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# Unique Identifiers in Civil Registration: Strengthening Governance and Statistics through Inclusive Identity Systems

**9 September 2025**
**13:00-14:00h (UTC+7)**

***Asia-Pacific Stats Café Series***

Unique identification numbers (UINs) are often implemented in modern civil registration and identity management systems. They enable accurate identification of individuals across their life course and across administrative systems, supporting efficient service delivery, inclusive governance, and high-quality statistics. This Stats Café will explore the role of UINs in civil registration systems, their applications in governance and statistics, and the principles for designing inclusive and secure identifier systems.

**Opening remarks:**



**Bhaskar Misra**
Child Protection Specialist, UNICEF

**Speakers:**



**Nicola Richards**
International Public Health Consultant



**Pema Letho**
Chief Civil Registration and Census Officer, Ministry of Home Affairs, Bhutan



**Mohd Sayuti Shaari**
Deputy Director, National Registration Department, Malaysia



**Jesper Ellemose Skou Jensen**
Chief Advisor, Statistics Denmark

**Moderator:**



**Tanja Sejersen**
Statistician and CRVS lead ESCAP

**Register here:** https://forms.office.com/e/U9VuV4e5dE

**Join the meeting here:** snipqr.com/z5Nr

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# Key findings

Nicola Richards



# Why this paper – why now?

Critical in the management of administrative records

- Generally issued when an individual enrols into a system
- Act as a record locator or index
- Supports data linkage and identity management

Different types and uses

- National-level (“ubiquitous”)
- Sector-specific
- Facility-level

Ability of individuals to prove their identity and of governments to accurately identify beneficiaries

- Direct or indirect enabler several SDGs
- Sector-specific benefits (health, CRVS, social protection)

# Why this paper – why now?

The type of identifier and way it is used also generates potential risks

- Implementation level and scope
- Data protection and privacy
- Data security
- Scope creep
- Operating environment

Specific risks for people in vulnerable situations and groups at risk of marginalization

# Why this paper – why now?

**The aim of the paper was to obtain a better understanding of the various approaches to unique identifiers being used in administrative data systems**

Common and emerging practices

Current international recommendations

Benefits and risks of the approaches

Goal of providing deeper understanding on how unique identifiers can be applied to CRVS and identification systems

# Global and regional trends

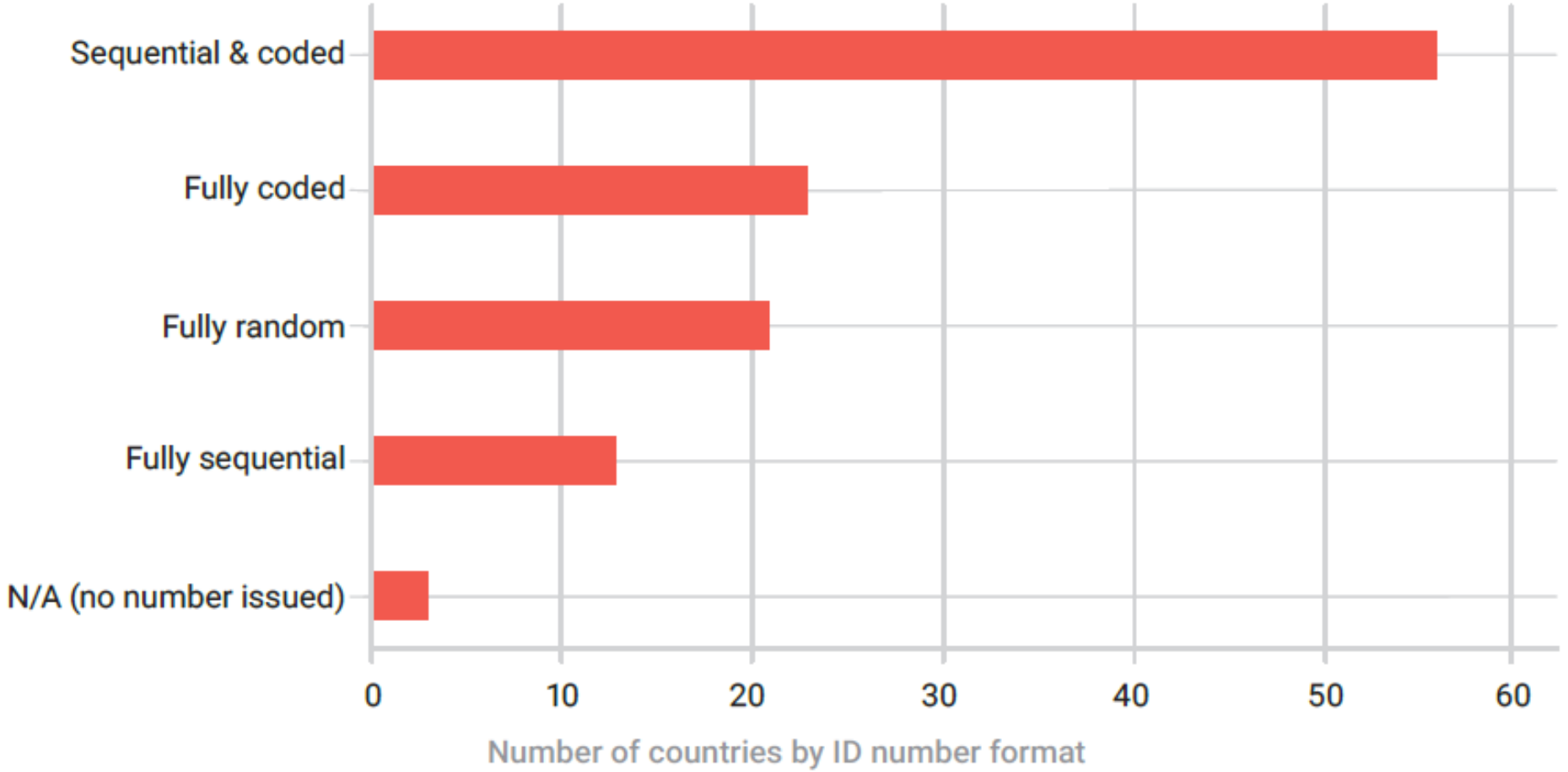


## 175 countries had some form of system issuing foundational identification for adults

- 96% were permanent
- 71% were assigned at birth
- 57% were recorded on the birth certificate
- Numbers ranged from 7–20 digits, most around 10–13

# Global and regional trends

Figure 2: Frequency of ID number formats (from 116 countries surveyed)




**Adapted from**: Casher C, Metz A and Clark J. ID4D Global Dataset Volume 3: Trends in Identification for Development. Washington, DC: World Bank; 2024.

# Applications and benefits

## Individual and/or administrative management

- Foundational, national unique identifiers
  - Additional benefits beyond a single sector
  - Thailand, Estonia
- Functional, sectoral identifiers
  - Scottish Candidate Number (education)
- Functional, facility identifiers

## De-identified statistical linkage

- Combining information about the individual



# Risks and concerns

- Implementation level and scope
- Data protection and privacy
  - Potential to re-identify individuals
  - Comprehensive profiling of individuals and population sub-groups by governments
  - The potential for overbroad and unnecessary data access
  - The creation of digital audit trails
- Data security
- Scope creep
- Operating environment

# Specific risks for people in vulnerable situations

- Exclusion from services, rights, and entitlements
- Identity theft or fraud
- Privacy violations
- Loss of agency over the use of personal data



# Core principles for a “good” identifier

- Uniqueness
- Inclusivity
- Timeliness
- Permanence
- Clarity and minimized ambiguity
- Validation and verification
- Scalability and future-proofing
- Randomization
- Interoperability
- Privacy and security
- Legal and regulatory compliance

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## INTERESTED IN LEARNING MORE?

**Practical approaches when planning for the use of unique identifiers (*currently in draft*) will provide practical guidance and tools to use when planning for the use of unique identifiers in administrative systems. It is divided into four sections:**

1. **Initial planning and preparation**. Outlines several time-limited and one-off steps that should be conducted as part of initial planning and preparation. These steps lay the groundwork for successful implementation.
2. **Designing the unique identifier**. Provides an overview of technical aspects when developing an identifier. Key topics include assessing the characteristics that make a good identifier; exploring options for structuring the identifier; deciding on the number of digits required to ensure long-term sustainability; and addressing questions around the need for biometrics.
3. **Working towards implementation**. Describes the specific actions and broad conditions that should be in place as part of building and strengthening a supportive environment for the use of unique identifiers in administrative systems. Many of these relate to complex, ongoing activities that will require substantial resources and commitment from relevant stakeholders.
4. **Useful resources**. Includes a planning checklist and other practical tools to assist in the implementation process.

# From Paper to Digital: Bhutan's Civil Registration & Identity Management

**Pema Letho**
**Chief Civil Registration & Census Officer**
**09.09.2025**

# Milestones of the Digitalization process

**1980-2002**

Paper-Based Registration (Family Diary)

**2003**

BCRS was developed

**2004-2007**

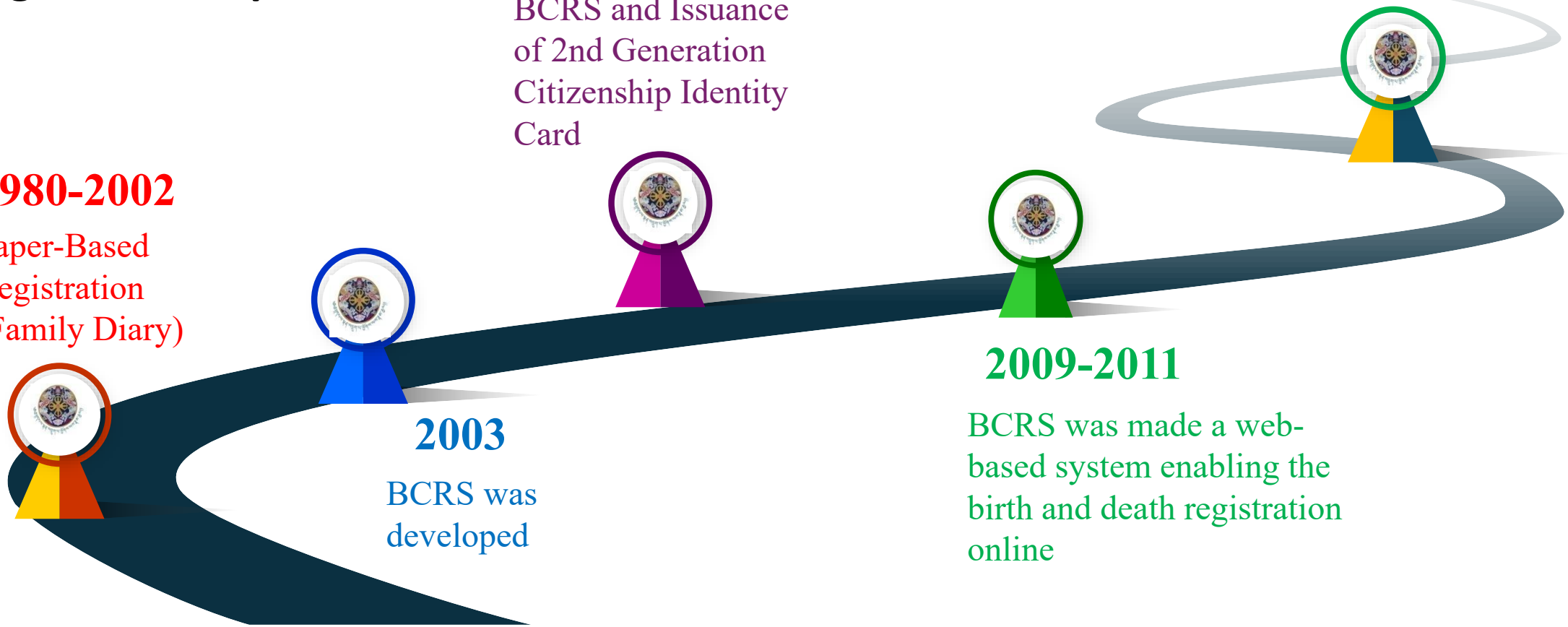
Nation-wide implementaion of BCRS and Issuance of 2nd Generation Citizenship Identity Card

**2009-2011**

BCRS was made a web-based system enabling the birth and death registration online

**2023 ….**

**Birth & Death Registration made fully online through ICS**

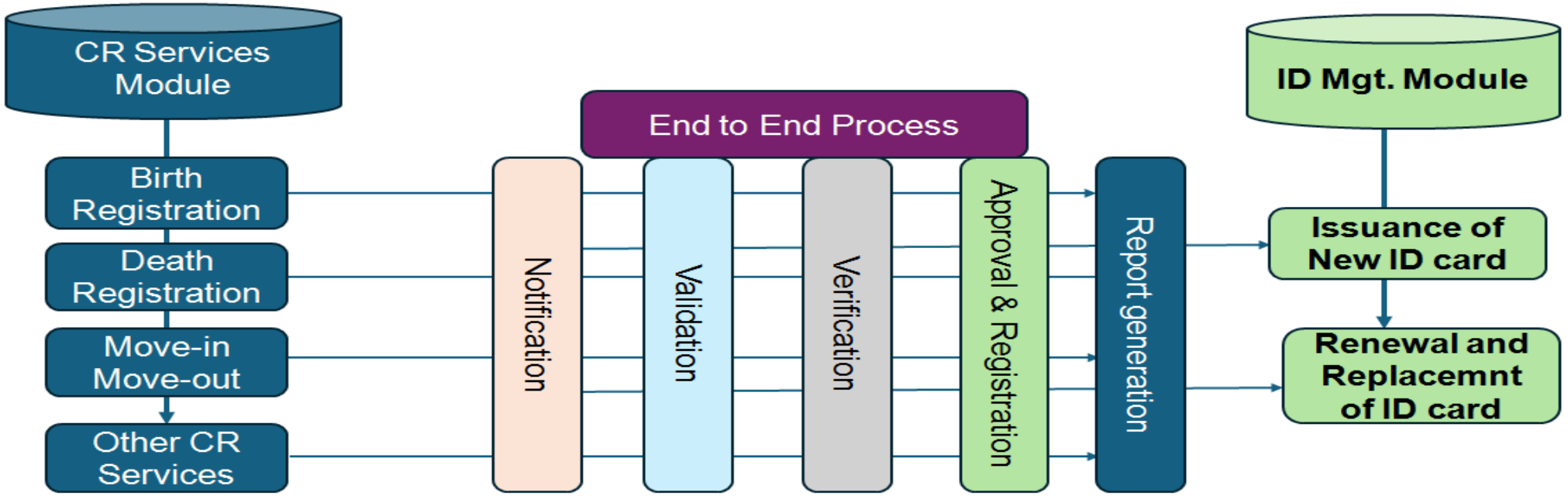


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# An Overview of the Bhutan Civil Registration System (BCRS)

**System Architecture:**
Modular Web-Based Centralized Database System

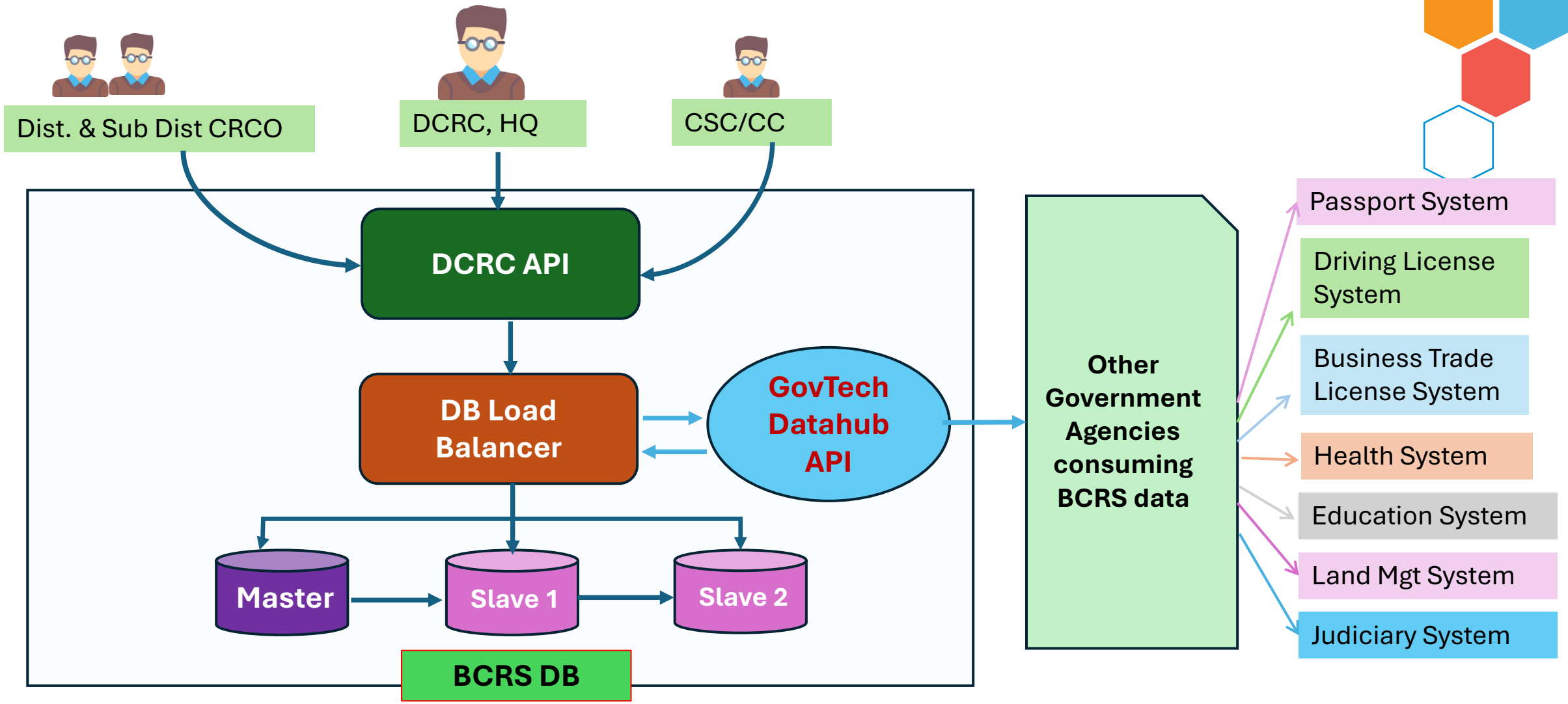
## Functionality of the BCRS:



# Features of Identification number:

- **Unique Eleven (11) digit system generated number with defined combination of citizen status, District & Block codes:**
  - 1st Digit represents either Bhutanese or Permanent Residence
  - 2nd & 3rd Digit represents Dzongkhag (District) Codes
  - 4th & 5th Digit represents Gewog (Block) Codes
- **The 11 digit identity number is generated the moment a birth of a child gets registered; and**
- **These 11 digit remains with an individual until the death or termination of his/her civil registration records**

# USE CASEs of Identification Number



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# Key Implementation Principles

**Universal & Inclusive** – all vital events (esp, Birth & Deaths are all recorded

**Interoperable & Reusable** – Data are shared and with digital stored, can be used again and again on real-time basis

**Security-By-Design** - Built with MFA, encryption, audit logs, incident response planning, and ongoing security hardening

**Data Privacy & Confidentiality** Incorporates selective disclosure, cryptographic credentials, and user consent policies through NDI

**Sovereignty & Local Hosting** - Prioritizes in-country data residency and control per national policies

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…successfull journey of Digitalization mainly attributed by STRONG POLITICAL COMMITmenT and Effective COLLABORAtion – Whole of Government Approach

…the integration of CRVS and Digital Public Infrastructure (DPI) and CRVS linked with ID management in Bhutan is already seen as success story….

…The Government to Citizen (G2C) Initiatives (2011), the Integrated Citizen Services (ICS) and the National Digital Identity are all banked on the ROBUST BCRS database…

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# Thank you & Tashi Delek !!!



# NATIONAL ID NUMBERS: The role in service provision and the production of statistics

Mr. Mohd Sayuti bin Shaari, The National Registration Department, Malaysia

# Background

i. Early 1990s, Malaysia has shifted from old 7 digit Identification Card number to 12 digit National Registration Identity Card (NRIC) number.

ii. The reason of change:

   a. Malaysia's population grew.

   b. Risk of fraudulent cases.

   c. Introduce a unique number issued to Malaysian and permanent residents.

iii. Since then, every newborn in Malaysia is registered and issued a birth certificate with a **Unique Identification Number (UIN)** generated and permanently assigned to the individual.

iv. Starting 2000, The UIN is printed on the birth certificate and becomes the foundational identifier used throughout the individual's life.



# Background

i. The National Registration Identity Card (NRIC) also know as MyKAD was introduced in 2000. It was replaced from the previous Identity Card called High Quality Identity Card, which was issued since 1990.

ii. MyKAD is a smart identity card that uses the ID number as the primary key for verifying an individual's identity across government and private sectors.

iii. MyKAD employs two types of biometrics technology - form of a digitalised colour photo and a pair of fingerprints.

iv. MyKAD issued to Malaysian who are 12 years old and above.

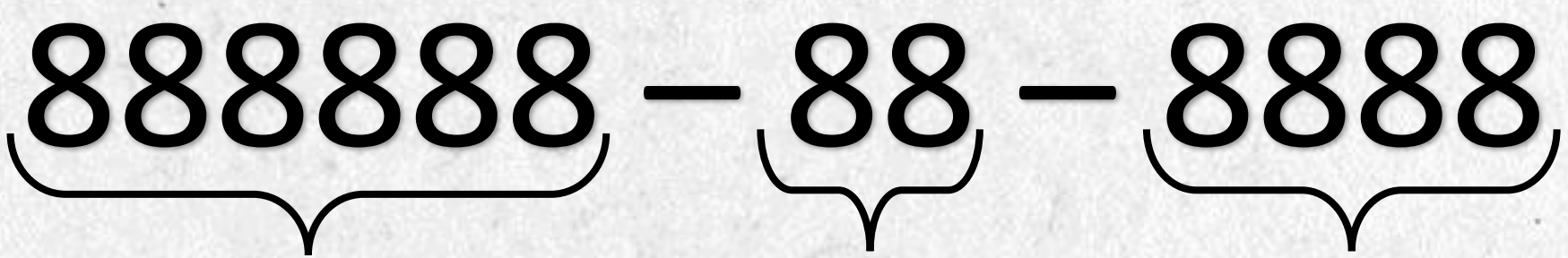


# Personal Identification Number

i. The 12 digit MyKAD number issued under the National Registration Act 1959 and it is stipulated specifically under the National Registration Regulations 1990.

ii. The number is unique, permanent and life long.

iii. Foundation of individual identity in Malaysia.




The birth date is written in the YYMMDD format. For example, if the birth date is 01 September 1995, it will be represented as 950901.

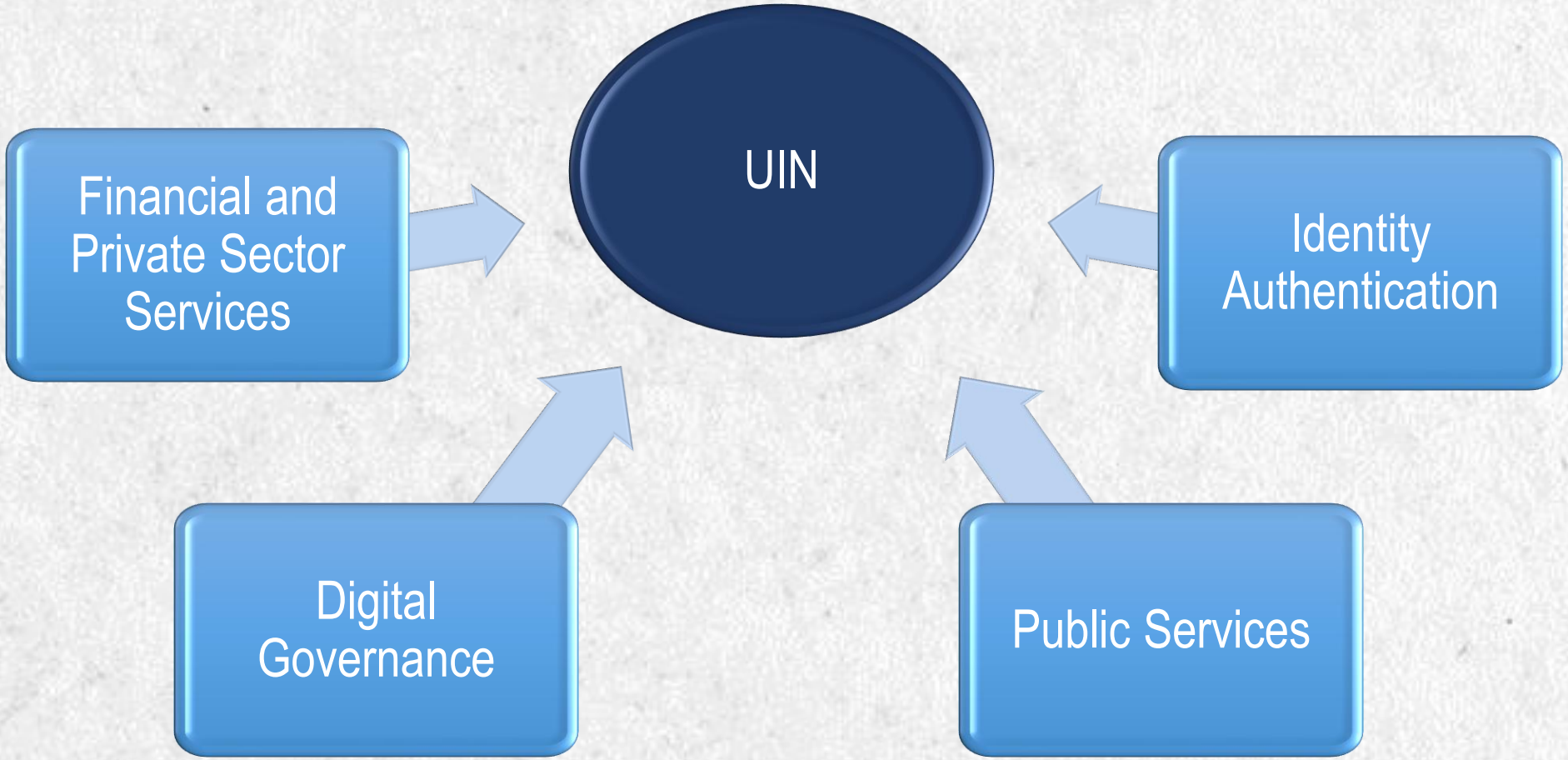
This field will indicate the code corresponding to the individual's birth state or country. (ie. Kuala Lumpur is 14, Japan is 89)

This is a system-generated unique 4-digit identifier.

# Role of UIN in Service Provision

i. MyKAD performs a wide range of function serving as proof of identity in accessing applicant's background in Malaysia.

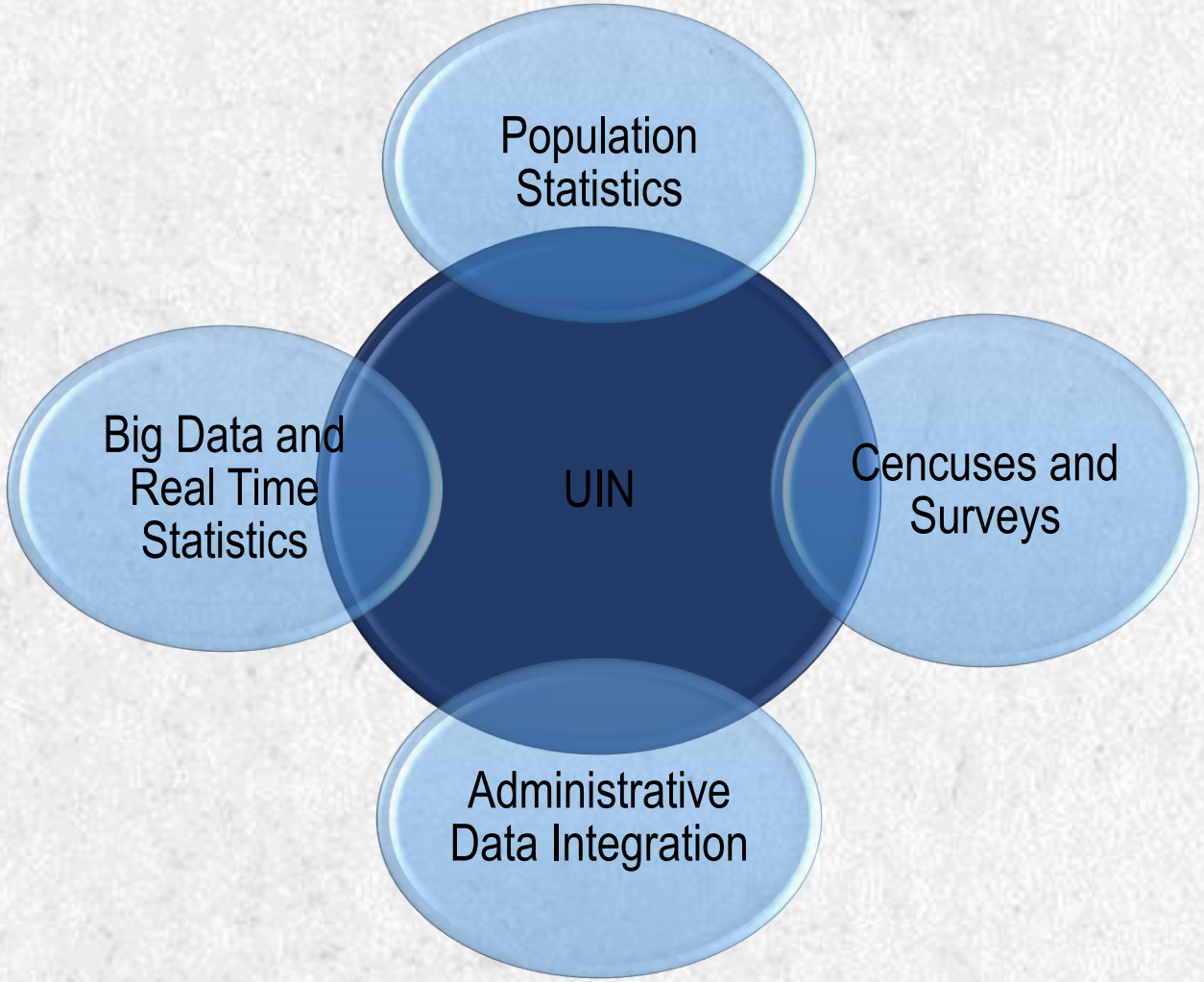
ii. Verifying personal details to prevent fraud, identity theft, accuracy of the candidate data and ensuring legal compliance with Malaysian regulations.



# Role of UIN in Statistics Production

i. Acting as unique identifier and secure platform for personal data, facilitating accurate data collection and analysis.

ii. Serving as a secure data in order to prevent duplicate records in ensuring integrity data and reliability.



## Conclusions

i. Serves as a unique identifier for individuals.
ii. Functions as a primary legal document for verifying identity in administrative and judicial process.
iii. Facilitates access to critical public services, financial institutions and employment verification.
iv. Enhances security measures by mitigate risks of theft and fraudulent activities.
v. Supports comprehensive population management and data integrity.

# Thank You

STATISTICS DENMARK

# 50 years of using unique id numbers for civil registration and vital statistics - It all began with taxes

September 9 2025
Jesper Ellemose Jensen
jej@dst.dk



# Lets begin with the beginning Luke 2:1-10

STATISTICS DENMARK

- In those days Caesar Augustus issued a decree that a census should be taken of the entire Roman world. (This was the first census that took place while Quirinius was governor of Syria.) And everyone went to their own town to register.
- In DK first census in 1769 although we only have records from the 1787 census.
- Statistics Denmark established in 1850 - Census until then by “rentekammeret” which basically means Ministry of Finance.



# First Vision in Scandinavian Statistics

STATISTICS DENMARK

- Svein Nordbotten 1960:
- “In 1970, there will probably not be any need to collect a census in the traditional way”



Svein Nordbotten 1928 - 2023. Norwegian Statistician- One of the architects behind the Norwegian person ID 1979-1982 Head of UN Statistical Division

# Act on Statistics Denmark 1966

- Dispute regarding weights for consumer prices initiates a need for an act governing Statistics Denmark
- Establish DST as an independent body
- **Use of registers for statistical purposes**
- Provision of services
- Support to government commissions / task forces
- Analysis and prognoses
- International cooperation



Olfert Viggo Kampmand – (1910-1976)
Statistical office from 1934-1946
Prime minister of Denmark 1960-1962

# Civil Registration

STATISTICS DENMARK

- In 1968 all permanent residents in Denmark had to be registered in the Central Person Register - CPR
- Reason: Income tax collection + distribution of social welfare services
- A unique identifier: date of birth + 4 digits e.g. 010165-1127
- Content:
  - name, address, marital status (e.g. married, unmarried, divorced, widow, widower, registered partner, previously registered partner)
  - birth registration information (e.g. information about place of birth)
  - citizenship
  - kinship (e.g. information about parents and parental authority)
  - relationship with the Lutheran Church (e.g. member, or former member)



# Civil Registration – An identifier

STATISTICS DENMARK

- A unique identifier: Date of birth + 4 digits e.g. 010165-1127
- Semantic key <> surrogate key
- Designed solely for administrative purposes
  - Not a signature – but necessary prerequisite
  - Not a bio-metric
  - No or very little or no bio-metric information by design
  - Church tax – NOT religion per se



# Businesses

- In 1975 all companies, associations, foundations and public authorities etc. (legal entities) were assigned a Central Business Registration number (CVR)
- Reason: tax collection and administrative purposes
- A unique identifier: 8-digit number for each legal unit
- Content:
  - Name, address, other contact information (telephone, mail etc.)
  - Start date, company form, business purpose etc.
  - Vat registration, financial year, statutes
  - Subscription rules, management, board of directors, founders and auditor
  - Ownership, accounts, yearly reports, registration history/historical data
  - Production units, number of employees



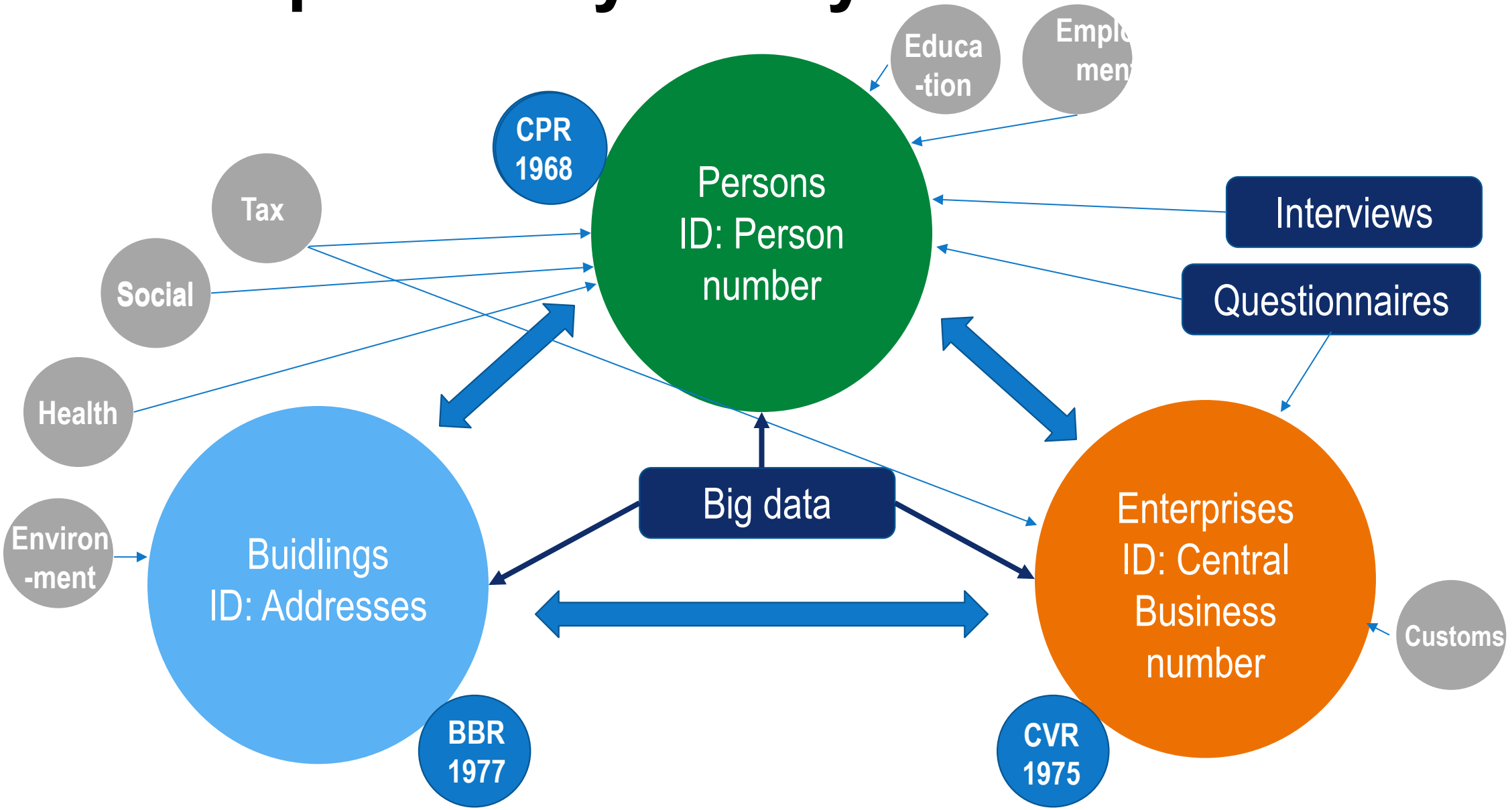
# Buildings

- In 1978 all buildings, residential and commercial units, technical facilities in Denmark were registered in the The Building and Housing Register - BBR
- Reason: Tax collection and administrative purposes
- Unique identifier: the address
- Content:
  - Year of construction, building materials, year of recent renovation or additions, number of floors, number of rooms, bathroom facilities, kitchen facilities, total building area,
  - Type of heating, water supply and drainage conditions (sewer)
  - Purpose of the building (type of dwelling, type of business etc.)



# ”The Tripod / Holy Trinity”

STATISTICS DENMARK



# The Tripod – In practice





CPR- Civil Registration

https://api.dataforsyningen.dk/adgangsadresser?q=Vejrøvej 5, 4243



CVR – Central Business Register



BBR – Central Dwelling Register

# Its all about trust

- Historical period with ”high trust” in technological progress and government
- Scandinavian ”welfare state” – taxes as gate keeper to (desirable) services
- “Trust” <> Privacy
- Minimum registration – originally technical constraints –semantic key
- Worked because of “trust”
- Now works because of “digital integration” – you can’t live in Denmark if your information is not current!



# Pitfalls of Civil Registration

STATISTICS DENMARK

- Dependent on timely and correct registration
- Unique identifier plus digital id as gate keep for government services
- Exclusion Risks:
  - Vulnerable groups may be left out.
- Privacy Concerns:
  - Risk of misuse eroding trust
- Dependency on Institutions:
  - Requires strong administration
- Inequity in Access:
  - Barriers to timely registration.




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Q & A

- To get timely information on developments in Civil Registration and Vital Statistics (CRVS) in Asia and the Pacific, we are happy to encourage everyone to **subscribe to the free monthly CRVS newsletter** at getinthepicture.org/crvs-insight-newsletter

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Next Stats Café session will be on **“Asia and the Pacific Regional Trends on Forced Displacement and Statelessness”**

**15 September 2025**
**11:00-12:15h (UTC+7)**

*Asia-Pacific Stats Café Series*