Cambodia National ID Program Strategy

Fifth meeting of the Regional Steering Group for CRVS in Asia and the Pacific on 17-19 September 2019, Bangkok.

Mr. THEY Kheam
Overview

➢ Inclusiveness
   • Everyone should be identified

➢ Uniqueness
   • Everyone should have just one unique identity

➢ Universal
   • Provide service delivery to all
National Strategic Plan for Identification

Vision and Mission

Vision for Identification in Cambodia
“A mission-focused, service-oriented and modern area of public administration in Cambodia that manages data about population identity and vital events and produces reliable population and vital statistics."

Mission for Identification in Cambodia
“To register all individuals and vital events in a transparent, non-discriminatory and efficient manner in order to issue proof of identification for ensuring equal rights in society and for providing reliable and protected data for good governance and for the development of the private and public sectors.”
Goals of NSPI (2017-2026)

1. Develop an enabling legal environment for personal identification
2. Establish a universal and responsive ICT based CRVS system
3. Establish the Integrated Population Identification System
4. Launch the unified data distribution system about population
5. Align organization and introduce e-services for client-oriented, efficient and transparent service delivery
Program Approach
ID systems in Cambodia – Current state

Existing System Landscape

CRVS SYSTEM                  NATIONALITY SYSTEM              RESIDENTIAL SYSTEM           KHMER ID SYSTEM             PASSPORT SYSTEM

- Biometric based
- Paper based

Key challenges faced today

Most of the current systems are paper-based
Presence of disparate systems & lack of a primary ID system
Uniqueness of citizen records cannot be ascertained
Systems do not support authentication
Duplication of effort and investments for the Government

Need for seamless bidirectional process integration amongst the ID systems
Design Considerations for IPIS

- KIdC issued by IPIS system will become the single point of truth for identity of a resident in Cambodia to be used by various government departments for extending services and benefits.

- IPIS should try to restrict the scope of KIdC to “verification” of identity. The role of managing other attributes and entitlements could be done by respective departments & systems.

- Once IPIS is operational across Cambodia, RGC should consider making KIdC a mandatory requirement for all residents within a certain prescribed timeframe.

- CRVS system is integral to successful establishment of IPIS. Hence, IPIS solution development should also be supplemented by ICT enablement of CRVS system, to facilitate seamless integration between the two.
Design Considerations for IPIS

- IPIS solution should attempt to re-use any viable existing components and infrastructure, that is currently available with the other five supplementary systems, to the extent possible.

- KIdC generated from IPIS should be completely random and not carry any information that will enable profiling of the holder.

- Raw biometric images collected for each individual should be stored without any loss in compression, independent of the service provider or the technology used. Access to the raw image should be available to only to authorized agency and it should not require involvement of existing service providers.
ID systems in Cambodia – Future state

IPIS is proposed to be a common integration platform and primary data source on population information.

IPIS VALUE PROPOSITION

- Single source of truth
- Integrated ID platform
- Cross system linkages
- Process and Data standardization
- Provision of ID-enabled services to all stakeholders

Authentication – KIdC enabled service
Building the integrated ID platform
For an effective deployment plan that will ensure a gradual rollout of this integrated ID platform across the country, it is important the implementation strategy is devised a "phase-wise plan".

- Will ensure allocation of adequate time and resources necessary to facilitate the effective rollout of ID systems in Cambodia, along with effective training of users on the ground.
Core services of IPIS

IPIS enrolment promotes usage (authentication) and vice-versa

Supplies

Enrolment

IPIS

Enables

Adoption
# IPIS Data structure

## Demographic and Biometric profile

### Demographics profile

- **First name**
- **Last name**
- **Birth date**
- **Birth place**
- **Biological Mother’s name**
- **Biological Father’s name**
- **Residential Address**
  - Number
  - Street, Village
  - Commune/Sangkat/Sub-district
  - Khan/City/District/Municipality
  - Capital/Province

### Biometrics profile

- **Fingerprints minutiae**
- **Photo**
- **Signature**
- **Raw images of the fingerprints**

### Demographics profile

- **Gender**
- **Email**
- **Mobile no.**
- **Introducer’s name**
- **Introducer’s KIdC**
- **Introducer’s relation**
- **Special mark**
- **Flag for De-duplication**
- **Flag for Biometric capture**
- **Flag for Nationality**
IPIS – KIdC Number

Proposed plan - KId Code : 123456789-Y

- 123456789 → 9 random digits
- Y → One Checksum digit

KIdC generated should not have intelligence built into it so that privacy and security of an individual is not compromised. Generation of random numbers will limit the profiling of the KIdC.

The numbering scheme should be able to accommodate necessary population growth over the years, as KIdC can never be re-used.

A nine digit randomly-generated number with the last number as checksum digit is recommended as the KIdC nomenclature.

It is proposed that a more complex algorithm than modulus 11 may be considered to reduce potential data entry errors.

Data field depicting Nationality will be part of the IPIS data structure instead of the KIdC.
IPIS Implementation Option

Data migration from Khmer ID system & enrolment through the IPIS enrolment system

Step 1
All demographic and biometric data in Khmer ID be extracted and stored in the IPIS. All the records in the Khmer ID system will be migrated to the IPIS system.

Step 2
Additional data fields of IPIS to be updated when an individual comes to collect the KIdC number.

Step 3
1. Resident visits IPIS enrolment centre
2. The enrolment agency checks for valid documents and IPIS checks for quality of biometrics captured. The request is sent for enrolment of the resident.
3. The application checks for duplicates based on combination of parameters – biometric and demographic.
4. KIdC is generated and issued to the resident if the identity is unique. Else, the request is rejected.
5. KIdC and other unfilled data fields updated in IPIS DB.
IPIS Implementation Options
Option 3 - Data migration from Khmer system & enrolment through the IPIS enrolment system (1/2)

**Step 1**
- 3: Kidc mapped to the 10 million records within Khmer ID system
- KIdc mapped to the 10 million records within Khmer ID system

1. (Demographic + Biometric) extracted
2. KIdC generated

**Step 2**
- 1: Carry valid documents to update data fields
- 2: Unfilled data field to be updated
- 3: KidC card issued

**Additional Information**
- All demographic and biometric data in Khmer ID system will be extracted and stored in the IPIS. All the records in the Khmer ID system will be migrated to the IPIS system. The additional data fields in the Khmer ID system would be deleted.

**Additional Information**
- Additional data fields of IPIS to be updated when an individual comes to collect the KidC number.
Resident visits IPIS enrolment centre

The enrolment agency checks for valid documents and IPIS checks for quality of biometrics captured. The request is sent for enrolment of the resident

The application checks for duplicates based on combination of parameters – biometric and demographic

KIdC is generated and issued to the resident if the identity is unique. Else, the request is rejected

KIdC and other unfilled data fields updated in IPIS DB

Step 3
The driving principles to foster innovation and creating a vibrant IPIS ecosystem are:

- Developing KIdC service as a ubiquitous utility — anytime, anywhere available and easy to use
- Resident should be able to enroll once and avail services upon KIdC issuance
- Instant activation of KIdC enabled services
- Empower service agencies to KIdC-enable their services
CRVS System

Step 1
The demographic data in IPIS be extracted and stored in the CRVS system once the unique identity of the resident is confirmed.

Every record will have a corresponding record in CRVS system.

Step 2
Additional data fields of CRVS system to be updated when a resident comes to collect the KIdC number

Step 3
Registration of new births:
- Resident will visit the CRVS enrolment center
- The relevant fields will be sent to IPIS to generate the KIdC
- The birth certificate with KIdC will be provided to the resident
CRVS implementation approach
Step 1: Migration of legacy data

- Residents visits IPIS Enrolment Centre
  - KIdC available?
    - Yes: Capture missing data fields in existing records
    - No: Send new enrolment request to IPIS central database

CRVS central database repository

Cambodian citizens enrolled in Khmer ID system

1. Only the data not available in digitized form from IPIS and Khmer ID system will be digitized from the legacy ~ 10 mn scanned birth certificates
2. Update missing fields on Birth record using search keys from already 6 million digitized records
3. Missing data fields on legacy records updated when citizen visits enrolment centre
4. The missing fields can be manually digitized from the physical registers kept in CRVS department, Phnom Penh
CRVS implementation approach

<table>
<thead>
<tr>
<th>CRVS System</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Access Mode</strong></td>
<td>Online</td>
</tr>
<tr>
<td><strong>Access Channels</strong></td>
<td>Web</td>
</tr>
<tr>
<td><strong>Enrolment Start Date</strong></td>
<td>2017</td>
</tr>
<tr>
<td><strong>Number of Enrolment Stations</strong></td>
<td>1 at each commune</td>
</tr>
<tr>
<td><strong>Current Status of Enrolment</strong></td>
<td>14 million records</td>
</tr>
<tr>
<td><strong>Demographic Details Captured</strong></td>
<td>Name, Address, Gender, Parent’s name</td>
</tr>
<tr>
<td><strong>Biometric details captured</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>Number of enrolments</strong></td>
<td>25000-30000 enrolments per month</td>
</tr>
<tr>
<td><strong>Form Factor</strong></td>
<td>Acknowledgement letter of application</td>
</tr>
<tr>
<td><strong>Services</strong></td>
<td>Birth, Death, Marriage, Vital Statistics</td>
</tr>
<tr>
<td><strong>Integration points</strong></td>
<td>Events, APIs</td>
</tr>
</tbody>
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CRVS implementation approach

Step 2: Registration for new births

CRVS enrolment Center → CRVS central database repository → IPIS central database repository

1. Relevant data fields sent to IPIS
2. Generate KIdC
3. KIdC sent to CRVS and stored in CRVS

Requirements for CRVS enrolment:

- Hospital certificate if born in the hospital
- Village chief certification if born at home
- Parental residential book or residential book
- Enrolment form for CRVS
- KIdC of the parent/guardian/introducer
Integration with health

CRVS

Verify KIdC of Mother/Father of registered baby

IPIS

Notify birth event, along with KIdC of mother/father

PMRS

Issue “Proof of birth letter”

Registration of new born’s

Acknowledgment on identity – Yes/No
Residential system

The Residential Management system will be the single source of information on individual addresses for IPIS. It is mandatory for all citizens to enroll in the residential system.

Step 1

The demographic data in IPIS be extracted and stored in the residential system once the unique identity of the resident is confirmed.

Every record will have a corresponding record in Residential system

Step 2

Additional data fields of Residential system to be updated when a resident comes to collect the KIdC number.
The Residential Management system will be the single source of information on individual addresses for IPIS. It is mandatory for all citizens to enroll in the residential system.
The nationality system will act as the front desk functionality to process all related requested concerning nationality issues. The nationality system enrolls the foreigners who are granted with Khmer nationality through the various ways that the law has determined.

**Step 1**

The legacy data of 1,700 records is digitized in the excel format

The data in the excel format will be migrated to the nationality system database

**Step 2**

Individuals will be asked to visit the nationality system to seed their KIdC
The nationality system will act as the front desk functionality to process all related requested concerning nationality issues. The nationality system enrolls the foreigners who are granted with Khmer nationality through the various ways that the law has determined.
Program Enablers
Program Enablers – ID platform

Technical Help Desk and call center will be a convenient way to facilitate program intervention support tasks.

Mandate would be to implement and manage the end-to-end implementation of ID platform.

Perform project monitoring and evaluation activities to consistently assess project progress, quality management and provide technical support.

An IEC group will guide the development and implementation of an overall awareness and communication strategy for the NSPI program.

The Innovation Group would generate new ideas/suggestions from external stakeholders, as well as from within and provide handholding support.