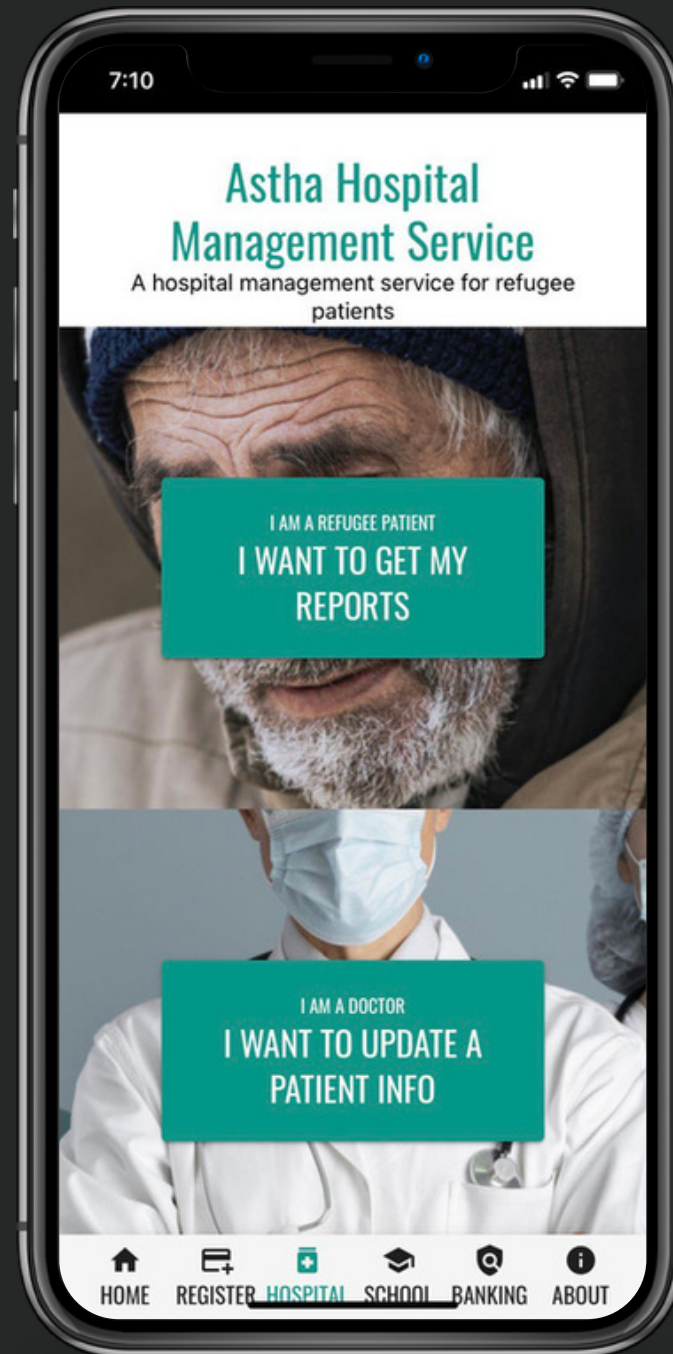
Business Model

ATK

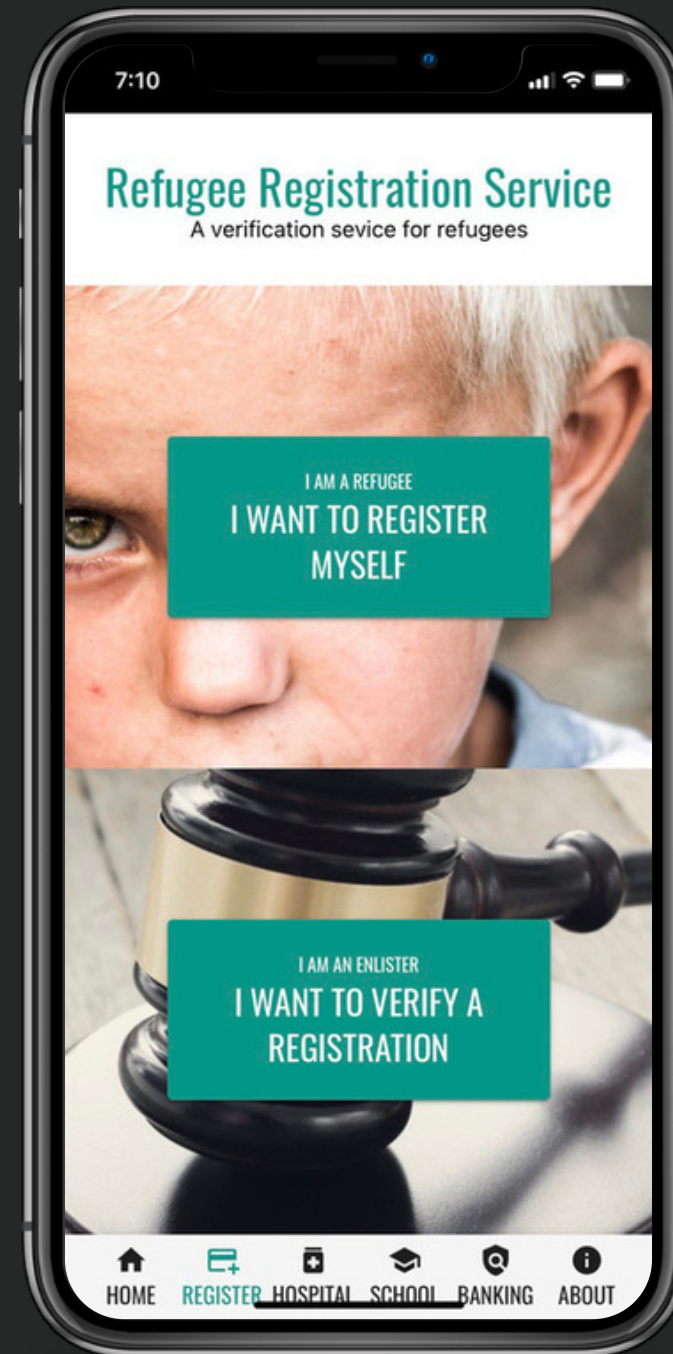
Impact & Risks

Astha Bank Attestation

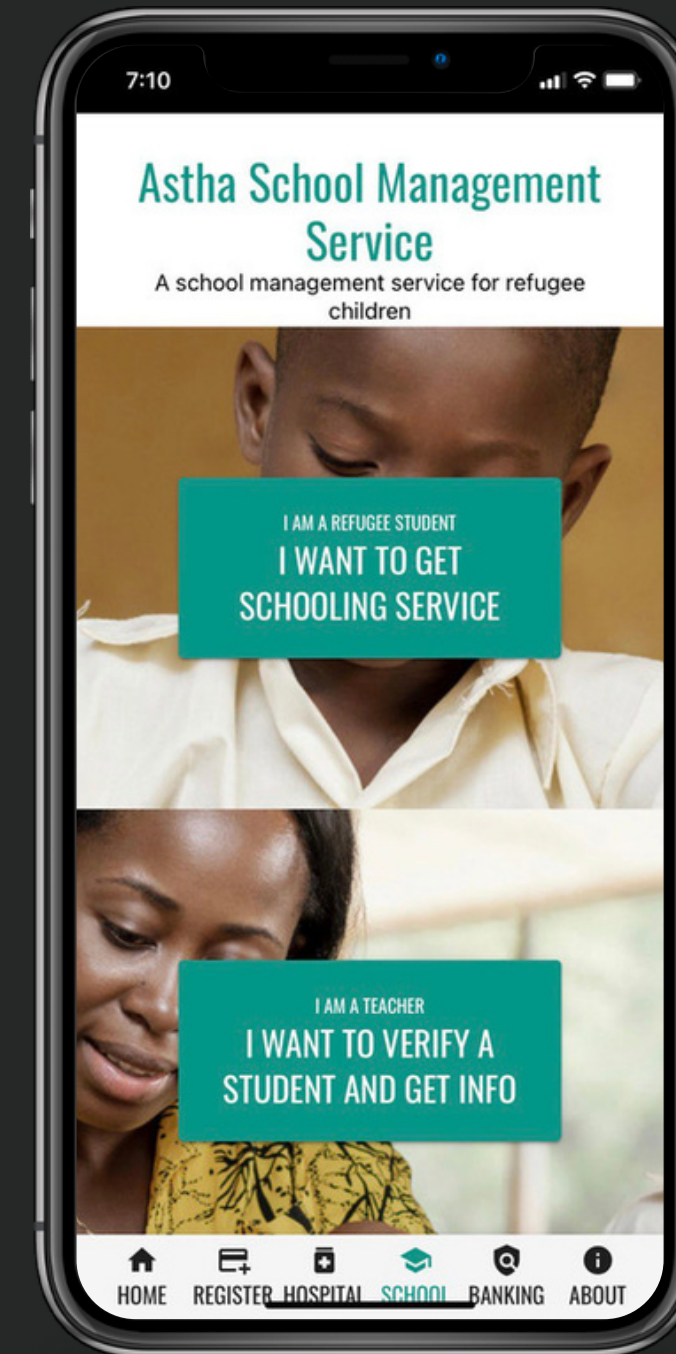
Mobile App View



Hospital



Bank



School

Problem

Solution

Technical

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Astha Website

QR CODE



Problem

Solution

Technical

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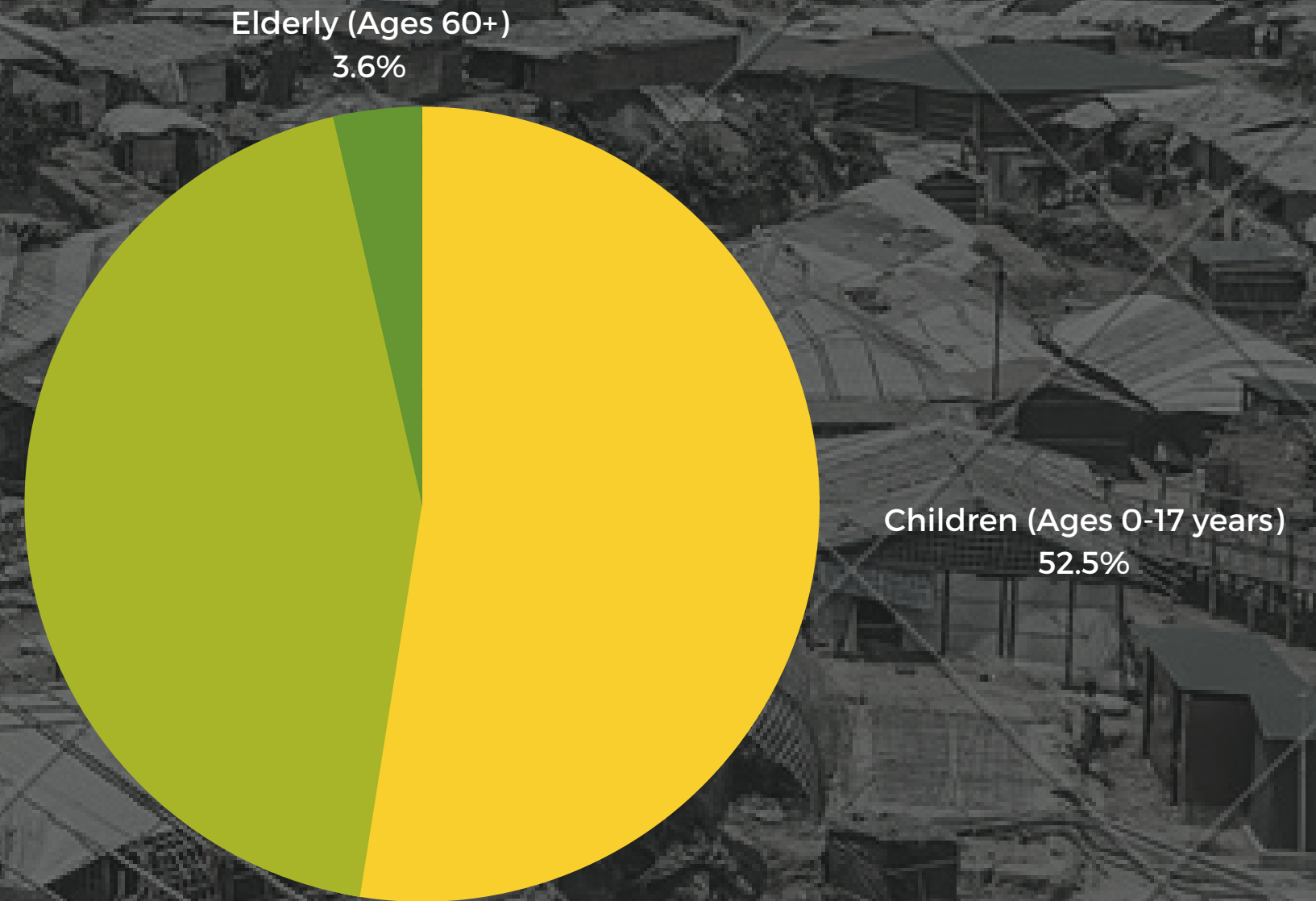
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TARGET GROUP

926,561 REFUGEES

AS PER UNHCR STATISTICS TILL 31 MARCH, 2022

The data displayed is for Rohingya refugees in Bangladesh, since our project primarily focuses on them before expanding globally.



Problem

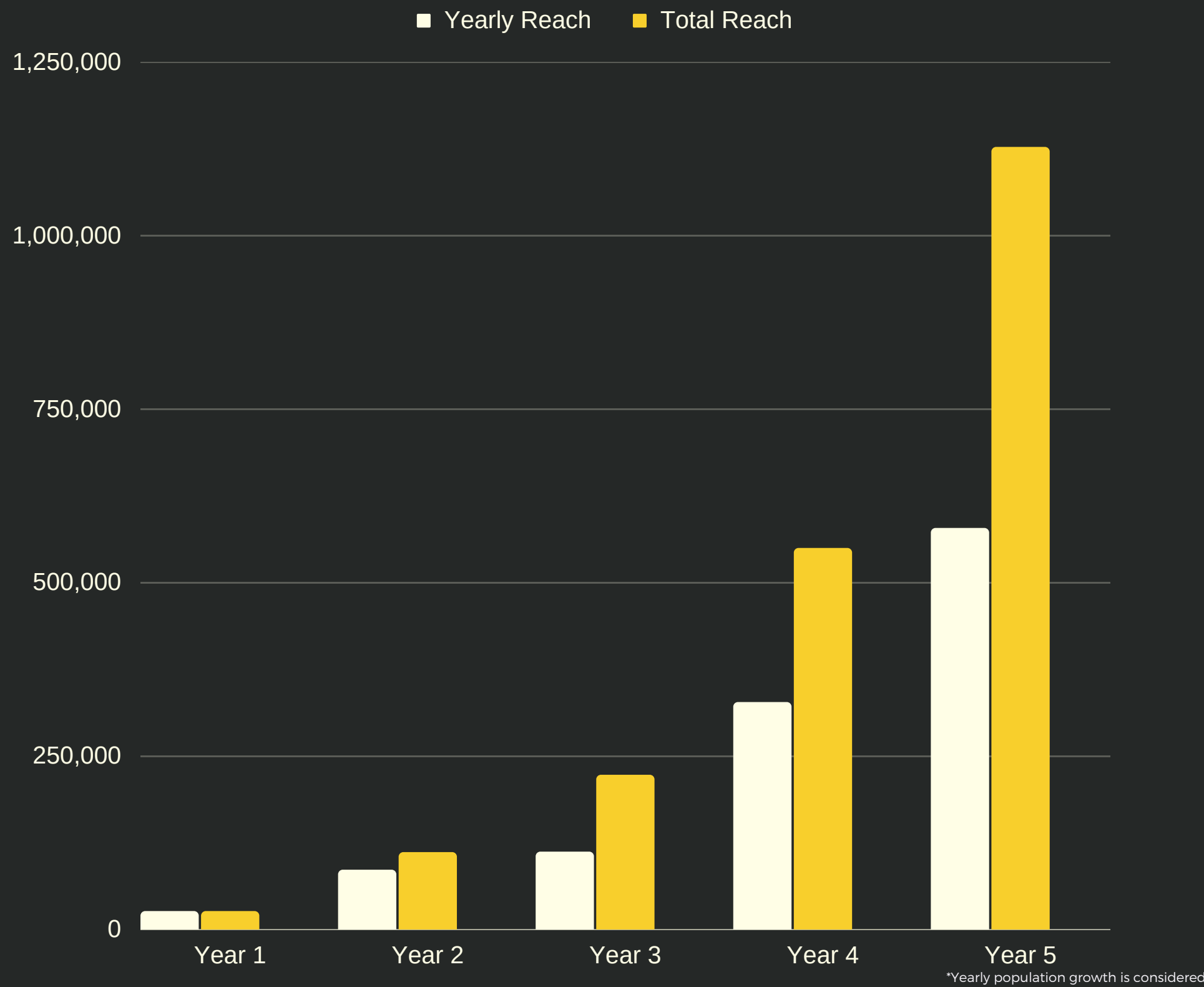
Solution

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TARGET REACH

PROJECTED REFUGEES UNDER ASTHA ECOSYSTEM

The data displayed is for Rohingya refugees in Bangladesh, since our project primarily focuses on them before expanding globally.

	Year 1	Year 2	Year 3	Year 4	Year 5
Yearly Reach	25,000	85,000	111,500	327,000	578,100
Total Reach	25,000	110,000	221,500	548,500	1,126,600

Business Model

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Impact & Risks

Expansion Plan

Rejuvenate → Connect → Community Building



Provide verification services

Target
Refugees

Create a bridge between refugees and relying parties and the companies who are looking for workforce with related skillsets

Expand operations and use registered refugees as sources of inspiration for more refugees

Target
Relying parties, service providers and companies

Problem

Solution

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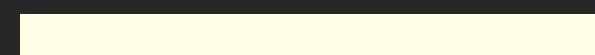
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PHASE 1:

Rejuvenate

ASTHA



Problem

Solution

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Business Model

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Marketing Strategies

CAMP VISITS

- Setting up booths in each camp visited along with post contract service (follow-up)
- Hosting small campaigns
- Raising awareness through on-site programmes

PARTNERSHIPS

- Bangladesh Government
- UNICEF
- Multiple local NGOs
- Local Newspaper (Advertisement, Publishing success stories)
- Awareness to local businesses through seminars

WEBSITE

- Refugees we have registered
- Newsboards showing our refugees serving in different big companies
- Ticker on side of showing how much impact we have created
- Social Media (Success stories, targeted ads)

BRAGGING RIGHTS

- Document as a Status Symbol
- Lucrative gifts on registration
- Free registration (Limited time period)

Problem

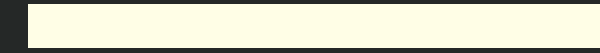
Solution

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Business Model

ATK

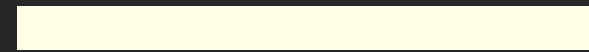
Impact & Risks



PHASE 2:

Connect

ASTHA



Problem

Solution

Technical

Business Model

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Impact & Risks

TARGET GROUP

926,561 REFUGEES

AS PER UNHCR STATISTICS TILL 31 MARCH, 2022

POPULATION GROWTH PER YEAR

35,000 CHILDREN

AS PER UNHCR STATISTICS TILL 31 MARCH, 2022

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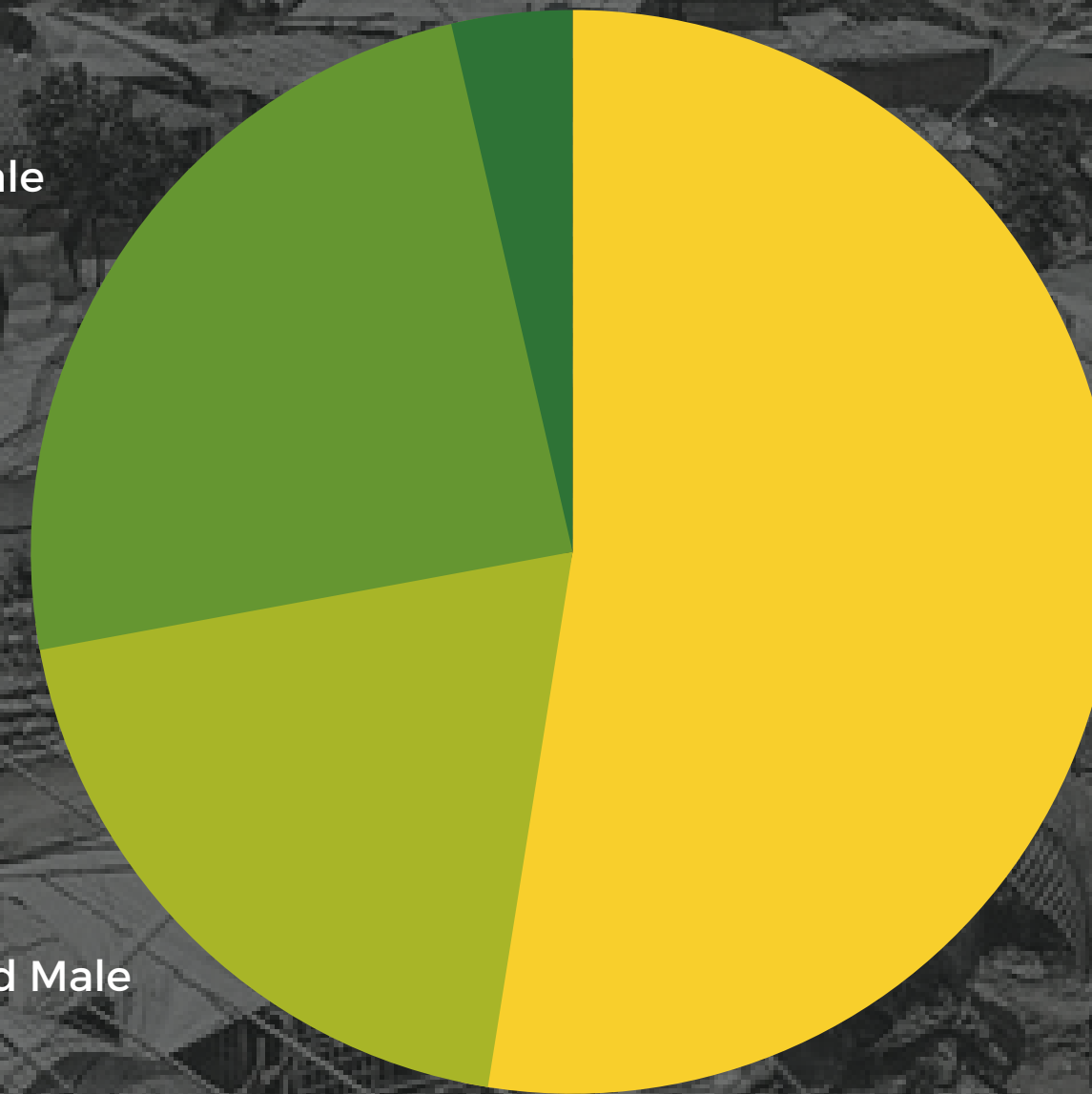


Unemployed Female
24.3%

Retiring Benefits
3.6%

Unemployed Male
19.6%

Deprived of Education
52.5%



Problem

Solution

Technical

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Why will they Excel?

HARD WORKING

**EASILY TRAINED
(LESS SKILL REQUIRED)**

**GREATER COMMITMENT AND
DEDICATION (LEADING TO
LOWER ATTRITION RATES)**

potential

Problem

Solution

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LABOUR FORCE BY LEVEL OF EDUCATION (2010)

Source: Bangladesh Bureau of
Statistics. Labor Force Survey

Level of Education	Total (%)	Male (%)	Female (%)
No Education	40.1	39.9	40.6
Class I-V	22.8	22.9	22.7
Class VI-VII	14.3	13.8	15.3
Class IX-X	9.0	8.3	10.5
SSC	6.2	6.5	5.6
HSC	3.7	4.0	3.0
Bachelor or Equivalent	2.1	2.5	1.2
Master or Equivalent	1.4	1.7	0.8
Medical	0.2	0.2	0.1
Technical/Vocational	0.1	0.2	0.1

Problem

Solution

Technical

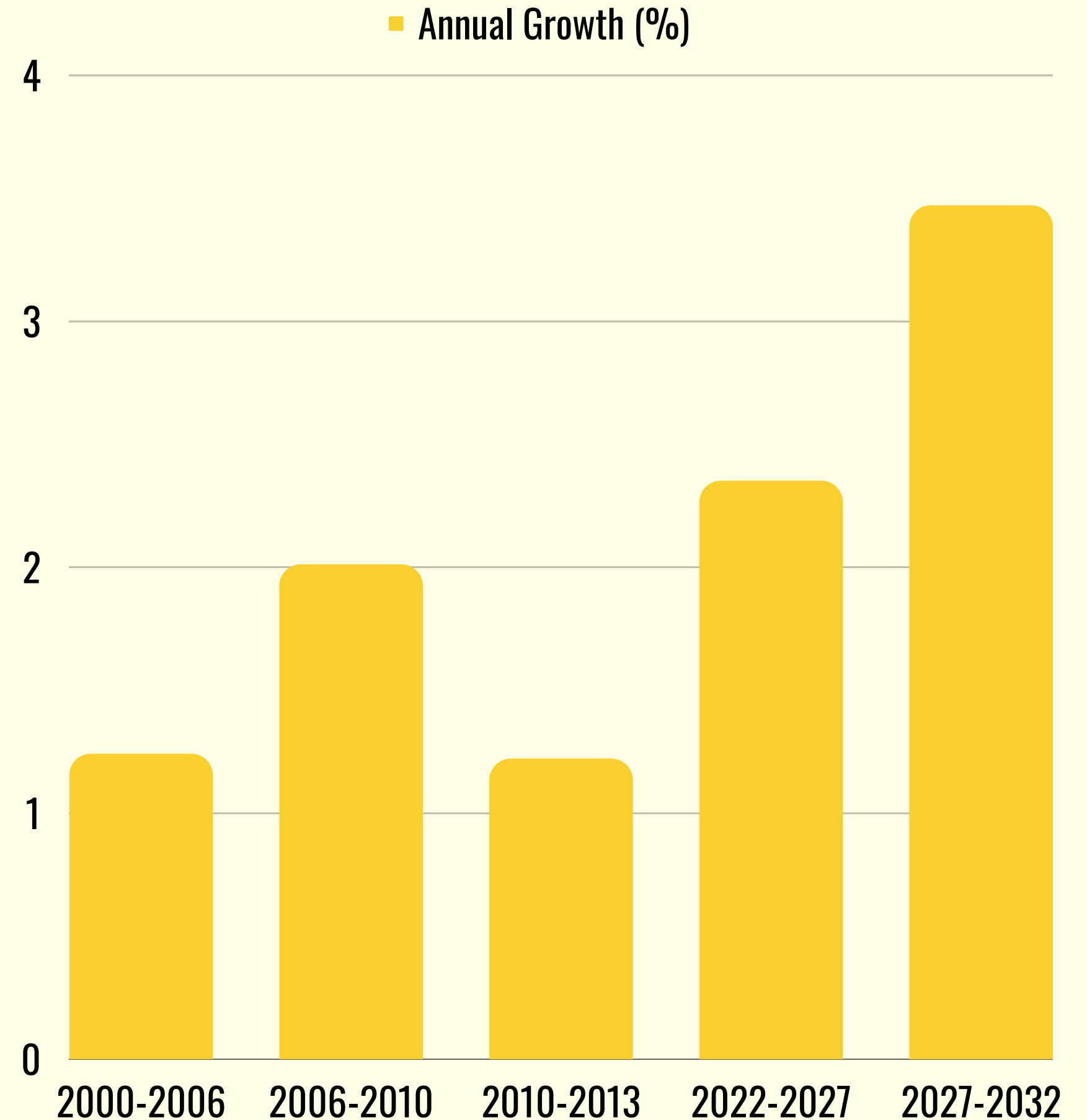
Business Model

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FORECASTED LABOUR FORCE ANNUAL GROWTH (2000-2013, 2022-2032)

Source: Bangladesh Bureau of Statistics. Labor Force Survey



Problem

Solution

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COUNSELLING BY ASTHA

Special on-site maintenance booth for refugees and relying parties twice a week, as well as a 24-hour hotline for any questions or small concerns



Problem

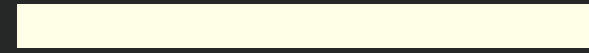
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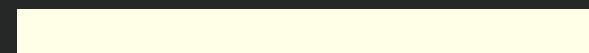
Impact & Risks



PHASE 3:

Community Building

ASTHA



Problem

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Impact & Risks

Expansion Plan



- Use trained youth in ICT but currently employed as decentralised executives

Problem

Solution

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ASTHA PROJECTED TIMELINE

A 2.5-YEAR PROJECTION

INCUBATION PERIOD

2022

2ND HALF

- Look for Investors
- Host awareness campaigns and set up ASTHA booths in Camp 27

2023

1ST HALF

- Continue developing infrastructure
- Register 75% of refugees from Camp 27 under ASTHA

INTRODUCTION PERIOD

2023

2ND HALF

- Marketing to clients and refugees
- Launch website and social media
- Form a collaboration with the government and small businesses to launch a pilot initiative with Camp 27 to get access to further ASTHA

2024

1ST HALF

- Register 99% of refugees from Camp 24,25,26,27 under ASTHA
- Use role models to appeal to mass refugees and relying parties and break social stigma

EXPANSION PERIOD

2024

2ND HALF

- With these Camps report, host and set up further awareness workshops and ASTHA booths in neighbouring camps.
- Mass education through NGOs

Problem

Solution

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WHAT ARE

ASTHA TOKENS (ATK)

THE FUEL FOR RUNNING THE ASTHA
ECOSYSTEM

Problem

Solution

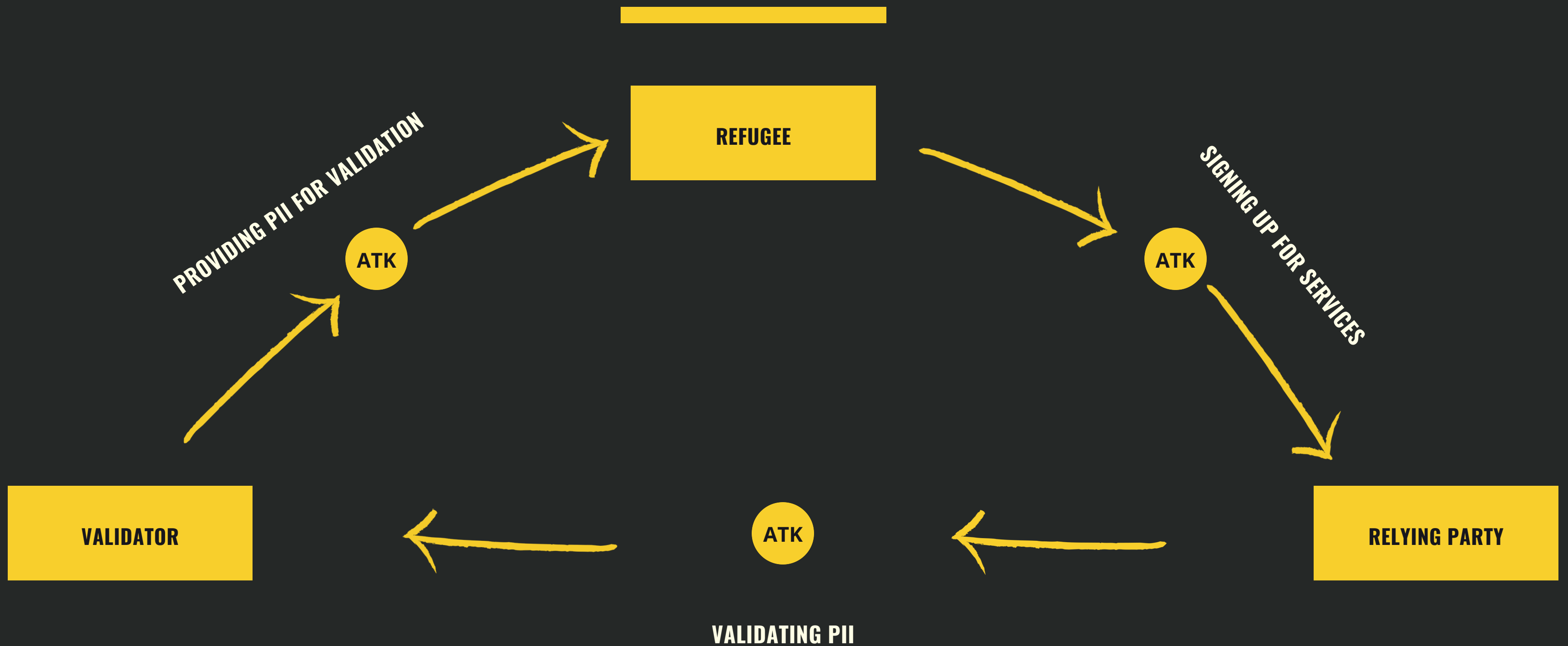
Technical

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Role of ASTHA Tokens (ATK)



Problem

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Why ATK over regular Tokens

SINGLE METHOD OF TRANSACTION

ATK provides a single and uniform method of settlement across the whole ecosystem.

PROVIDES USER INCENTIVE

ATK incentivizes the essential services in the ecosystem, ultimately increasing its value

PROVIDES STABILITY

Having a specialized, unique token for the ecosystem provides stability, preventing it from outside effects and volatility.

SEAMLESS TRANSACTIONS

Since ATK is a blockchain based ledger system, it utilizes smart contracts to make transactions seamless

Problem

Solution

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Power of ATK

BANK ACCOUNT
APPLICATIONS

INSURANCE
APPLICATIONS

JOB APPLICATIONS

CITIZENSHIP THROUGH
INVESTMENT
PROGRAMS

MARKETPLACE LISTING

ACCESSING MEDICAL
FACILITIES

COIN EXCHANGES AND
TRADING

TOKEN SALES

PRECIOUS METAL
PURCHASES

BUSINESS
INVESTMENTS

MONEY TRANSFER
SERVICES

P2P IDENTITY SERVICES

Problem

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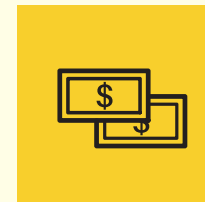
ASTHA REVENUE MODEL

MAJOR SOURCES

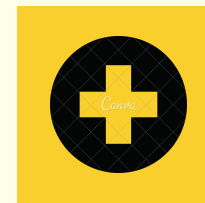
Revenue Stream



.05% Commission on Individual Transactions of ATK

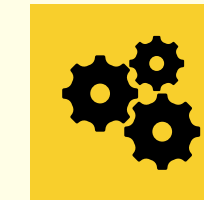


2% Commission from Relying Parties

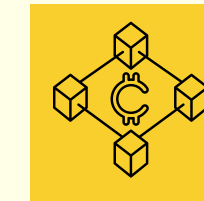


Foreign Aid

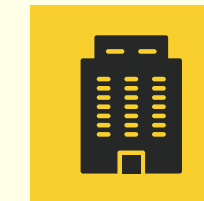
Expenditure



Running ASTHA



Managing Blockchain Technology



Overheads

Problem

Solution

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ANNUAL REVENUE PROJECTION

FROM REFUGEES

	Yearly Reach	Total Reach	Refugees(Owners) \$10 (USD)	Usage per Year (USD) (3% Commission)	Annual Revenue (USD)
Year 1	25,000	2,5000	250,000	56,250	306,250
Year 2	85,000	110,000	850,000	191,250	1,041,250
Year 3	111,500	221,500	1,115,000	250,875	1,365,875
Year 4	327,000	548,500	3,270,000	735,750	4,005,750
Year 5	578,100	1,126,600	5,781,000	1,300,725	7,081,725

*Usage per year has been limited to 5 transactions for 1st year of registering only

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ANNUAL REVENUE PROJECTION

FROM RELYING PARTIES (INSURANCE, BANKS, HOSPITALS ETC.)

	Yearly Reach	Total Reach	Relying Parties (USD) (5% Commission)	Annual Revenue (USD)
Year 1	25,000	2,5000	281,250	281,250
Year 2	85,000	110,000	1,237,500	1,237,500
Year 3	111,500	221,500	2,491,875	2,491,875
Year 4	327,000	548,500	6,170,625	6,170,625
Year 5	578,100	1,126,600	12,674,250	12,674,250

*Foreign Aid has not been considered since it is subject to vary annually

Problem

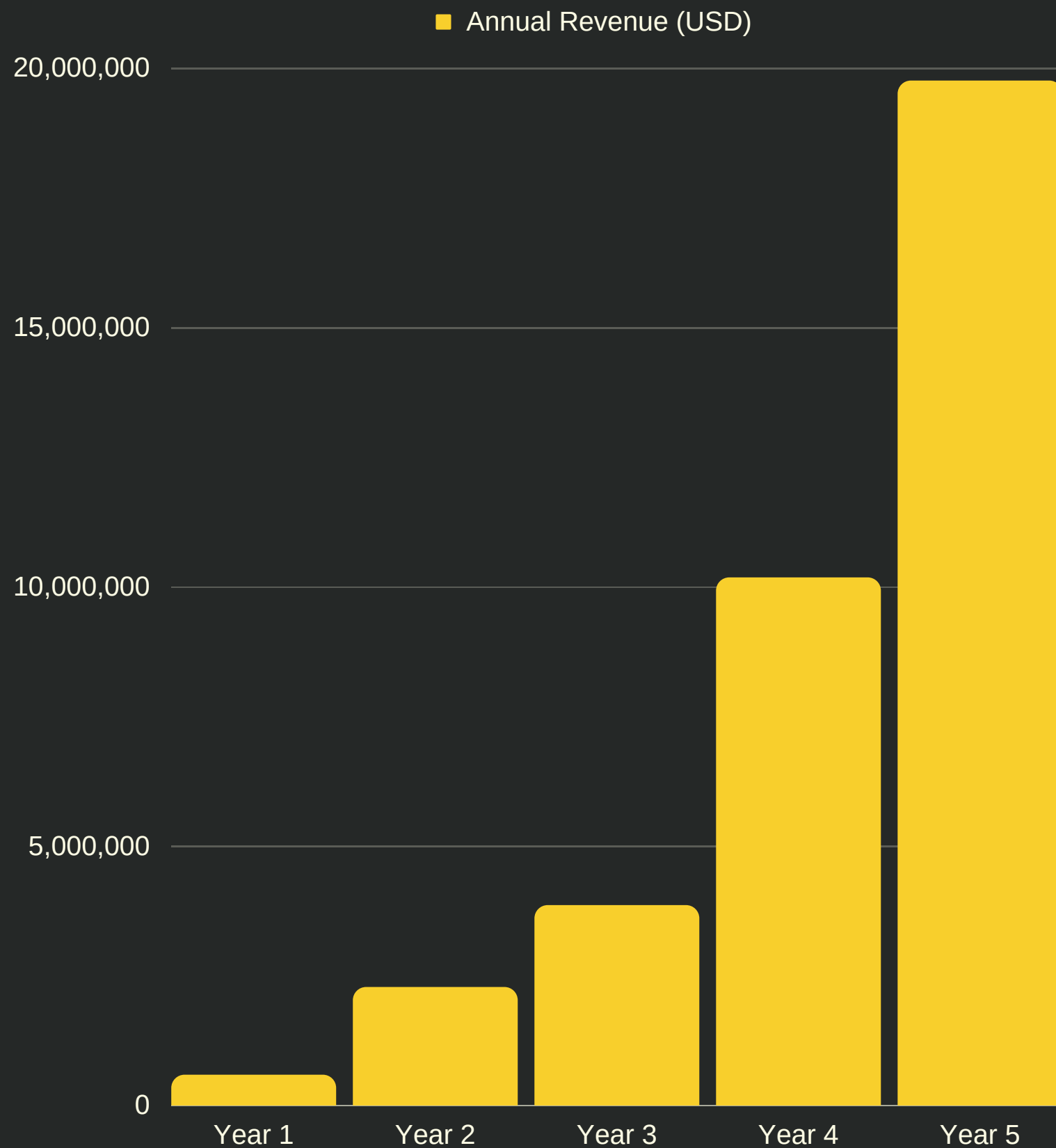
Solution

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ANNUAL REVENUE PROJECTEION

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Problem

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Key Performance Indicators

REFUGEES

- Number of Refugees successfully registered
- Sign-ups for jobs and banking services
- On-site visit to refugee registration conversion rate

RELYING PARTIES (BANKS, HOSPITALS, SCHOOLS ETC)

- Number of clients served
- Social Media Engagement
- On-site visit to Client conversion rate

Problem

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IMPACT GENERATION

BY ASTHA

RISE IN GDP

With thousands of new workers, the government and local businesses can gain access to a new untapped market and exploit this workforce. Higher employment means self dependency which will impact the country's economy positively.

COMPLYING

DWA-SDG RELATIONSHIP

With the new ecosystem, Bangladesh government and ASTHA will aim to achieve the following SDGs:

- No Poverty (1)
- Zero Hunger (2)
- Quality Education (4)
- Gender equality (5)
- Decent work and economic growth (8)
- Reduced Inequalities (10)
- Sustainable cities and communities (11)
- Peace, Justice and strong institutions (16)

EFFICIENCY

With the new blockchain ecosystem, managing the refugees will become more efficient by achieving:

- allocative efficiency
- productive efficiency
- dynamic efficiency
- social efficiency

Problem

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Impact & Risks

IMPACT CALCULATION

Impact Basis	Total Impact (USD)
Identity Proof	18,000,000
Lifestyle Improvement	4,250,000
Crime Rate Reduction	900,000
Information Robbery Reduction	900,000
Total	24,050,000
Investment in an Annum	4,500,000
Impact for per \$1 investment	5.34

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RISKS AND MITIGATION

Risks	Mitigation
Relying parties infrastructure not being ASTHA friendly	<ul style="list-style-type: none">• Hardware has fixed cost which can be funded by the government and investments
Refugees feel they need a lot of Technical Knowledge	<ul style="list-style-type: none">• Awareness campaigns will be hosted• On-site registration• 24/7 hotline
The Blockchain is dependent on Ethereum	<ul style="list-style-type: none">• Price of Ethereum is quite stable in the global market• May shift to some other crypto token if Ethereum becomes unstable
Loss of AVD (ASTHA Verifiable Document)	<ul style="list-style-type: none">• Refugee has to go through the same registration process again• Make copies of the json file
Clients resisting to hire refugees	<ul style="list-style-type: none">• Find more refugee friendly clients• Promote with the benefits of hiring refugees• Government intervention
Lack of Education	<ul style="list-style-type: none">• Provide training and education to the refugees regularly

Problem

Solution

Technical

Business Model

ATK

Impact & Risks

A dark, monochromatic background image showing the silhouettes of a group of people, likely refugees, walking across a field. They are carrying various items such as bags, bundles, and a child on a woman's back. The scene is set against a light, hazy sky. Two horizontal yellow bars are positioned above and below the main text.

THANKS FOR LISTENING

By BUET GRC