

The Invisibles – Digital Identity for All

Executive Summary

The Invisibles project is building a world, where individuals from the poorest areas can access opportunities offered by anyone from anywhere around the world, while being protected by a justice layer of the Internet. This would be realized by a virtual marketplace called an “Open World” which would unlock sleeping capital in marginalized communities, leading to eradication of poverty and accelerated financial inclusion. Imagine a world where a US-based consultant looking for a research assistant who finds US costs make a project uneconomic, can now hire a Sri Lankan worker at a wage that allows the project to move forward. Thanks to increasing penetration of mobile phones and internet network in developing world, this is no longer a dream.

There are two main obstacles why such a marketplace is still inexistent despite the needs. First, there is lack of trust between the transacting parties. In order to make a successful digital transaction, parties need to be able to identify and keep accountable each other. Internet has been built without an identity layer, but latest technologies including distributed ledger technology (DLT) enable the creation of trusted verifiable digital identities.

Second, Internet lacks a justice layer, that would guarantee fairness, freedom and ethics of digital behavior. In many cases, individuals from marginalized communities get exploited unable to prove ownership of their digital assets or their working rights. IBO’s experience of running projects that enforce online justice for the past 14 years, using latest legal developments such as ODR (Online Dispute Resolution) offers a unique chance to restore digital justice.

The Invisibles project aims to create a solid foundation for an “Open World” marketplace by restoring digital identity for the marginalized populations within a legal framework for digital identity. The first pilot has been taking place in Bangladesh, issuing trusted credentials for teachers and volunteers working for JAAGO foundation, an NGO that provides free education to underprivileged children, and doctors in Gonoshasthaya Kendra, one of the four largest hospitals. Teachers, volunteers and doctors will act as “trusted agents of change”, facilitating the issuance of digital identity to their students and patients. The ultimate target population is refugees, which is the group in the most urgent need of identity to be recognized as individuals and get access to opportunities.

The system is easily replicable in other marginalized communities, when adjusted to local context such as culture, tradition, and norms of each community. Once we have a solid foundation of digital identity, we would start developing other components crucial to enabling financial transactions within “Open World”, such as payment systems and mobile apps.

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Overview and Problem Statement

The barrier targeted by the Invisibles project – lack of identity – is the first fundamental problem that needs to be solved in order to build an Open World that would eradicate poverty. Opportunities that can be accessed when one has identity are limitless, but representative ones include access to publicly provided healthcare and education, to get married, to buy property, to get a job or set up a business, and to move freely. Individuals lacking identification and resulting injustice can be a missing link in development strategies and an obstacle in breaking the cycle of poverty.

According to Justice for All report published by the Task Force on Justice, overwhelming number of people are excluded from access to opportunities due to the lack of identification of formal documentation. 4 billion people were “unable to better their lives and climb out of poverty” because they lacked access to basic documentation and other legal protections. 1.1 billion people lack legal identity. For 1 in 3 children below the age of five, this is the result of their birth not being registered. 45 percent of the poorest quintile lack legal identity. 45 percent of women from all income groups lack legal identity.

In addition to credentials describing the individual, identity includes formal documentation related to individuals’ ownership. 2.1 billion people are employed in the informal sector, lacking formal contracts and therefore operate outside the purview of labor laws. 2.3 billion people lack proof of housing or land tenure. This would lead to the poor missing economic opportunities under rapid urbanization. Additional 1.1 billion people expected to live in towns and cities by 2030, which could lead to an increase in disputes as people fight over scarce property and land. Having the right documentation has been shown by itself to improve people’s health outcomes.

The Invisibles is the first digital identity project that focuses on the standards needed to guarantee fairness, freedom and ethics of digital behavior relying on private, portable and interoperable digital identity. While there is a lot of literature on why we need digital identity, there has been little or no focus on the legal framework that would allow Invisibles to operate/use digital identity once it is created. There have been sovereign identity projects that begin to build identities for specific narrow target groups, focusing on particular types of identification. Now we need framework projects that would develop standards for wide-spread creation and use of sovereign digital identity, enabling scaling of digital identity projects beyond local populations.

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Description of the project

Two deliverables of the Invisibles Project in the Bangladesh is the following:

a) Issue interoperable and portable self-sovereign identity wallets (SSI) for undocumented/under-documented populations and the professionals working with those populations;

b) Establish a governance framework for digital identity that would protect and enforce rights and obligation of all stakeholders involved in the transactions.

The Invisibles Project is taking the following three steps to achieve both of the above goals :

1. a) Establish identity for medical and education professionals, who will be “Agents of Trust” being trusted by their patients and students. Using Truu.id and Sovrin DLT, identity will be issued to healthcare workers in Bangladesh healthcare project and medical college, Gonoshasthaya Kendra, and teachers working for JAAGO Foundation. Identity elements will also be established for volunteers assisting doctors and teachers, such as midwives, nurses, photographers and marketers.
b) Based on the voices from the grassroots, IBO, with ANSI and the Indiana University Kelly School of Business, will bring together all stakeholders to identify and draft a governance framework that would ensure fair, free and ethical usage of digital identity for all.
2. a) Establish identity for patients and students. Doctors, teachers and volunteers who received SSI in step 1 can attest to the digital identities created for refugees they work with, extending their trust value to encourage 3rd parties to trust the newly created refugee identities. For example, doctors and midwives are the first line of trust in maternity and birth cases
b) The draft governance framework will be improved based on the feedback from the first owners of SSI in Bangladesh.
3. a) Expanding an identity wallet by connecting medical, and education credentials, or adding other types of credentials. For example, children should be able to have in their SSI wallets both a certification of the education courses they took with JAAGO and results of regular medical check-ups they get through JAAGO. A patient who works as a musicians should be able to add the proof ownership of music (digital asset) to medical credentials
b) Finalized governance framework will be implemented by introducing enforcement mechanisms such as ODR.

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The technologies and emerging international open standards that allow the Invisibles Project to build and develop a trusted digital identity solution that can be scaled globally is the Sovrin Network. However, we will note that the Invisibles Project is technology agnostic and will utilize the technology that will suit its purpose to empower individuals with private, portable interoperable digital identity, and core principles of fairness, freedom and ethics.

Sovrin Network is an open source project creating a global public utility for self-sovereign identity. Built on top of Hyperledger Indy, part of the Hyperledger project, it enables people, organizations or IT devices to prove things about themselves to anyone or anything, peer-to-peer, using data that the other party can verify. It is a global collaboration, hosted by The Linux Foundation, including leaders in finance, banking, Internet of Things, supply chains, manufacturing and technology

Hyperledger Indy is a distributed ledger, purpose-built for decentralized identity. It provides tools, libraries, and reusable components for creating and using independent digital identities rooted on blockchains or other distributed ledgers so that they are interoperable across administrative domains, applications, and any other “silo.”

Hyperledger Indy has developed specifications, terminology, and design patterns for decentralized identity along with an implementation of these concepts that can be leveraged and consumed both inside and outside the Hyperledger Consortium. Because distributed ledgers cannot be altered after the fact, it is essential that use cases for ledger-based identity carefully consider foundational components, including performance, scale, trust models, and privacy. In particular, Privacy-by-Design and privacy-preserving technologies are critically important for a public identity ledger where correlation can take place on a global scale.

Potential for Scaling / Roadmap

The project will grow by expanding the variety of credentials in the SSI wallet; increasing usability of the wallet by incorporating mobile apps and payment mechanisms; reaching the most vulnerable, namely refugees; and replicating in other countries.

Usability of the identity wallet will increase as the variety of credentials added increases: adding educational and employment credentials will facilitate job search; adding financial credentials will facilitate opening bank accounts and acquiring micro-loans; adding legal proofs of identity will facilitate access to online dispute resolution processes and to the

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courts. Priority will be given to types of credentials that would give access to economic independence in the form of employment and royalty fees such as proof of ownership of digital assets.

Digital Identity that marginalized populations will gain through the Invisibles project would be widely applicable. Potential employers require ID. Schools require ID. Healthcare providers require ID. Law enforcement requires ID. For example, lack of a proof of age leads to children being treated as adults in courts. A 16-year-old offender can be judged as a 21-years-old if he/she looks older than real age, but has no means to prove it. Opportunities exist to acquire education, receive healthcare, and receive protection under the law, but those opportunities can be accessed only by those with Identity.

[need a paragraph about apps and payment mechanisms?]

The ultimate population that the Invisibles project strives to help is the refugees: they comprise a large percentage of the 1.5 billion human beings who make up the undocumented population of our world. They are a group worthy of help and accessible to those who wish to help. The Invisibles project will assist refugees in camps in Bangladesh reaching them through its partners: both Gonoshasthaya Kendra, and JAAGO Foundation work in Cox's Bazar refugee camp, each providing medical services and helping children to cope with post-stress traumas.

The Invisibles Project can be replicated by actors working with any undocumented or under-documented population across the globe. The system generates credentials through digital apps, which makes it very easy for professionals and refugees to access. While starting in Bangladesh, next locations are already lined up to be Liberia, Haiti, Zambia, Kenya, Brazil, Lebanon and Jordan, where IBO has relationships with local communities through through its FairTrade music project, PeaceTones for over 8 years, and Tykn, has strong regional ties. Invisibles exist, and can be helped, not only in conflict areas and refugee camps, but in regions where access to systems for identification documentation are not available or not up to international standards

Project Impact

In the short term, issuance of digital identity will contribute to organizational efficiency and human rights protection.

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When anyone or anything is able to trust who or what it is dealing with online, massive amounts of friction can be removed, user experience can improve, and the transaction processes can be simplified. Providing identification to the professionals working with undocumented / under-documented populations greatly shortens the time spent on verification of credentials across geographical venues, allowing more efficient operations on the ground in areas of great need. Refugees are returning to their homeland with minimum Identification documents, specially mothers and their children who were born in the camp. Digital proof of relation produced by trusted doctors and teachers can help global aid organisations assisting families in their return journeys.

The project will contribute to reconsideration of the basic elements of access to justice, adding following three basic human rights to the list of things that should be elements of access to justice:

- The right to exist, to have an identity and to be recognized as a human being, is a basic human right and an element of access to justice.
- The right to control one's identity, to decide who can access the elements of identity, under what conditions, and for what uses, is a basic human right and an element of access to justice.
- The right to access opportunity, to unlock value in one's knowledge and skills, is a basic human right and an element of access to justice.

In the long-term, as the ecosystem around digital identity matures, it will lead to eradication of poverty through financial inclusion, enabling the individuals to receive fair payment for their work in the Open World marketplace. This ecosystem will be governed by a harmonized set of rules and procedures regarding issuance and use of digital identities within this 'Trusted Online Community'.

The most enduring example of this was and remains IBO's PeaceTones project in the music industry that empowered musician to be able to receive fair payment for their creations, or digital assets. Most artists and musicians who cannot rely upon highly complex IP law to protect their creations, unable to afford employing a host of intermediaries who exist between their creations and the marketplace. Therefore, revenues of these creators' get tied up with the work performed by intermediaries who were engaged to get their music to market.

Since its inception in 2008, PeaceTones has taken artists from countries where it was impossible to protect IP, and given them the opportunity to build a profitable business using their music with great success. Earning money in Haiti, Sierra Leone, and Brazil, was more

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than these artists had ever experienced, and, it laid the foundation for IBO to build a fair trade music model on the Internet in future years.

Digital identity will be foundational in a leap towards educational, health, social, and financial independence. Currently unrecognized refugee populations, particularly women and children, will be greatly empowered by gaining new means to document and prove their skills and capabilities.

Sustainability

This field of human-centred digital identity is still emerging, especially in a humanitarian space. Therefore, the key to the long-term success is building and extending a healthy ecosystem of multidisciplinary stakeholders. The project would initially start relying on the financial support from the foundations and self-funding of participating organizations, in order to avoid any kind of political or ideological influence from the external funders when building truly fair, free and ethical framework for digital identity and Open World marketplace. Later on, the organizations from public and private sector within the ecosystem are expected to contribute financially in return to the increased efficiency and access to skilled and unskilled workers in the Open World marketplace. Influence of individual organizations would be levelled out through organizational governance. Cost of acquiring digital identity for the marginalized populations would be free.

Team

The team consists of three organizations (InternetBar.org Institute, Truu.id, Tykn), and number of volunteering supporters who believe in the world we are building.

InternetBar.org Institute (IBO), a project organizer, has been successfully building Justice Layer of the Internet, through its numerous projects. *Tech for Justice* is a collaboration platform for legal service providers, technologists, and community activists to develop greater access to justice. *PeaceTones* promotes the concept of using arts and culture to transform the rule of law, and, in this particular application, the implementation of environmental justice through music. Jeff Aresty, IBO's president, is a member of the ID4A (Identity for All) working group in Sovrin Network, contributing to the governance of the world's first self-sovereign identity (SSI) network.

Truu.id, a project technology partner, is a founding steward of the Sovrin Network. They play a role in running the network for Sovrin (a not for profit organization running a public utility for Global digital Identity). Truu is also a member of Evernym (a for profit

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organization that donated the source code for Sovrin) accelerator program. Therefore, Truu gets early access and helps develop the latest technologies for Self-sovereign Identity. Truu's focus has been on healthcare worker digital identity to enable and improve access to healthcare around the world.

Using Sovrin Network, Truu.id, has done work in the UK with the NHS, and just recently completed a project demonstrating a doctor being issued and controlling trusted verifiable digital credentials by one hospital (equivalent to paper documents needed for pre-employment checks) and having those documents verified by another hospital. This system will be adapted to the Bangladesh situation to build a digital identity platform identifying doctors, teachers and volunteers.

Tykn, another technology partner, is also founding member of the Sovrin Network, who has built and used a system to generate “proof” through the use of digital apps. By leveraging the trust and oaths of healthcare practitioners, Tykn provides a digital, global, public, and immutable proof of birth – a birth notification - owned and controlled by the individual. Tykn works with the Dutch RedCross on digital identity solutions for an efficient aid distribution. The idea behind Tykn started in a Dutch Refugee camp where the founder lived for years without an identity. The blend between being a problem owner and tech expert put Tykn as the top Identity Startups of the Netherlands.

Supporters of the project include Gillian Hadfield (writer of “Rules for a Flat World”); Don De Amicis (Adjunct Professor at Georgetown University Law Center); Scott Cooper (VP of Public Policy and Govt Relations of American National Standards Institute (ret.)); Daniel Rainey, Board Member of the International Council for Online Dispute Resolution; Natsuhiko Sakimura (Chairman at OpenID Foundation); Joyce Searls (Founder and Board Member of Customer Commons); Linda Warren Seely, Executive Director of the American Bar Association Section of Dispute Resolution, and many more tech, legal, and humanitarian professionals.

Conclusion / Ask

The Invisibles project has all the necessary components to successfully build an Open World Marketplace to eradicate poverty, by leveraging by the power of digital identity: access to the latest proven technology, strong record of past performance, and trust relationships with local communities. The project would initially need 5 million dollars to continue implementation of the project in Bangladesh outlined in the project description, before raising funds to scale up.

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Supporting Documentation

- Digital penpals Program (member training):
<https://www.internetbar.org/membership/become-a-member/>
- Tech for Justice “Developing Digital Identities for Stateless Refugees”:
<https://www.techforjustice.org/the-invisibles/>
- “ODEM to Partner with Internet Bar Organization to Aid Rohingya: ”
<https://medium.com/odem/odem-to-partner-with-internet-bar-organization-to-aid-rohingya-953c6e161ce5>
- Daniel Rainey “The Invisibles”: <http://danielrainey.us/the-invisibles-project/>
- Blockchain Can Empower Stateless Refugees by Amy Schmitz and Jeff Aresty:
<https://www.law360.com/articles/1095148/blockchain-can-empower-stateless-refugees>
- CrowdJustice “Developing Digital Identities for Stateless Refugees: s”
<https://www.crowdjustice.com/case/theinvisibles/>
- “510 is exploring the use of Blockchain in Humanitarian Aid with Tykn.tech”_
<https://www.510.global/510-x-tykn-press-release/>
- “Dorcas Pilots 121 With Tykn & 510 in Ukraine”
<https://www.121.global/dorcas-pilots-121-with-tykn-510-in-ukraine/>
- PeaceTones recording with Rohingya Refugees :
<https://peacetones.org/projects/world-united-song/>