



Leveraging blockchain technology to create a  
universal ID platform

ID4Africa 2018  
Abudja, Nigeria



# AGENDA

**1. How it works**

**2. Results from the Kenya pilot**



# OUR AMBITION

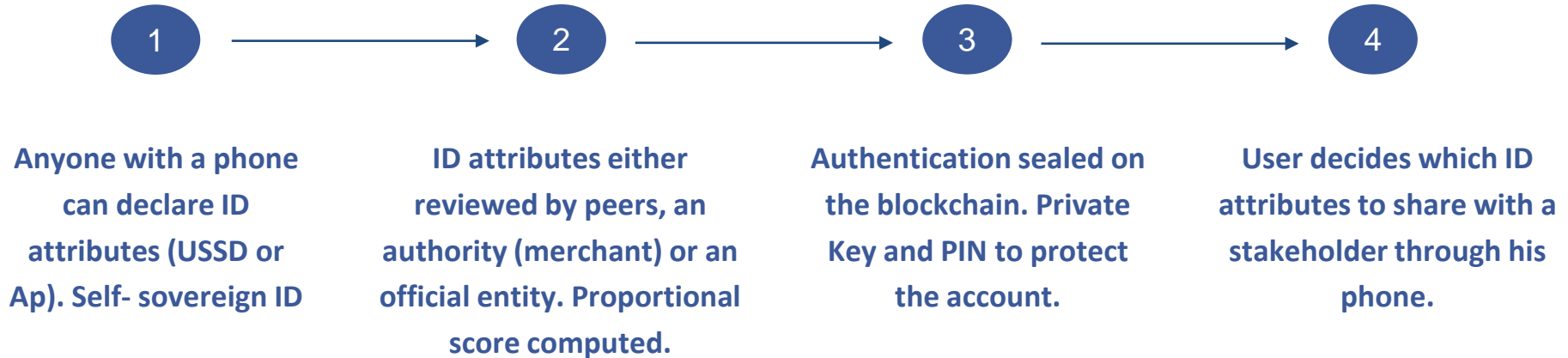
Create an ID platform that will improve existing ID infrastructure by :

1. Providing more proportionality, through machine learning scoring  
> Current challenge : ID is binary
1. Making identification onboarding protocol more convenient and scalable  
> Current challenge : expensive and labor intensive ID vetting process
3. Empowering citizens with control of their ID data with stakeholders  
> Current challenge : lack of ID interoperability, duplicate costs

**Gravity ID : not a substitute for an official ID, but a meta-ID leveraging it**



# HOW IT WORKS



## Gravity ID : compliant with official ID constraints

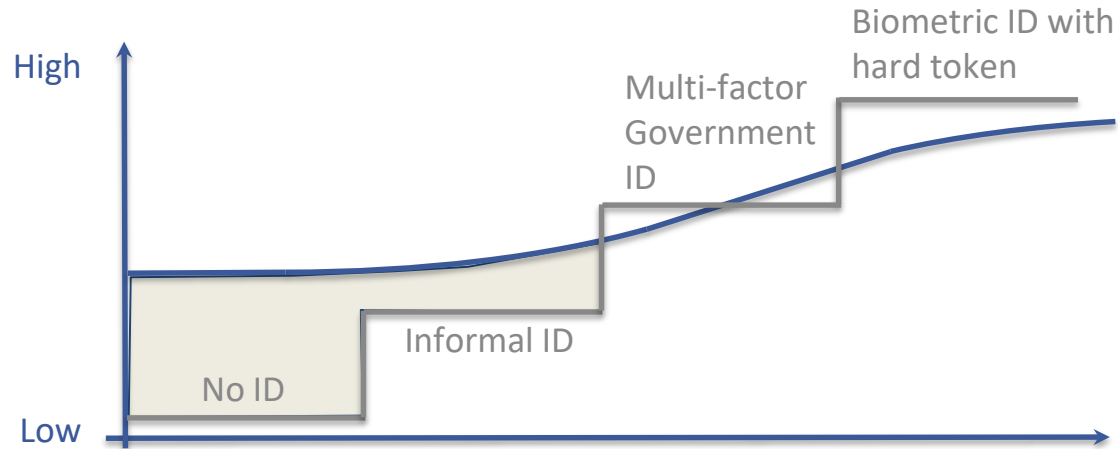
- Uniqueness : include biometrics in the protocol (fingerprints, voice recognition, eyescan)
- Official authority vetting
- Inclusion of birth certificate registries

# ID ATTRIBUTES

**Machine Learning:** from rare and expensive data to cheap low intensity data

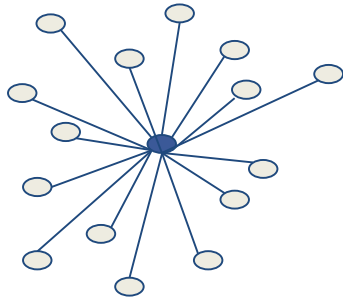
Level of assurance of  
g-ID, capture  
through user ID  
score

Level of assurance of  
traditional ID systems

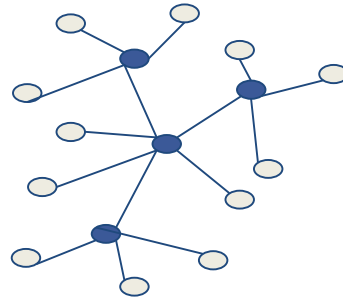


# ID REGISTRY

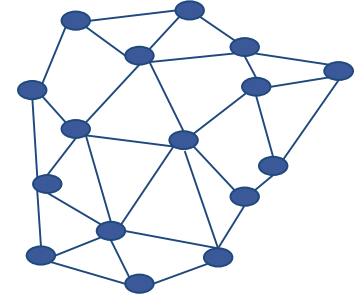
**Blockchain:** from sequential data processing to full interoperability



Centralised



Decentralised



Distributed

**Data management becomes:**

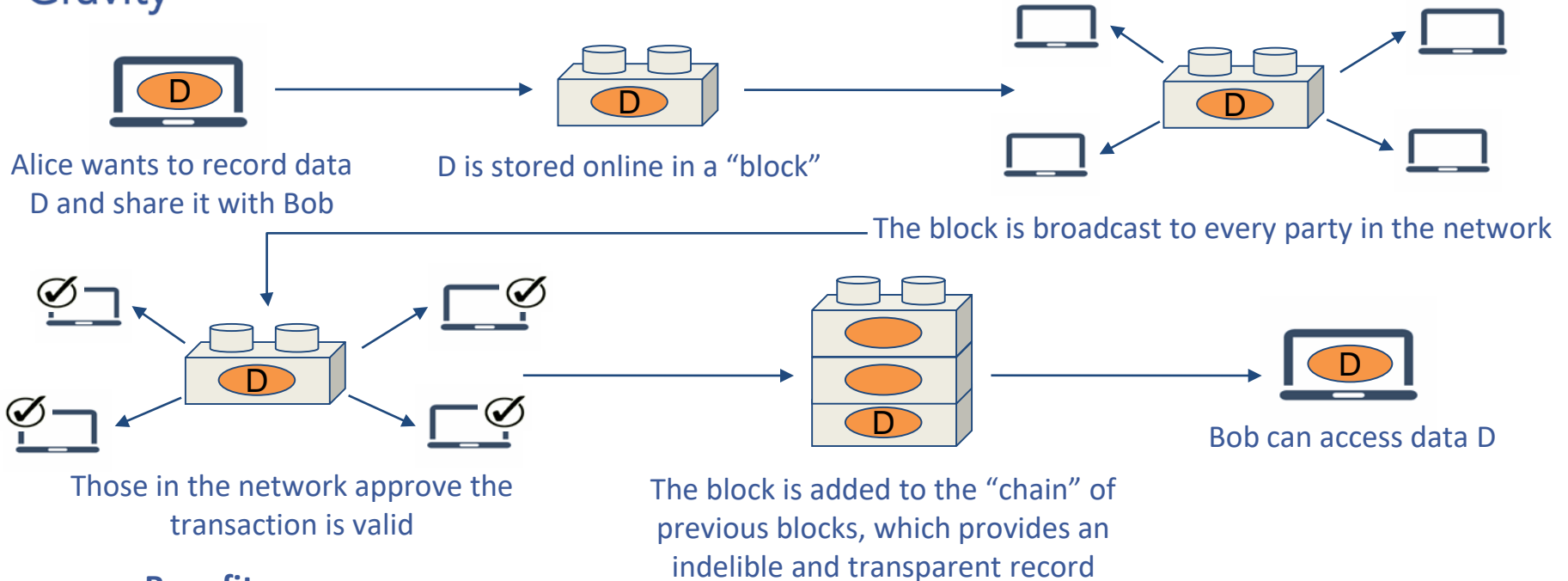
**1 Shared**

**2 Secured**

**3 Trusted**

**4 Automated**

# WHY BLOCKCHAIN



## Benefits :

- **an official vetting can never be undone, forever trackable**
- **avoid multiple ID validation by officials and congestion of ID proofing public entities**

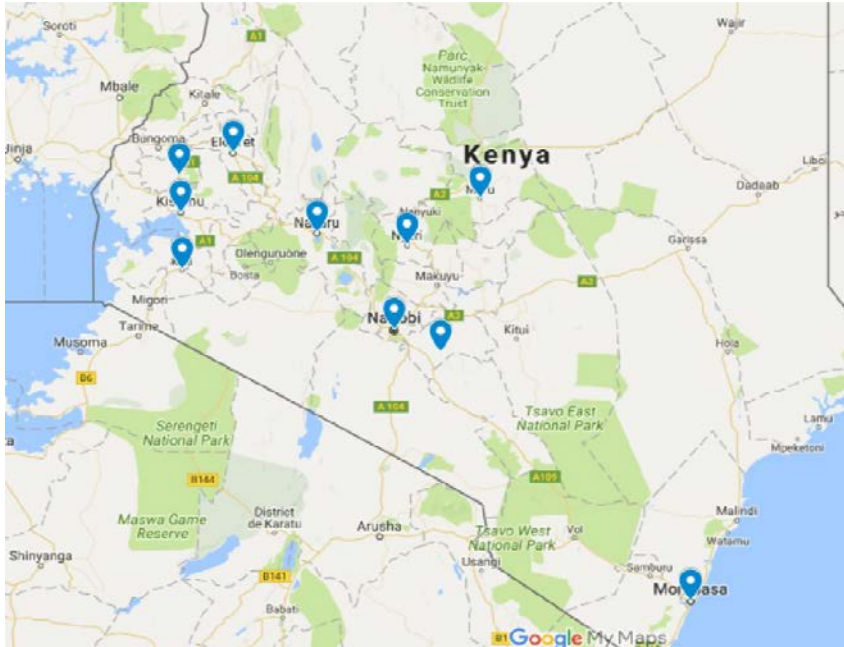


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# PILOT SCOPE



- g-ID pilot run in June 2017 in Kenya
- Front-end platform based on a USSD menu
- 74% living in rural areas: Mombasa, Nairobi, Meru, Nakuru, Kisumu, Kisii, Nyeri, Machakos, Eldoret and Kakamega

# DATA CAPTURED

**SUBSCRIBER REGISTRATION FORM**

**SUBSCRIBER TELEPHONE NUMBER:** \_\_\_\_\_

**FIRST NAME** \_\_\_\_\_ **MIDDLE NAME** \_\_\_\_\_ **LAST NAME** \_\_\_\_\_  
(Use all names as they appear on Identification document)

**DATE OF BIRTH:** DD \_\_\_\_\_ /MM \_\_\_\_\_ /YY \_\_\_\_\_ **GENDER:** MALE  FEMALE

**NATIONALITY:** \_\_\_\_\_ **OTHERS (SPECIFY COUNTRY):** \_\_\_\_\_

**TYPE OF IDENTIFICATION:** National ID  Passport  Alien ID  Military ID  Birth Certificate  Certificate of Registration/incorporation

**IDENTIFICATION NUMBER:** \_\_\_\_\_

**POSTAL ADDRESS:** (where available): P.O BOX \_\_\_\_\_ **POSTAL CODE:** \_\_\_\_\_ **TOWN/CITY:** \_\_\_\_\_

**PHYSICAL ADDRESS:** ESTATE / VILLAGE \_\_\_\_\_ **HOUSE NO/PLOT NO:** \_\_\_\_\_ **ROAD:** \_\_\_\_\_ **WARD:** \_\_\_\_\_ **COUNTY:** \_\_\_\_\_

**ALTERNATE CONTACT TELEPHONE NUMBER:** 1: \_\_\_\_\_ 2: \_\_\_\_\_

**MONEY REGISTRATION**

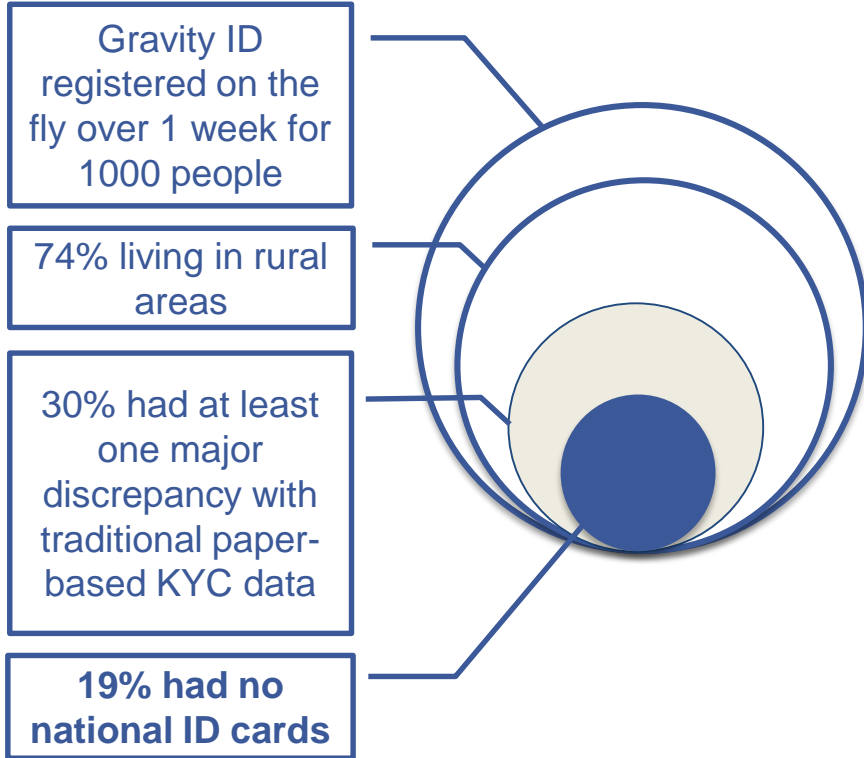
By completing this section, I hereby acknowledge that I shall be registered for \_\_\_\_\_ Money services. I understand that I may opt out of the services at any time by giving written notification to \_\_\_\_\_ I acknowledge that my use of \_\_\_\_\_ Money services is subject to \_\_\_\_\_ I acknowledge that the Airtel Money Terms and Conditions constitute a binding agreement between me and \_\_\_\_\_

**Customer's Signature** \_\_\_\_\_

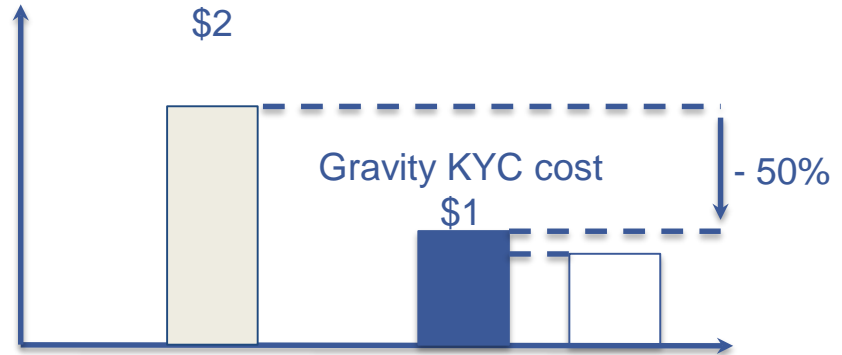
**NEXT OF KIN DETAILS:** FULL NAMES \_\_\_\_\_ **RELATION:** \_\_\_\_\_



# KEY FINDINGS



Average paper-based KYC cost for mobile operators  
\$2



...of which \$0.45 paid to the end customers as a reward



# A UNIQUE VALUE PROPOSITION

Our approach is 100% suited for the African context, while leveraging the most up to date technologies and data privacy principles :

1. A mobile first/centric protocol, leveraging the most ubiquitous channel in Africa : mobile. Either through USSD or smartphones, with a unique “sponsor” mechanism.
1. Use of blockchain to make the authentication 100% secure.
1. Make the user in control, by self declaring ID attributes, leveraging his social connections for Peer to Peer vetting and give him easy ways to share his ID with stakeholders. Compliant with EU GDPR guidelines.



GRAVITY Identity Management Services

visit us at [www.gravity.earth](http://www.gravity.earth)