Leveraging Mobile Technology and "Bubble Tag" Wristbands to end the Problem of Ghost Children

ID4Africa Movement

Abuja, Nigeria, April 26, 2018

Speaker: Mr. Clément KAISER, co-founder, iCivil Africa

INTRODUCTION - Observations

In sub-Saharan Africa, birth registration rates are below 50%.
In the poorest households, it is less than 30%.

❖ 230 Millions Ghost Children

2/3 of the deaths are never recorded and are therefore not counted in the vital statistics system.

However, it is necessary to specify that, these data concerning unregistered children are necessarily approximate. They are likely to be much larger.

INTRODUCTION – Civil Registration and Vital Statistics

*"A well-functioning **Civil Registration and Vital Statistics (CRVS)** system registers all **births and deaths**, issues birth and death certificates, and compiles and disseminates vital statistics, including cause of death information. It may also record **marriages and divorces**.*

*Despite the **well-documented benefits of CRVS**, many countries do not have adequate systems in place. The births of **tens of millions of children are known to be unregistered** every year, and it is estimated that **two-thirds of deaths are never registered** and are thus not counted in the vital statistics system."*

World Health Organization

CRVS: Complexity due to multiple Stakeholders and multiple Sites...

Citizens
New born, young boy and older

Parents
Citizen's parents

Midwife
Or any authorized person
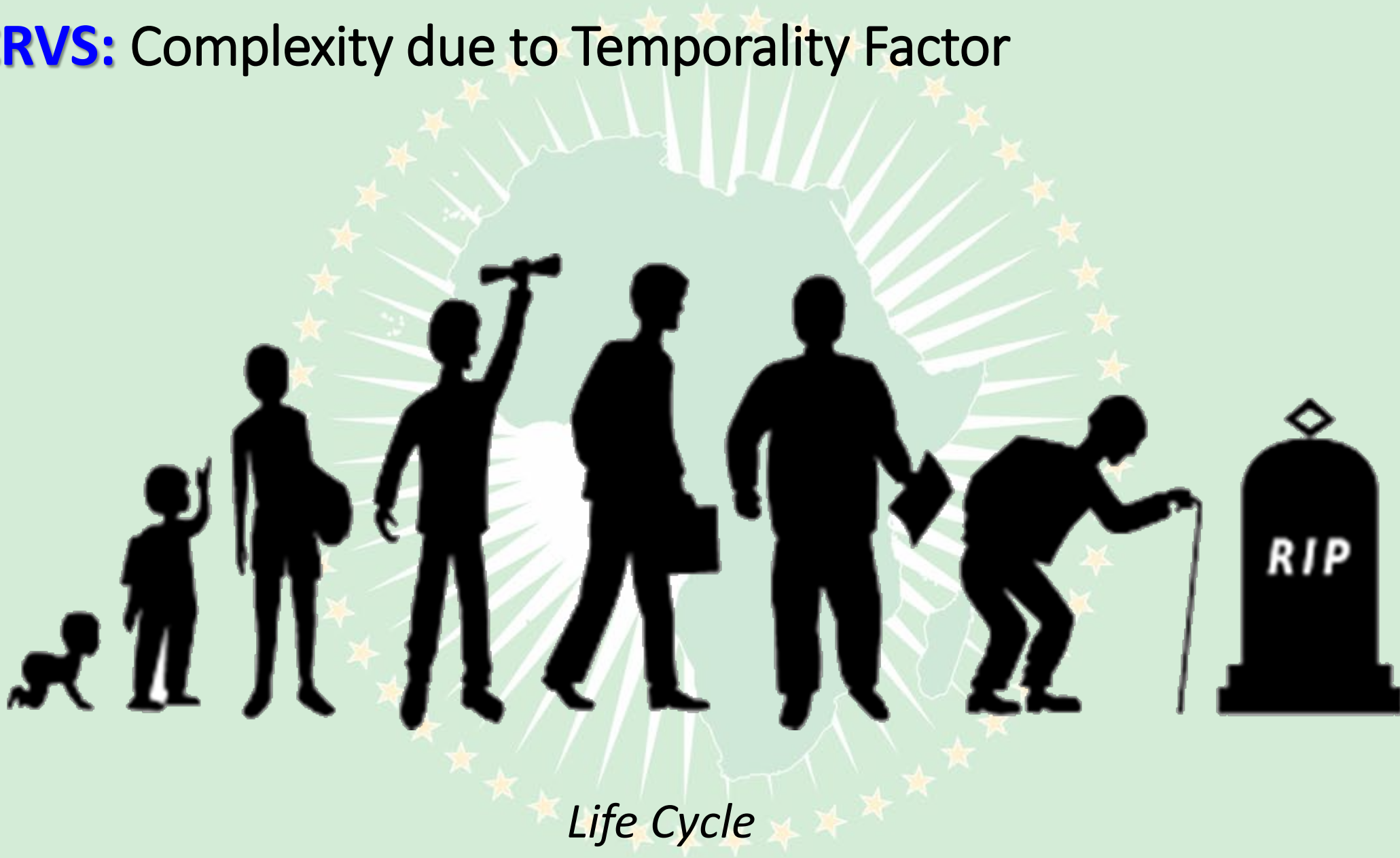
National Registry Officer
Government Officer

Judge

Issuer of administrative or official documents
Local Government Officer

CRVS: Complexity due to Temporality Factor

Life Cycle

iCivil ™ **SOLUTION**
Integrated System for People e-ID

iCivil ™

iCivil ™ SOLUTION
Tools

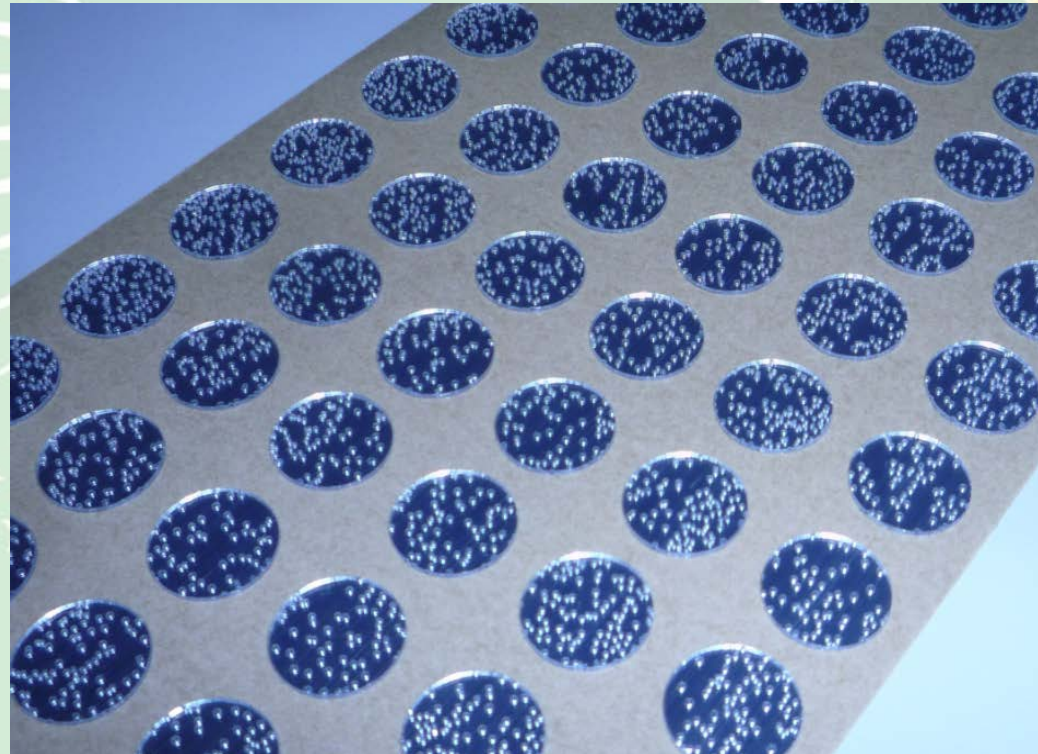## Bubble Tag Wristband

- Cannot be cloned
- Unique: Chaotic 3D Self Generated Code resulting from a Natural phenomenon
- Unpredictable digital signature
- Total Traceability of actors
- Digital and visual Authentication
- Do not break down
- Life cycle exceeding 250 years

iCivil ™
App'

SMARTPHONE

iCivil ™ App'

iCivil ™ **SOLUTION**
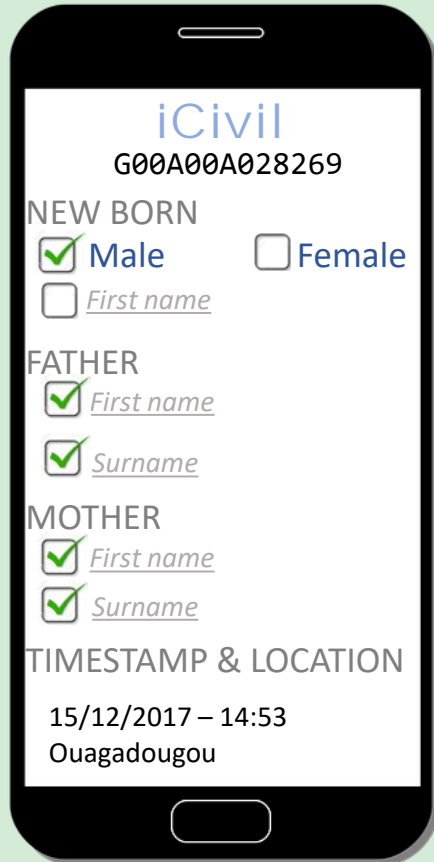Operation: Birth Declaration – Day 0

1 A **Bubble Tag Wristband** is placed around the wrist of the **new born baby**.

2 The **midwife** uses a **mobile phone** to scan the QR Code of the **Bubble Tag Wristband** using the **iCivil App'**

Maternity

iCivil ™ SOLUTION
Operation: Birth Declaration – Day 0

Maternity

iCivil

G00A00A028269

NEW BORN
☑ Male   ☐ Female
☐ *First name*

FATHER
☑ *First name*
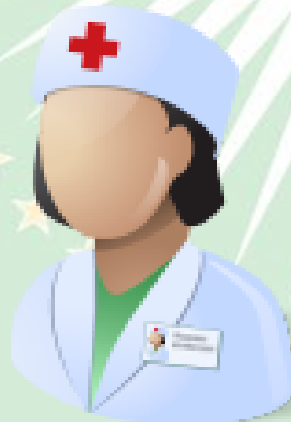☑ *Surname*

MOTHER
☑ *First name*
☑ *Surname*

TIMESTAMP & LOCATION

15/12/2017 – 14:53
Ouagadougou

3 A form opens in order to **collect all the information** related to the birth

4 Once completed, an **encrypted SMS** is sent to the **National Central Server**

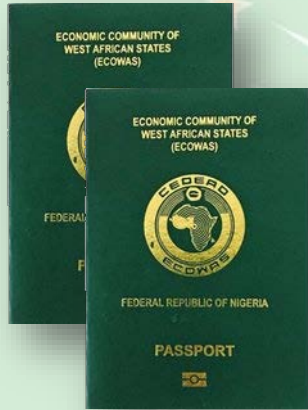**5** The **encrypted SMS** is processed. A SMS is sent back to confirm **safe receipt**

6 The information are uploaded to the **National Register of Civil Status**

iCivil Central Server

iCivil ™ SOLUTION
Operation: Birth Registration – Day 20

National Birth Registration Office

2 The information are downloaded from the **National Register of Civil Status**

3 A **certified copy of the Birth Certificate** can be printed with the **image of the Bubble Tag**

1 On presentation of the **Bubble Tag Wristband** with parents' **ID Document**, the **Officer** can **register** the birth of the new born baby
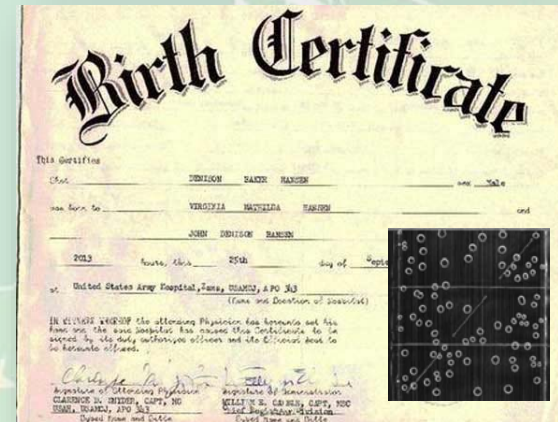
ECONOMIC COMMUNITY OF WEST AFRICAN STATES (ECOWAS)

ECONOMIC COMMUNITY OF WEST AFRICAN STATES (ECOWAS)

FEDERAL REPUBLIC OF NIGERIA

PASSPORT

iCivil

Birth Certificate

iCivil ™ SOLUTION
Operation: Birth Certificate Issuance – e.g. Year 18

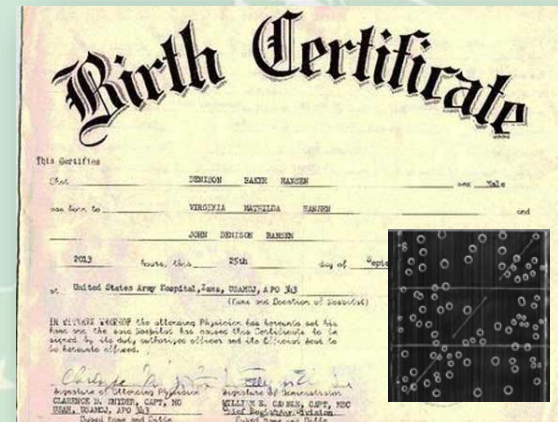**2** The information are downloaded from the **National Register of Civil Status**
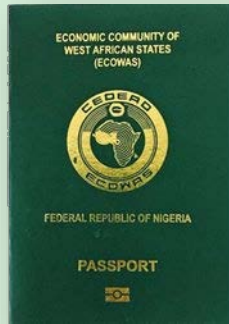
1 On presentation of the **Bubble Tag Wristband** together with his **ID Document**, the **Officer** can **issue** the birth certificate to the **Citizen**

3 A **certified copy of the Birth Certificate** can be printed with the **image of the Bubble Tag**

Mayor Office

COHERENCE OF THE SOLUTION

Physical World

Proof

Digital World

N°14256* N°14256 N°14256 N°14256 N°14256 N°14256 N°14256 N°14256

Birth Declaration
Birth registration
Issuing a certificate of birth
Adoption
Wedding
Divorce
Issuing a birth certificate
Death

* N°14256 is an example

Digital Birth   Digital Death

STRENGTHS OF THE SOLUTION

- **The Bubble Tag Wristband**
  - Ensures the interphase link
  - Can not be duplicated
  - Unique: It is a self-generated chaosmetric 3D code, resulting from a natural phenomenon
  - An unpredictable digital signature
  - Total traceability of actors
  - Digital and electronic authentication
  - Does not break down
  - Durability over 250 years

- **Application for Smartphone iCivil**
  - Total traceability of agents
  - Guarantee of the integrity and authenticity of the collected data
  - Geolocation of the place of declaration

- **Other advantages**
  - Compatibility with the communication networks already available
  - Rapid constitution of the national registry of civil status
  - Highly secure ecosystem
  - Declaration and registration of large scale births without risk of duplication,
  - Provision of secure and controllable civil status records
  - Provides reliable, complete and real-time statistics to the authorities, the administration, the technical and financial partners ....
  - Facilitates the planning, implementation and evaluation of the development policies.

PROOF OF CONCEPT

Proof of Concept visible in Burkina Faso

Several thousands of children registered in 10 maternities
+ 30% of births registered in the said maternities

Proof of Concept supported with UNFPA funding

A STRONG INTERNATIONAL RECOGNITION

OIF
UNFPA
UNICEF
OMS
UNHCR
Delegation UE/ BF
World bank
ANF
ID4Africa
ONU

(Target 16.9 of the Sustainable Development Goals)

…

International Medias
link

International Organisation of La Francophonie
SG, Michaëlle Jean, Burkina Faso, March 2017

iCivil promises much needed birth registration in Africa
Rawlson O'Neil King, U.S.A., August 2016
link
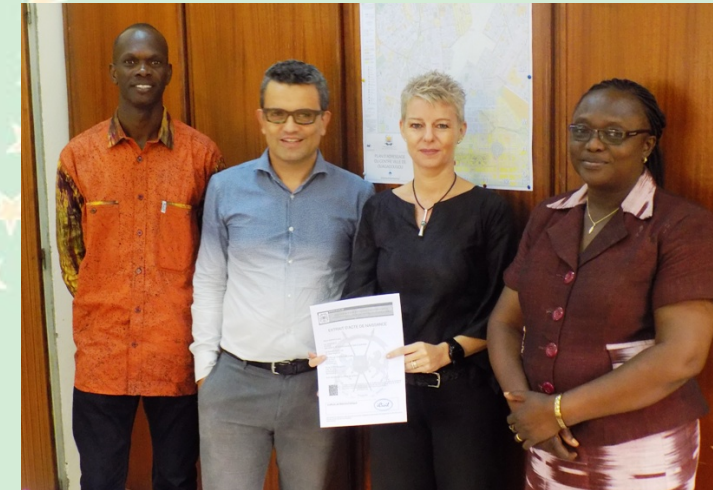
Economic and Social Development Section of the European Union.
Mr. Thomas Huyghebaert, Head of Governance, Burkina Faso , Juin 2017

THANK YOU FOR THEM

iCivil ™
Integrated System for People e-ID