



Birth data into the register at the place of birth How Kenya redesigned the birth registration journey

Together with the Kenyan state, we redesigned how births are registered

The goal was to use digitalisation to solve the accessibility of the service and the logistical obstacles in the movement of data. Paper-based registration became a digital service, launched in 2025 as Kenya's national digital birth register. The work was part of a wider commission: the analysis and prototyping of three public e-services, carried out in parallel.

Client	ESTDEV, the Estonian Centre for International Development
Service owner	Civil Registration Services, Kenya
Programme	Team Europe Initiative on Human-Centred Digitalisation (GIZ and ESTDEV through the Digital Transformation Centre Kenya)
Funding	European Union · Germany · Estonia

Project scope	Analysis of three e-services and prototyping of their user interfaces, centred on end-user needs
Trinidad Wiseman's part	Research, service design, prototype, requirements analysis, methodology
Timeline	Field and design work from August to October 2024, handover in November 2024

SUMMARY

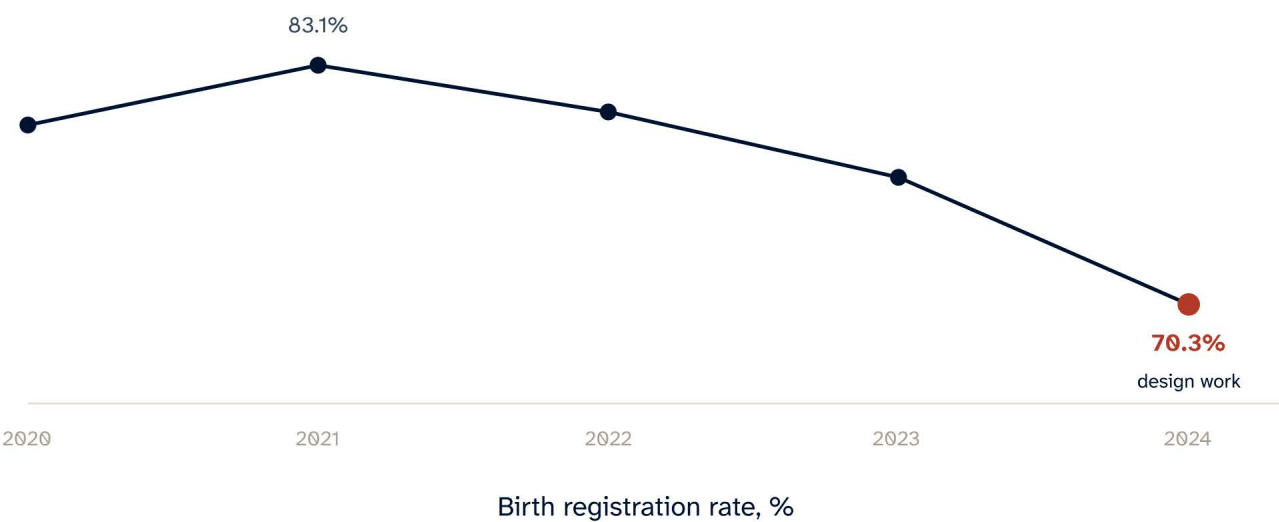
Instead of merely digitalising a paper form we redesigned the journey of birth data.

Birth data is now born digital where the child is born. The register entry is the lasting foundation; paper birth certificate is only a proof.

Research · co-creation · prototype · testing · development · launch

In 2024, more than 469,000 children in Kenya went unregistered

By the start of the project in 2024, Kenya's birth registration rate had fallen for **three years in a row**: from 83.1% in 2021 to 70.3% in 2024. Kenya's own statistical report describes this as a persistent decline.



PROBLEM · WHAT IT MEANS FOR THE CHILD

Until the age of 18, the birth certificate is a child's only identity document

Without the certificate, the child cannot later get an ID card, and they must start proving their own birth with school and church records.

Every error and delay in this service becomes the person's own burden of proof.

The child cannot take part in the process but feels the consequences throughout their life.



Child

- **Most dependent on correct birth registration and access to the birth certificate**
- **Has no control over the process until the age when already set back by the issues**

Birth registration completeness in Kenya is about 70%. Various issues, steps and complex process of registration handling allow for mistakes and gaps to appear which generate complications for the child's future in education and acquiring national identity number and card later on.

Without retainable traceable data and birth certificate, large obstacles are set on their way to success

Births were recorded in the hospital. The data reached the register late or not at all.

Nearly all births in Kenya take place in hospitals, and the staff are ready to record them. Yet it did not always succeed: when they ran out of registration forms, the birth went unrecorded. But even the data of a recorded birth might never arrive.

By agreement, the hospital was to deliver the completed birth notifications to the civil registration office once a month. In reality, no documents had arrived from some areas for three years, because transporting them was costly and burdensome. A birth that never reached the register remained unknown to the state.

On its way to the civil registry head office, every birth notification passed through the hands of eight officials and carried three different numbers along the way.

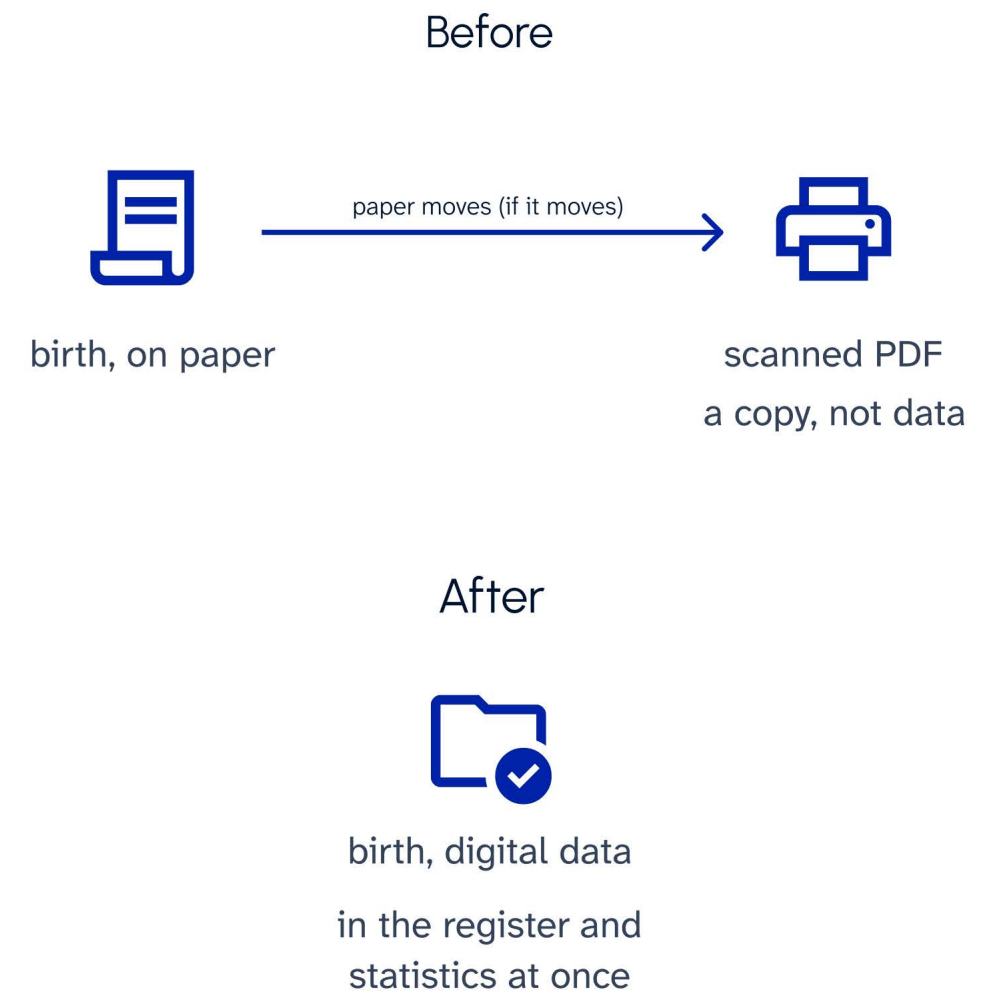


The digital system held copies of papers instead of data

Forms that reached the head office were scanned into the archive as PDFs. That is digitisation, not digitalisation: the system held a picture of the paper, not machine-readable data.

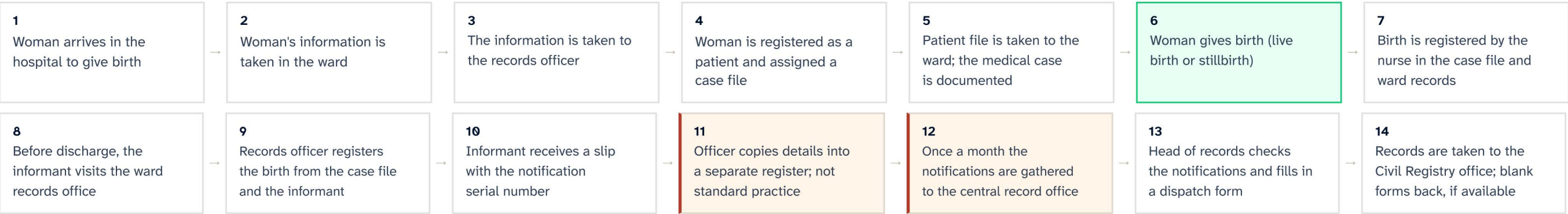
Corrections were made on paper, but they never reached the scanned copies. With every correction, the gap between paper and system grew.

Out of this grew the principle of the solution: data must be born digital where the child is born. It then reaches the register and statistics immediately, without transport, retyping or scanning.



There were two ways to register a birth and both ended as paper in an archive

BIRTH IN A HOSPITAL · 8 STEPS FROM BIRTH TO THE CIVIL REGISTRY



Special cases: a stillbirth is marked on the notification by ticking “born dead” · in case of neonatal death, a death notification is filled in at the hospital central records office, which is a separate office

BIRTH IN THE COMMUNITY · THE CHIEF IS CALLED WITHIN 48 HOURS, FOLLOWED BY 8 STEPS



Special cases: a stillbirth is marked by ticking “born dead” · in case of neonatal death, the death notification is filled in by the chief

THE DESIGN CHALLENGE

How to get birth data into the register without transporting and retyping paper?

And to do it so that the parent's internet, smartphone or digital skills are not a precondition for registration.

PRINCIPLE 1

Data must be created at the place of birth and reach the register immediately, not once a month on paper.

PRINCIPLE 2

The digital obligation stays with the institution providing the service, not with the parent.

Five weeks on the ground. A year later, the service went live.

Because of the project's short timeframe, we chose a high-intensity five-day sprint format: the parties assembled the future service in one room, not through rounds of written review.

August 2024	Field research in Nairobi and Kajiado: interviews with service providers and users, observation in offices, a hospital and an archive	26 and 30 September	User testing at the Nairobi and Kabati civil registration offices; validation of technical requirements with the service owner
14–15 August	Synthesis: personas, mapping of the current journey, ranking of pain points	October 2024	Design refinements based on the test results and preparation of the solution documentation
22 August	Co-creation workshop with 18 participants: the future service journey and the service blueprint	November 2024	Handover: analysis, prototype, requirements and methodology handbook
September 2024	Clickable prototype and design system in Figma, following Kenya's accessibility standard KS 2952-1:2022	2025	Development (ADM Interactive with Kenya's Civil Registration Services) and launch of the national digital birth register

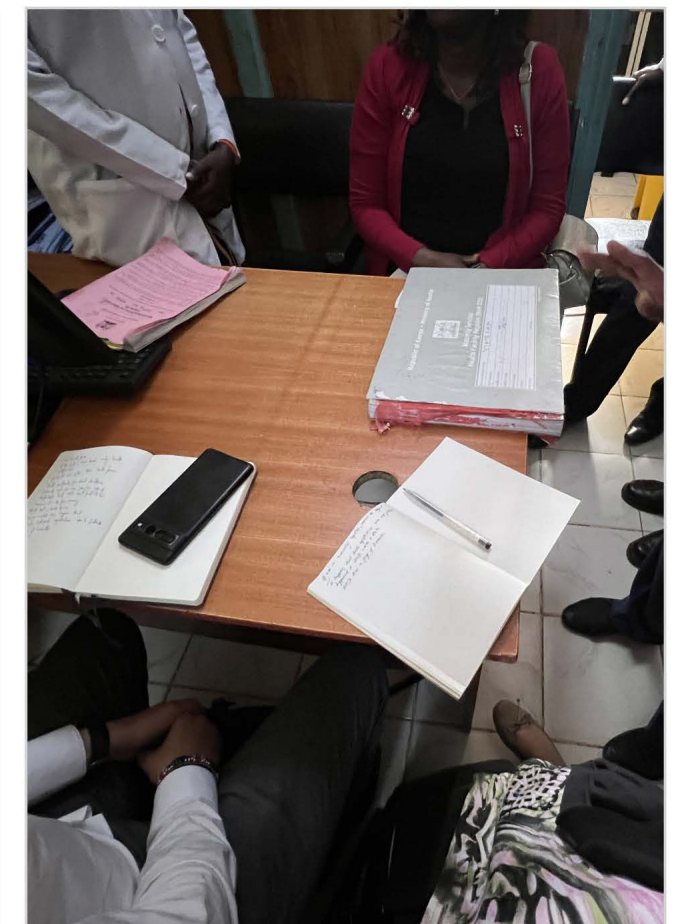
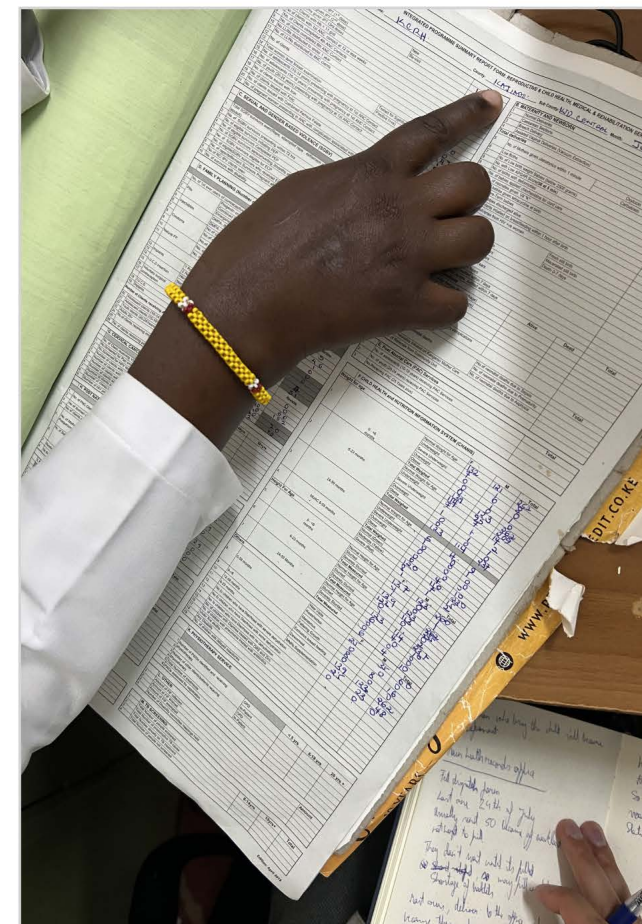
We studied the service on site: in a hospital, in offices, in an archive and in the queue

Two field days: in the city of Nairobi and in rural Kajiado. We deliberately chose both, because the service works differently in the city and in the countryside.

Nine interviews with service providers: registration officials, data entry clerks, certificate issuers and corrections officers, the hospital's registration officer and transport coordinator, a statistician and an assistant chief.

Observation days at civil registration offices and archives.

Conversations with parents in the waiting halls of civil registration offices.



What people told us in the queues for birth certificates

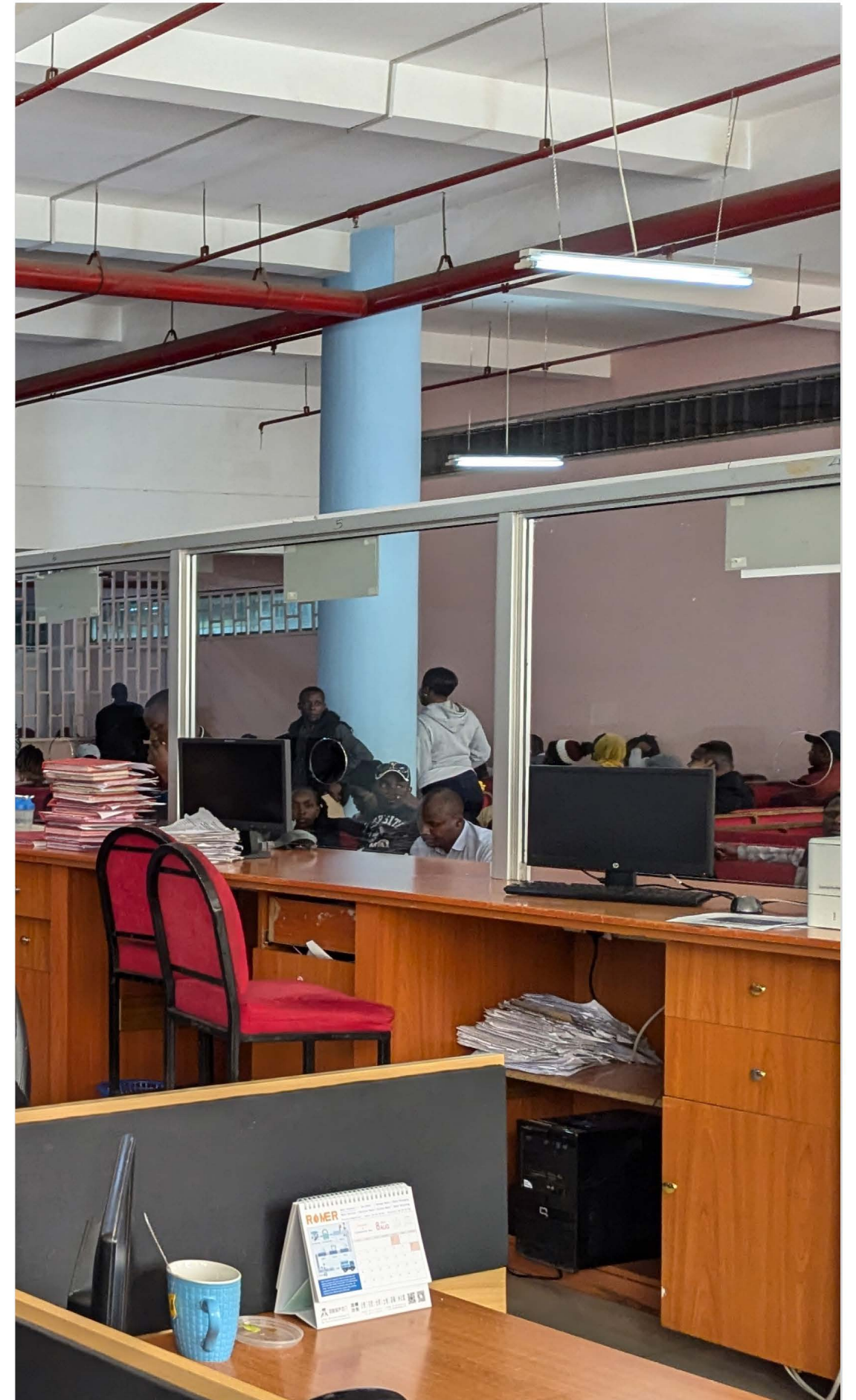
A parent whose child is a year and four months old: the online application did not list the hospital where the child was born. They were told: pick any one, it can be corrected later. So even before receiving the certificate, they knew it would need correcting.

A parent of two applied for the certificates on e-Citizen through a cybercafé. When the notice came, collecting the certificates still meant taking a day off work.

A 19-year-old man came for his birth certificate in order to get an ID card, carrying records from his school and church and copies of his parents' documents. He had taken a whole day off work, not knowing that past the age of 18 he could no longer apply for the certificate directly. The day off was wasted, and a far longer and more complicated process lay ahead.

These stories were not exceptions. Every visit cost a person a working day, and every error was the citizen's to find and to fix.

User interviews at a civil registration office, 12 August 2024



Everyone saw only their own stretch of the service.
No one saw the whole.



Parent

After a child is born, there are more urgent things than paperwork that demands travel, time and fees.



Chief

Registering births is only a part of my work. Registration and transporting the documents are the main obstacles.



Hospital registration officer

I understand the importance of correct documentation, but I run into many obstacles.

Everyone did their own part well, yet the whole of the service was lacking.
The consequences fell on the only one who had no say in the process at all.



Child

Without retainable, traceable data and a birth certificate, large obstacles are set on their way.

The future service was put together by the people who deliver it every day

The service providers were not spectators in the process but participants. They came along on the field research to the hospital and the village, took part in the interviews, helped to translate and asked the questions only someone who knows the system from the inside can ask.

Creating the personas, they put into words for the first time how every delay and error ultimately reaches the child, and what responsibility this service and the state actually carry.

The future service was born in co-creation, built on the research results we had prepared. Around the table were 18 people: nine from civil registration, GIZ, the Ministry of Interior, the e-Citizen platform, the Kajiado county hospital and three of us. A chief, a hospital officer and a platform developer discussed the same service together, although they normally never meet.

By the end of the process, the participants felt the solution was their creation. That sense of ownership carried it through development to the launch in 2025.

Field research and co-creation, August–September 2024



The prototype was tested by people who had come for their own child's certificate

We ran the prototype tests in the real service environment: 12 tests with parents who had come to collect certificates and 4 tests with frontline service providers, three of them hospital registrars and one a village chief. We also walked the solution through with four CRS officials.

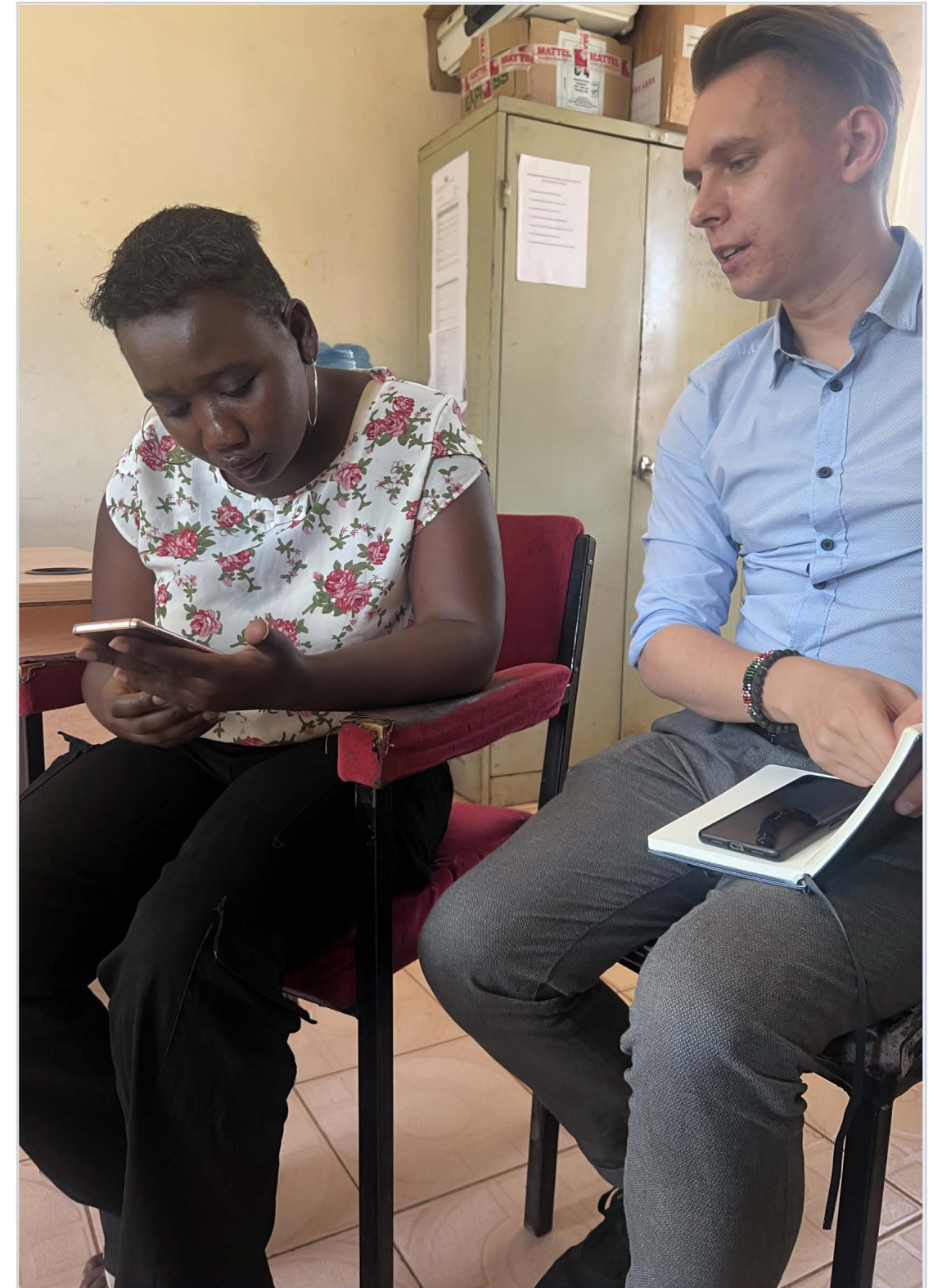
The test scenario came from real life: a parent of three children, two of them without a birth certificate. Testers grasped the situation at once.

"This makes sense because all of this current paperwork is unnecessary."

Parent taking part in a test, September 2024

Not every finding led to a change: testers asked whether the phone number must be mandatory. Because the confirmation logic relies on the phone and most people own a basic phone, we kept the mandatory number after discussing it with the service providers.

Several testers commented on the size of the state fees shown in the prototype (it displayed the official rates in force at the time). Changing the fees was not this project's call, so the feedback went into the documentation with a recommendation to review the fee system. The fees have since been reduced.



Alongside the formal tests, we validated the solution continuously throughout the autumn: three prototype reviews with the service owner, a presentation to civil registration officials and a technical requirements review with the CRS head of IT.

We did not assume the citizen has internet, but that the state can provide it to the hospital and the chief who register births.

We mapped the constraints that matter for digitalisation: literacy in the country is around 82%, internet access is uneven, digital services are used mainly on phones, and at the time of the design process there were no personal identification codes, digital signature infrastructure or data exchange platform. We did not treat these as obstacles but as the frame of the task.

Uneven internet coverage	The digital requirement sits with the institution, not the citizen. Hospitals and chiefs' offices are a limited, known set, and 98.6% of births in Kenya take place in a health facility.
Literacy around 82%	Registration was not left to depend on the parent's English or literacy: the hospital officer supports the parent and writes the details down from spoken statements. If needed, a family member helps confirm the spelling of the names.
The main device is a phone	USSD confirmation works on a basic phone, without mobile data. e-Citizen is an option, not a precondition; the physical channel remains.
No digital signature infrastructure	The signature is replaced by USSD confirmation on a basic phone, which works in Kenya without digital signature infrastructure because phonenumbers are personalized.

**USSD is a mobile network protocol that creates a fast, real-time connection between a phone and the operator's computer system.*

Data is born where the child is born

	BEFORE	AFTER
Where data originates	On paper, in two copies	Digitally at the place of birth
Precondition for registering	A paper form is at hand. When forms run out, the birth goes unrecorded	An internet connection. If it drops, the app stores the data and sends it as soon as the connection returns
How data moves	Physically, once a month	Immediately
Parent's confirmation	Signature on paper	USSD confirmation on the phone
Correcting errors	The parent travels to the hospital for a proof document	The parent corrects it on e-Citizen
Getting the certificate	Only at the office assigned by place of birth	Can be printed anywhere
A lost certificate	A new application from scratch	The digital certificate is still in the system

We did not break the structure of the registration form. Drastic changes in which nothing familiar survives are hard to adopt, and the form is closely tied to the collection of national statistics. The digital form follows the paper form's structure and changes it only where digital can be clearer than paper: selections from dropdowns and fields that open based on earlier answers.

„If the birth certificate is issued once and printed, why, when the paper certificate is lost, does the parent need to reapply — why cannot a duplicate be just printed out?“

Testis osalenud lapsevanem praeguse süsteemi kohta, september 2024

The solution answers this: with registration the child receives a digital certificate that always remains in the system and can be printed on paper at any civil registration office.

Serial No. BI AA

REPUBLIC OF KENYA

THE BIRTHS AND DEATHS REGISTRATION ACT (Cap. 149)

REGISTER OF BIRTH

Form B1

5125454

1. NAME

First name

Other name

2. DATE OF BIRTH

Day

Month

Year

3. SEX*

Male ☐

Female ☐

4. TYPE OF BIRTH*

Single ☐

Twin ☐

Other, specify

5. NATURE OF BIRTH*

Born Alive ☐

Born Dead ☐

6. WEIGHT OF BIRTH

7. PLACE OF BIRTH

Sub-location or Estate and Town or health institution

8. NAME

First name

Middle name

Father's name

9. AGE

10. MARITAL STATUS:

a) Married ☐

b) Divorced ☐

c) Single ☐

d) Widowed ☐

11. NATIONALITY

13. ID Number/Passport/Allen card Number

12. OCCUPATION

14. Level of Education

15. USUAL RESIDENCE

Sub-location or Estate and Town

16. PREVIOUS BIRTHS TO MOTHER: No. born alive

District

17. NAME

First name

Other name

No. born dead

19. ID Number/Passport/Allen card Number

18. Nationality

20. NAME

First name

Other name

Father's name

21. CAPACITY OF INFORMANT

Parent ☐

T.B.A. ☐

Midwife

Medical Attendant ☐

Other, specify

22. DATE

Day

Month

Year

23. SIGNATURE

24. DATE

Day

Month

Year

25. REGISTRATION ASSISTANT FOR (State Sub-location or health Institution)

26. NAME AND SIGNATURE

27. DISTRICT

28. REGISTRATION No.

29. DATE

Day

Month

Year

30. NAME

31. SIGNATURE

*Cross the appropriate box, thus (x)
+ If mother is not married to father, do not insert the name of father

GPS (7) 583-500 (Rev. 10/202)

09.09.24

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Birth notification

1 Child

2 Mother

3 Father

Child info

Nature of birth *

☒ Live birth

☐ Stillbirth

First name *

Middle name

Optional

Date of birth *

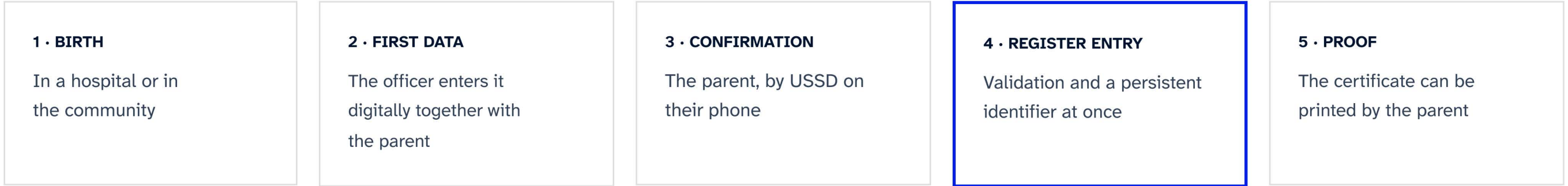
Sex *

Weight on birth *

kg

Next →

Data moves at the moment of the event, not once a month on paper



The new journey reduces handovers, double entry and dependence on paper. In the old journey, paper moved once a month; now the data reaches the register and statistics at the moment of the event.

	BIRTH REGISTRATION · AT THE HOSPITAL	BIRTH REGISTRATION CONFIRMATION · IN E-CITIZEN
PARENT	Before discharge, the informant visits the ward records office → gives the information for the birth notification (national ID etc.) → confirms with a USSD push or signs the form → is informed by the officer and by SMS that the notification is in e-Citizen, tied to their national ID	Logs into e-Citizen → opens the validation task → checks the read-only registration form → confirms → is informed that the child's certificate can be printed at any civil registry office
FRONTSTAGE, VISIBLE TO THE USER	The records officer registers the birth directly into the digital registry, from the patient case file and the informant, in four guided steps: child, mother, father, informant	e-Citizen shows the parent's children, the status of each registration and the filled form as read-only
LINE OF VISIBILITY		
BACKSTAGE, INVISIBLE	Data retrieval from IPRS by national ID · duplicate check at the time of registering · automatic registration number issuance, replacing manual stamping	Data is marked valid · the child is issued a UPI · a digital birth certificate is registered, ready for printing
SYSTEMS	Birth registration system · IPRS · USSD service · SMS service · birth notification digital register	e-Citizen portal

Extract from the service blueprint “Birth Registration TO-BE service”: the phases “Birth registration” and “Birth registration confirmation”, condensed. The full blueprint: 8 phases and 9 layers, condensed here into four.

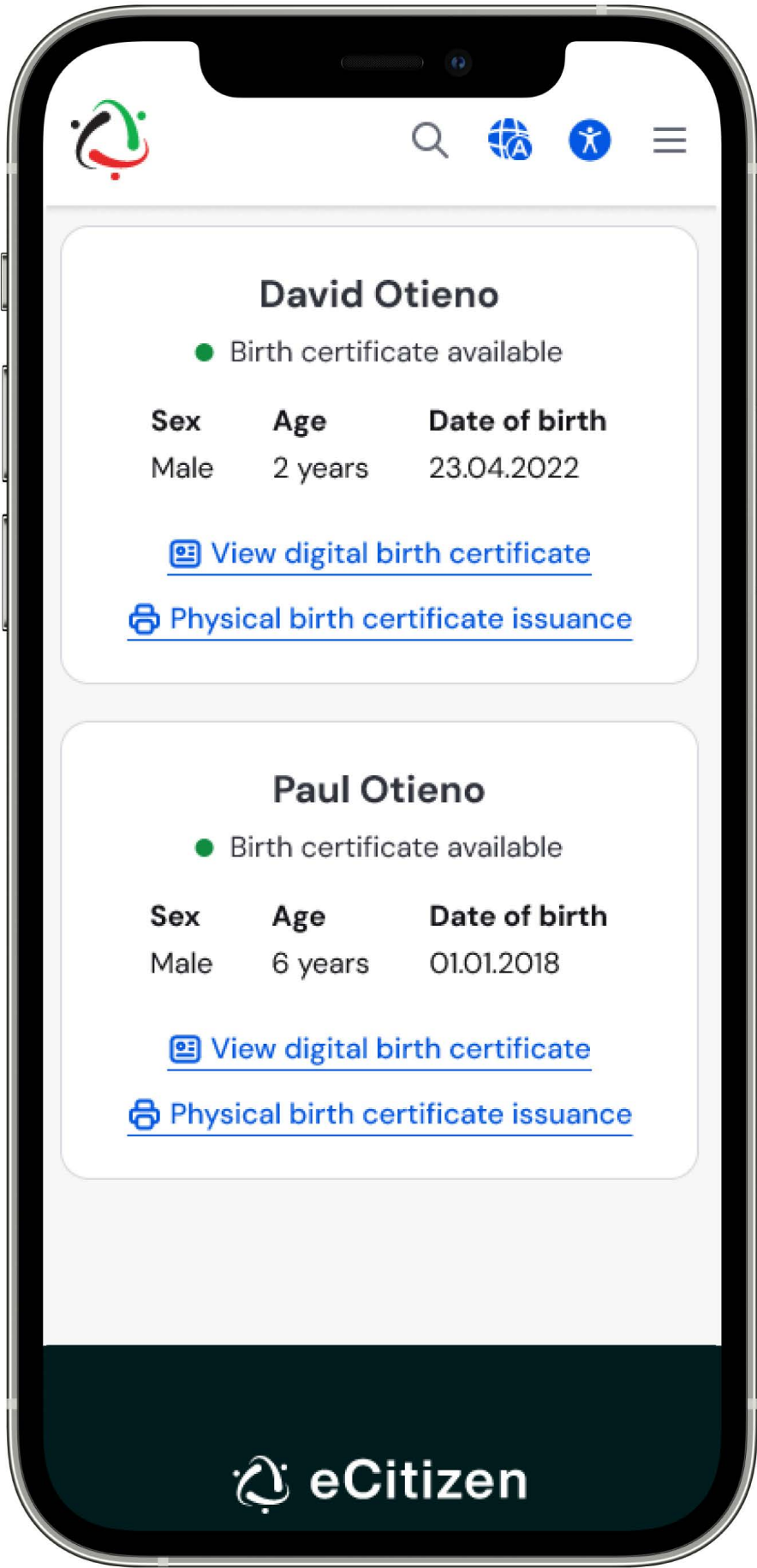
One birth record. One persistent identifier.

Our concept did not treat the child through a paper certificate but through a persistent digital register entry. With registration, the child receives a persistent unique identifier (UPI) that stays with them for life.

During the project, we discussed how this identifier could connect to the emerging Maisha Namba framework if the national programme moved forward.

In 2026, Kenya brought these directions together: the electronic birth notification was tied to the national identity reform, and the identifier is created for the child at birth, as part of a lifelong identity.

The decision to integrate with Maisha Namba was made after our project ended, and we do not attribute it solely to our work.



Kenya's national digital birth register went live in 2025

We handed over the analysis, prototype and requirements in November 2024. The solution was developed by ADM Interactive together with Kenya's Civil Registration Services and integrated with the e-Citizen portal.

“Delays were common and administrative costs were high. Parents could wait months between the time a birth was recorded and when they received a certificate.”

Alexander M. Chege, head of ICT at Kenya's Civil Registration Services (CRS)

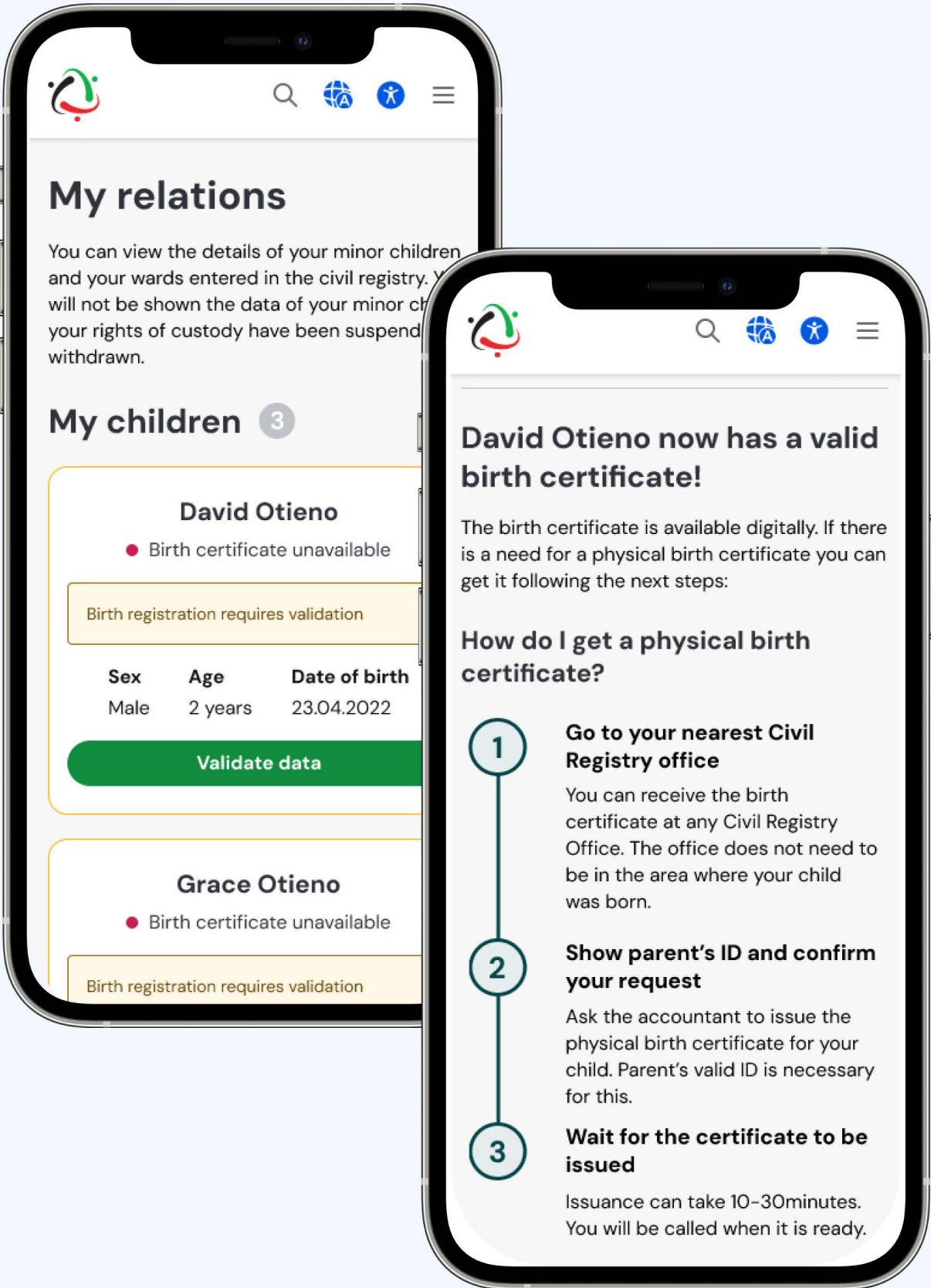
“With this e-service, hospitals can submit birth details electronically, records are validated automatically, and newborns receive a unique digital identifier at birth.”

Africa-Europe Foundation, The State of Africa-Europe 2025, p. 98

The concept we created reached implementation in its essence and in its key design decisions.

In 2026, the change reached both ends of the service. In May, electronic birth notification went live in 372 health facilities across Nairobi, with a plan to roll it out nationwide. Since June 2026, the birth certificate can be downloaded and printed from e-Citizen, without even visiting an office.

The application is an internal system for state officials; no screenshots of it are included in this overview.



What we know and what we do not know yet

KENYA'S OFFICIAL STATISTICS 2024

- The registration rate fell from 83.1% (2021) to 70.3% (2024)
- In 2024, more than 469,000 children went unregistered
- 521,449 births were registered later than six months after the birth

- In May 2026, electronic birth notification went live in Nairobi, in use in 372 health facilities
- Since June 2026, the birth certificate can be downloaded and printed from e-Citizen

INTERNATIONAL REPORT THE STATE OF AFRICA-EUROPE 2025

The Africa-Europe Foundation selected the project as a featured case study in its report *The State of Africa-Europe 2025* (p. 98). According to the report:

- Time from birth notification to certificate: 1–2 months → under three days
- Registration rate: projected to rise to 85%
- Parents no longer need to travel anywhere to notify a birth, register it or collect the certificate

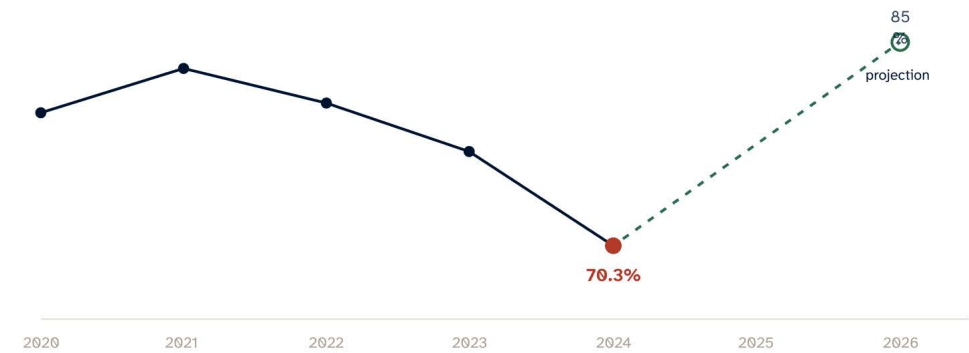
“When people are not counted, they remain invisible — thus propelling inequities.”

The State of Africa-Europe 2025, p. 98

WHAT CHANGES FOR THE SERVICE PROVIDER

- Document transport runs and dependence on form stocks disappear
- Double entry disappears: the same data reaches the register and statistics at once
- The paper archive stops growing; corrections reach the data, not only the paper

We also recommended reducing the state fees for registration and corrections, because the high cost was one reason births went unregistered. Kenya has since set the direction to abolish birth registration fees, so that they would not become an obstacle to registering new citizens.



The Kenya Vital Statistics Report 2025 has not been published yet. The statistics for 2026 will be published in 2027. It is the only source that will show whether the trend truly reverses.

For a figure that fell three years in a row, even halting the fall would be a result.



Africa-Europe Foundation with AUDA-NEPAD, November 2025 · case study p. 98

The Kenyan state received three services and a method for future projects

Alongside the analyses and prototypes, we handed over an 87-page handbook for designing human-centred digital services in Kenya's public sector. Its purpose was not to describe one project but to pass on the principles for applying the human-centred approach more widely.

It is not a generic methodology textbook. The same conditions we worked in are passed on as guidance for the next teams: how to test in a country where some users need a Swahili-language prototype; how to plan research in an area with poor connectivity; under which conditions and considerations to involve rural participants in the research; how to take Kenya's data protection act into account in research.

The prototype and design system followed **Kenya's national accessibility standard KS 2952-1:2022**, not only international guidelines.

The clearest sign that the approach took root is that the service provider describes the result not through the system but through the user:

"Applying human-centric design principles places the user at the heart of the design, which is crucial in a diverse country like Kenya."

Paul Mwangemi, Secretary of the Civil Registration Services, Kenya



Who did what, and when

Service design, research, concept, prototype, requirements analysis, methodology

Trinidad Wiseman OÜ
August–November 2024

Team

Helen Susan Selirand, service design and project management
Janar Linros, lead analyst
Taavi Aher, UX/UI design

Client and coordination

ESTDEV: Christopher Waweru, Triin Kangur

Service owner

Civil Registration Services, Kenya: Alex Chege and colleagues

Software development and rollout

ADM Interactive with Kenya's Civil Registration Services, 2025

Programme and funding

Team Europe Initiative on Human-Centred Digitalisation · GIZ · Digital Transformation Centre Kenya · European Union · Germany's BMZ · Estonian Ministry of Foreign Affairs

