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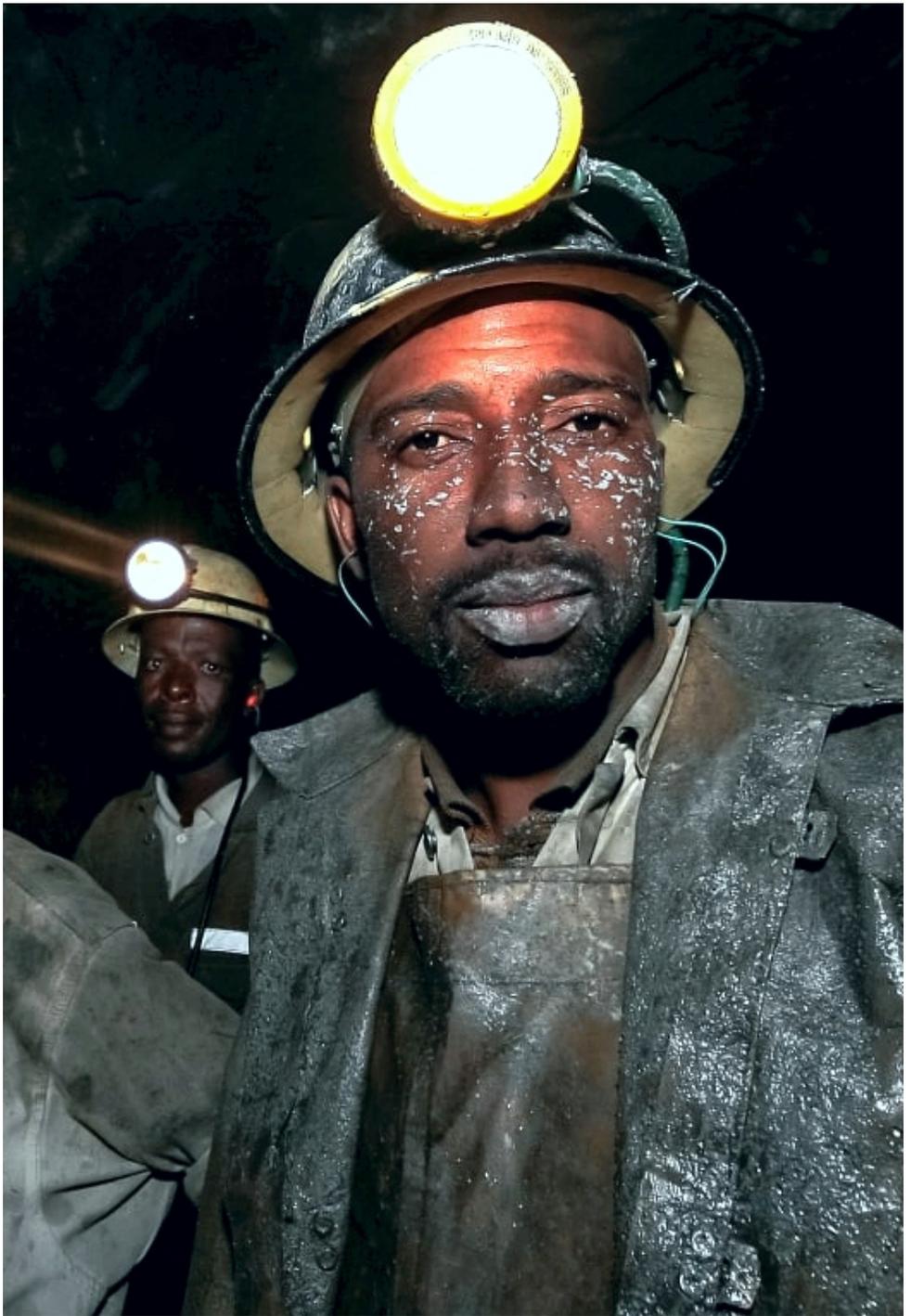


# Building biometric registers for target groups

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What we do. How we do it.





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**The targeting of specific social groups such as fisher folks, miners, farmers and teachers can be very helpful when rolling out social intervention programs or when providing streamlined services. Uniquely identifying members of such target groups is essential to building a trusted register. GenKey assists in achieving this feat by providing a simple approach to registering and managing biometric registers for target groups.**

The World Bank estimates there are over 1 billion people globally with no verifiable legal identity. These people are often the poorest, socially displaced and the most vulnerable in the society. An estimated 500m of this population live in Sub-Saharan Africa, and over 620 million of this 'invisible billion' operate in the Lower Middle-Income Economies<sup>1</sup>. These people are target social groups who form some of the fundamental anchors of society, some of them performing crucial tasks which keeps society moving.

Since 2012, we've helped millions of people in Africa to authenticate who they are, using their unique biometric identity. We've not stopped. With a growing population in the middle class, the need for reliable ID systems for social target groups across many sectors in Africa keeps increasing.

Being able to be uniquely identified and be confirmed as a member of organized target groups is very vital to receiving benefits and living a 'normal' life. We're positioned to assist in solving this problem.

The need for target groups such as miners, farmers, students, hawkers and even civil servants to possess accessible, secure and verifiable ID systems has increased over the years. These systems provide such target groups with a sense of belonging, grant them access to financial and economic inclusion and gives them other benefits in the society. We're positioned to help such target groups overcome these challenges and help open up doors of opportunities to them.

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*The need to uniquely identify target groups in many countries has increased with the need to provide streamlined services to such groups of individuals.*

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<sup>1</sup> <https://id4d.worldbank.org/global-dataset/visualization>

## Who are the target groups?

### Miners

Miners are very important for the world's economy. The mining industry records an estimated 692 billion USD revenue<sup>2</sup> with miners spread across salt, minerals, coal, metals, limestone, chalk, and many other essential commodities. Miners cover a large percentage of the working force in mining countries. Some countries such as Tanzania have almost 10% of the population being miners.

Successfully registering and implementing a Digital ID infrastructure for miners provides several benefits to the governments, the miners and the industry stakeholders involved. A carefully planned and executed ID infrastructure goes a long way to coordinate mining activities in mining regions across the globe.

### Farmers

Agricultural development is one of the most powerful tools that can be used to end extreme poverty. Agriculture accounts for nearly one-third of global gross domestic product (GDP), and the majority of the world's poor live in rural areas and make a living through agriculture.

Many farmers typically rely on income from a variety of sources, including government social nets and subsidies. The application of innovative digital ID infrastructures can enable these families to exit poverty by addressing many critical challenges they face. A secure and trusted ID system can increase the effectiveness and inclusivity of subsidy programs, enable formal land and asset registration and improve data about farmers' economic activities and needs.<sup>3</sup>

### Refugees

Registration of refugee target groups is essential to protecting the basic rights and stature of refugees in different countries. Such registrations and identity documents issues are vital for the people concerned and the countries they arrive in. Enabling robust ID infrastructure for refugees empowers them to open bank accounts, access educational opportunities, increase inclusivity and can allow greater freedom of movement in host countries. Registration of refugees can also help prevent refoulement, arbitrary arrest and detention, and enhance keeping families together.

Refugee registration also provides a vital resource for population census for beneficiary program planning such as provision of food, shelter, water, cash-based incentives and other forms of targeted assistance<sup>4</sup>. Such data also serves as a tool for preventing and combating fraud, corruption and crime.

### Civil Service

The number of members in the civil service has been increasing globally, and with that increase is a rise of public sector related fraud. Events such as existence of ghost workers, making multiple payments to the same accounts, making the same payments to multiple accounts or making payments for work not done has cost governments losses in billions of dollars annually.

The application of biometrics in building digital ID infrastructure can help in reducing and preventing the commencement and operations of public sector fraud. The building of robust end-to-end ID systems with mobile or stable registration kits goes a long way to ensure the building of clean registers for public sector workers in governments.

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*Farmers, students, public sector workers, miners, teachers and many more target groups provide avenues for the provision of streamline services by governments.*

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*Provision of trusted and secure identity infrastructures for registering and managing the identities of various target groups opens up numerous opportunities for them.*

<sup>2</sup> <https://www.statista.com/topics/1143/mining>  
<sup>3</sup> <http://documents1.worldbank.org/curated/en/655951545382527665/pdf/The-Role-of-Digital-Identification-in-Agriculture-Emerging-Applications.pdf>  
<sup>4</sup> <https://www.unhcr.org/registration.html>

# And many more

- Hawkers
- Students
- Drivers
- Bankers
- Social workers
- Police
- Surveyors
- Civil engineers
- Teachers
- State Officials
- Health workers
- Diplomats
- Firefighters
- Tax workers
- Others

## What are the benefits?

The benefits of building biometric ID infrastructures for target groups cuts across several domains, from governments to the Target Groups themselves.

### For Target Groups

- Financial and economic inclusion for target groups.
- Allows target groups to work in their representative sectors and access trade centers..
- Provide associated services to target groups such as collective health care (basic healthcare), and access to information shared by their associated national bodies/ministries.
- For poor populations mostly without any identity, being registered gives them a community status.
- Prevent forced displacement of individuals and empower target groups to participate in patriotic exercises.

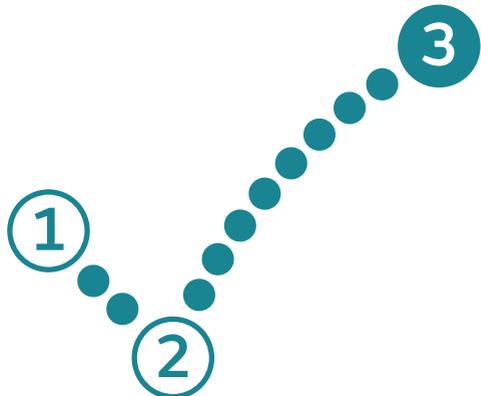
### For Governments & States

- Crack down on illegal organizations, illegal operations, reduce fraud and prevent corruption – e.g. resale of resources outside official markets
- Enable ability to register transactions by setting up, allowing and regulating of trade centers; recover taxes on the transactions
- Using data to administer national statistics: number of workers, which sector they are working, population census, etc.
- Preparing beneficiary programs and incentive programs / social assistance programs.
- Tracking revenue from National Revenue Authorities (tax revenues)
- Eliminate child employment
- Ensure transparency within high-value and fast-paced sectors.



### And there are more opportunities

- Implementation of an online trading platform for high-value commodities
- Offer additional micro health insurance
- Possibility for people that want extra coverage for their insurance, and possibility to include dependents.
- Implementation of a central monitoring dashboard where all high value transactions can be followed in target sectors.
- Enhanced monitoring for services and individuals, as data collected is available.



# This is where we come in

GenKey provides a simple, three step, end-to-end approach to help successfully build biometric registers for target groups around the globe. Each step is proven in real-world applications, cost effective and compliant with the highest global standards. Furthermore, our approach is customizable and adaptable to any market sector, from miners' registration and banking, to education and civil registration.

Our three step approach is designed to support sustainable identity systems, based around interoperable technologies and components that meet the highest global standards. Our technologies can be integrated seamlessly with

existing identity systems and hardware. Our technologies are hardware-neutral and are compatible with all commercially available systems and can be updated over time in step with hardware upgrades.

1



## Enroll

Our Enroll Solution ensures a person's data is registered to the highest standards.

2



## 1=1

Our 1=1 Solution is the central ID Management hub, ensuring that one person = one unique ID.

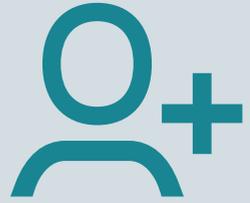
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## Verify

Our Verify Solution delivers secure, reliable and fast ID verifications.

# Enroll Quality in quantity



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Our Enroll Solution ensures that millions of people's data is registered to the highest standards, and all it takes is a few minutes. GenKey's Enrollment software is designed to capture high quality, reliable data, that's stored securely.

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#### **Mobile registration**

Our enrollment software supports all the benefits of mobile registration without any compromise to the quality of the data captured. Our privacy-by-design function provides secure data storage even in the most remote rural areas with limited infrastructure and connectivity.

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#### **High quality data capture**

Our solution is designed to capture the highest quality image templates. It integrates with third party enrollment hardware and works with all commercial scanners.

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#### **Multi-modal capability**

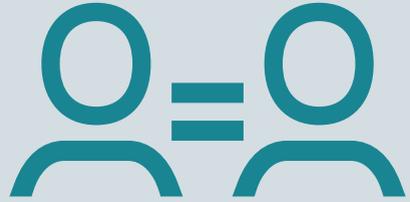
Fingerprint, iris, face, voice: our solution is designed to capture a range of biometrics for improved accuracy.

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#### **Local deduplication capture**

GenKey's patented duplicate check detects if any duplicate biometric data is being submitted and alerts the operator immediately. It reduces the risk of double registrations and acts as a first line of defense against fraud or administrative error.

# 1=1 The hub of ID management



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GenKey's 1=1 Solution manages and maintains millions of IDs. It's the central hub that ensures data is held securely and can be retrieved, updated and maintained efficiently. A key component is GenKey's ABIS, which runs continuously, deduplicating small and large-scale biometric databases with industry-leading speed and accuracy.

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#### **State-of-the-art deduplication**

GenKey's ABIS is capable of checking over 1 billion stored fingerprints per second, on a single server. It uses two powerful SDKs to achieve both speed (FastAFIS®) and accuracy (BioFinger®).

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#### **Managing data, continuously**

GenKey's 1=1 Solution is the central management hub. It runs continuously 24/7, importing new registrations, creating reports, issuing ID cards and verifying IDs.

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#### **Certified to the highest global standards**

GenKey's 1=1 Solution meets the highest global standard of biometric certification. Our technology is MINEX certified and our biometric image and template formats are ISO compliant.

# Verify

## Reliable identity, wherever it's needed



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Our biometric Verify Solution delivers secure, reliable and fast ID verifications, using GenKey's biometric verification devices. They're designed for any biometric ID verification purpose, being easy to use and long lasting. We've issued over 72,000 to Ghana alone since 2012.

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### Mobile Verification

Our mobile biometric identity verification solutions are designed for a range of environments and markets. They're easy to use, with a customizable workflow application that has step-by-step instructions for operators.

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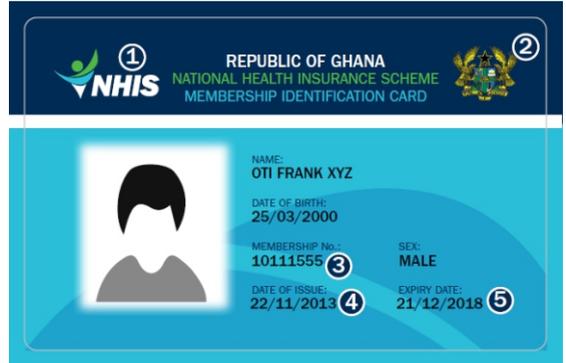
### Privacy-by-design

Our patented BioHASH® technology encrypts data to the highest ISO standards. A stored BioHASH® template is created by application of a one-way encryption operation which removes the need to store the source biometric data from which it is derived. BioHASH® codes are revocable if they are lost or deleted through a security breach.

# How do we make this work?

## Registration Process

- Trained registration officers go to the field at fixed locations or with mobile units moving throughout the country to locations of target groups. Data collection fields will be based on inputs from governing bodies.
- Biometric and biographic data of target group members are collected, including, facial, fingerprints and signature.
- Target group members are issued a card which prove they are legitimate members of the target group (workers / miners / refugees etc.) or have paid any periodic registration or renewal fees.
- Target group members receives a message (e.g SMS) to authenticate the data collected.
- Capability to register 30,000+ target group members per day with deployment of 600 registration stations /or tablets.
- A renewal and re-registration model for lost cards can be set up in consultation with governing bodies.
- A centralized national database will be under the control of the associated governmental Ministry.



## Card Customization

- Card design and security features can be agreed with Government Agency
- Card can be suitable for contact(less) reading and updating
- Biometric information can be stored on card as a bar code with the help of GenKey's BioHASH®.

## Possible security features of issued cards



Hologram

Micro text

Security

2D barcode background designs

# We have experience.



## **Ghana Household Registry**

In 2016, the Ghanaian government asked GenKey to undertake a highly ambitious project: to help build a complete, biometric-based social register of every household in the country. The aim of the Ghana National Household Registry (GNHR) is to support social protection services, giving vulnerable people with no formal identification access to the social assistance they desperately need.

Using a door-to-door approach and hundreds of biometric tablets, we helped in enrolling over 138,000 households in the Upper West Region of Ghana (stage 1) into the register, comprising a total of over 600,000 individuals.



# A door-to-door approach



Mobile registration of impoverished households in Ghana as part of social protection program.



### **Niger Civil Registration**

Niger has been faced with a sharp increase in members of the civil service sector as a result of several major recruitments. At the end of 2017, the civil service number was estimated at around 130,000 persons. Due to the diversity of services involved in the management of the careers and remuneration of civil servants and the lack of accurate coordination of centralized services, it is highly impossible to produce exact statistics on the number of staff in the civil service.

GenKey is building a biometric system for registering, identifying and authenticating state employees and students receiving grants and/or various forms of social assistance, culminating to 400,000 enrollees. This will serve as an emblem of a future national population register, to which other systems of identification, verification and authentication can be grafted.

# Talk to us!

Let's have a conversation on how we can tailor our solutions to your specific needs.



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[info@genkey.com](mailto:info@genkey.com)  
[www.genkey.com](http://www.genkey.com)

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# We're GenKey. We're experts in biometrics.

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We work with governments and their partners to help millions of people across Africa to register and verify their identity.

Our 3 step approach is proven to deliver large scale ID programs across a wide range of markets, including elections, healthcare and social protection to name a few.

There are 1 billion people with no legal identity, that means no birth certificate, no ID card, no passport. Nothing. What's more, it's estimated that over 600 million children alive today have no registered birth. Access to a legal identity is one of the UN Sustainable Development Goals. It calls for every person to have a legal identity by 2030.

It's GenKey's mission to help bring about *Identity for all.*