



# Identification Systems for Social Insurance

## November 5, 2019

Robert Palacios  
World Bank

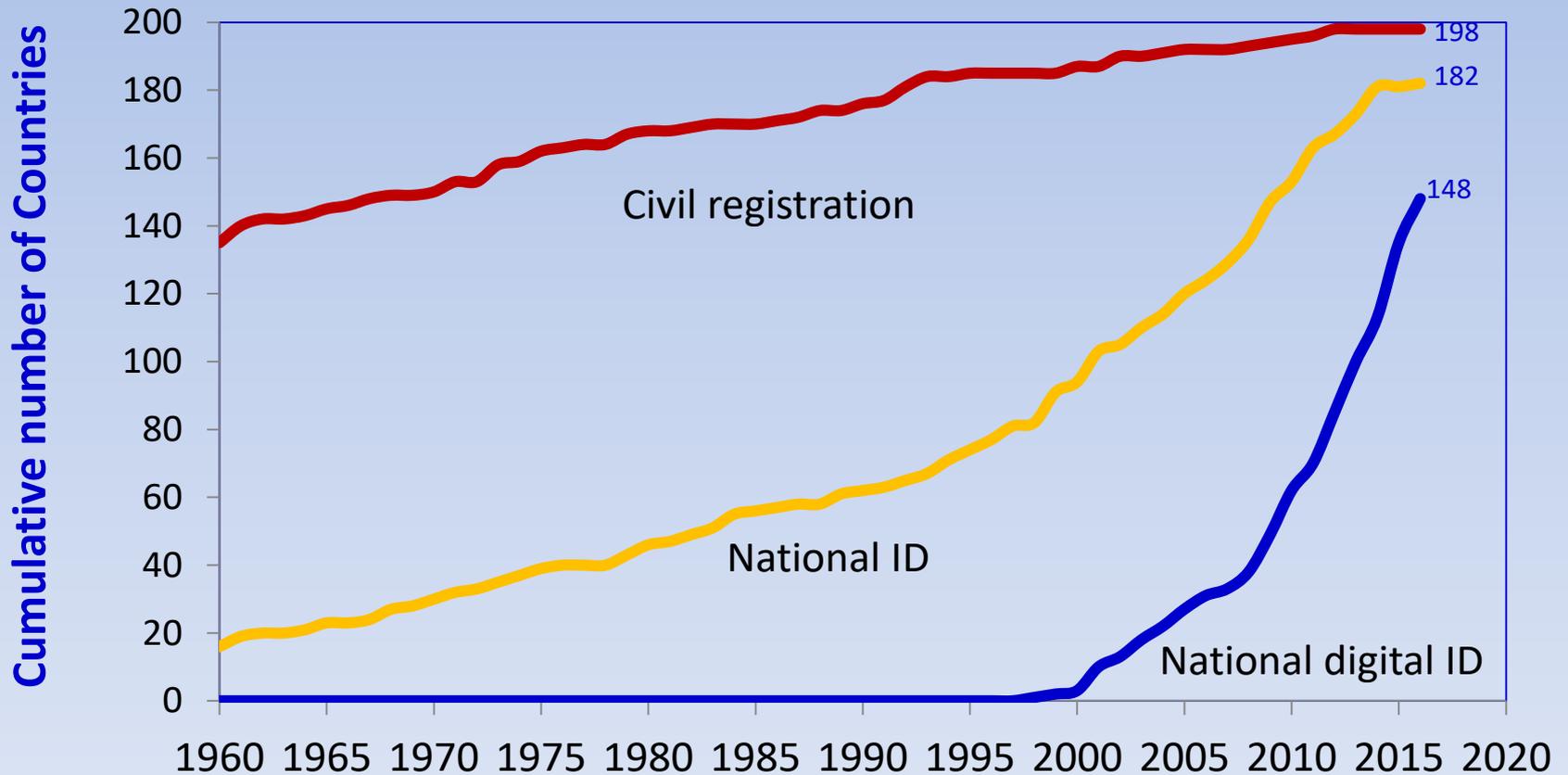
[Pensions Core Course](#)

# The identification revolution

- The root of trust for the digital economy
  - E-KYC for mobile phones/money
  - Credit rating services
- Shift to digital government
  - On-line voting and tax filing in Estonia
  - Direct benefit transfer (DBT) in India
- Migration and security challenges
- Technological progress and lower costs especially for biometrics

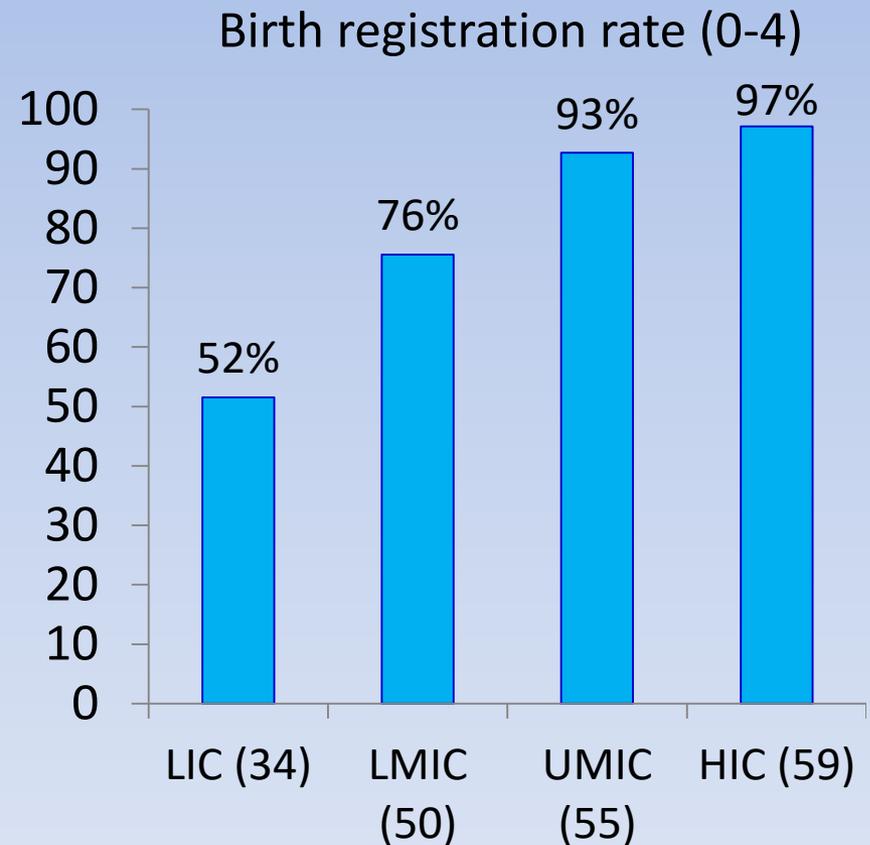
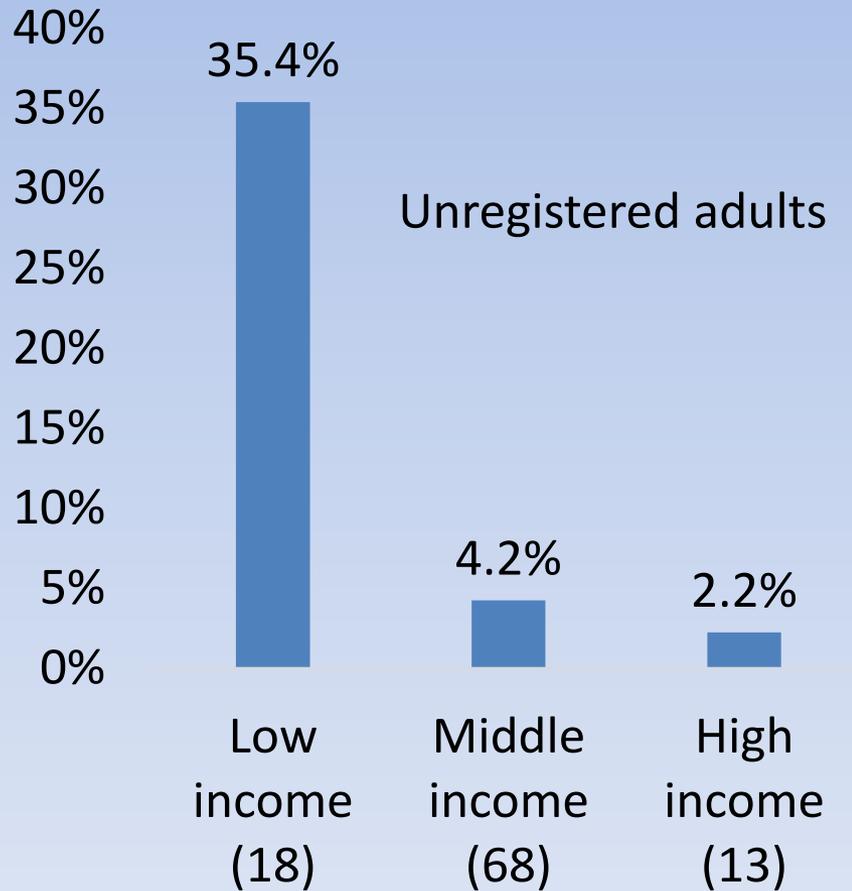
# We are in the midst of an ID revolution

## Civil Registration and Identification (1960-2017)



Source: ID4D Global Database

# Coverage is improving but gaps remain



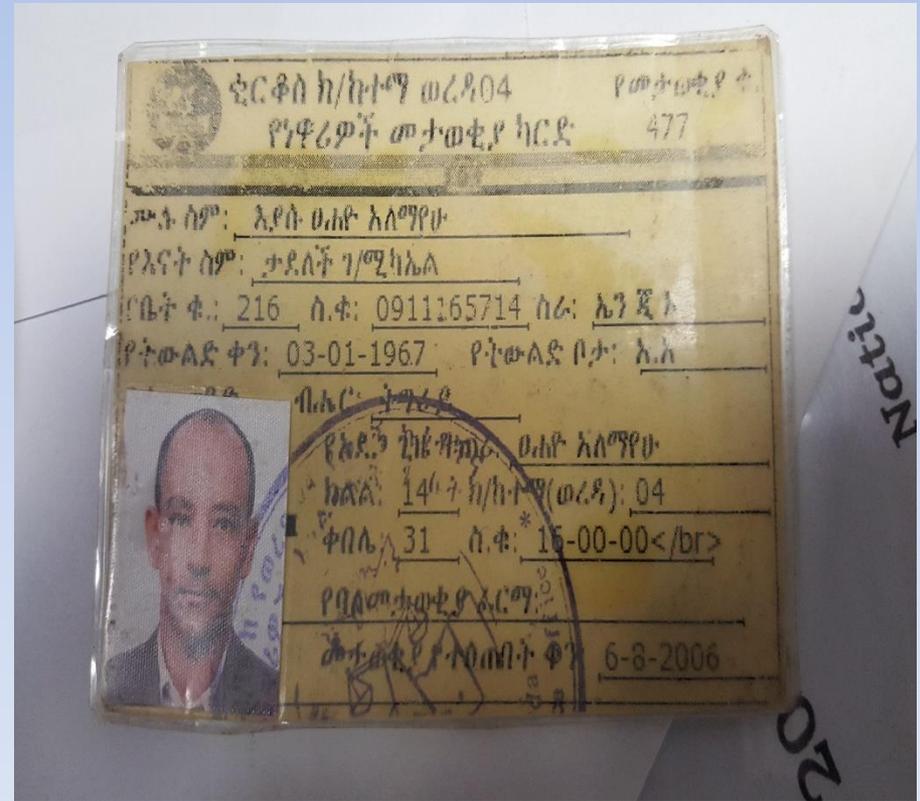
Source: ID4D Global Database based on FINDEX and UNICEF data

# But many IDs are not digital or robust

## Birth registration records



## National ID card



# And may not ensure uniqueness

Consulta Curp

Resultado (1 - 1 de 1)

Imprimir Formato

Curp	PEMA660123MDFRRL00
Primer Apellido	PEREZ
Segundo Apellido	MARTINEZ
Nombre(s)	ALMA ROSA
Sexo	MUJER
Fecha de Nacimiento	23/01/1966
Nacionalidad	MEXICO
Entidad de Nacimiento	DISTRITO FEDERAL
Tipo Doc. Probatorio	ACTA DE NACIMIENTO

Datos del Doc. Probatorio	
Entidad	09 DISTRITO FEDERAL
Municipio	017 VENUSTIANO CARRANZA
Año	1966
Libro	0001
Tomo	Foja
Acta	00269
Crip	

Historicas

\* Formato para fechas: dd/mm/aaaa  
\* DP: Documento Probatorio

Dirección General del Registro Nacional de Población e Identificación Personal

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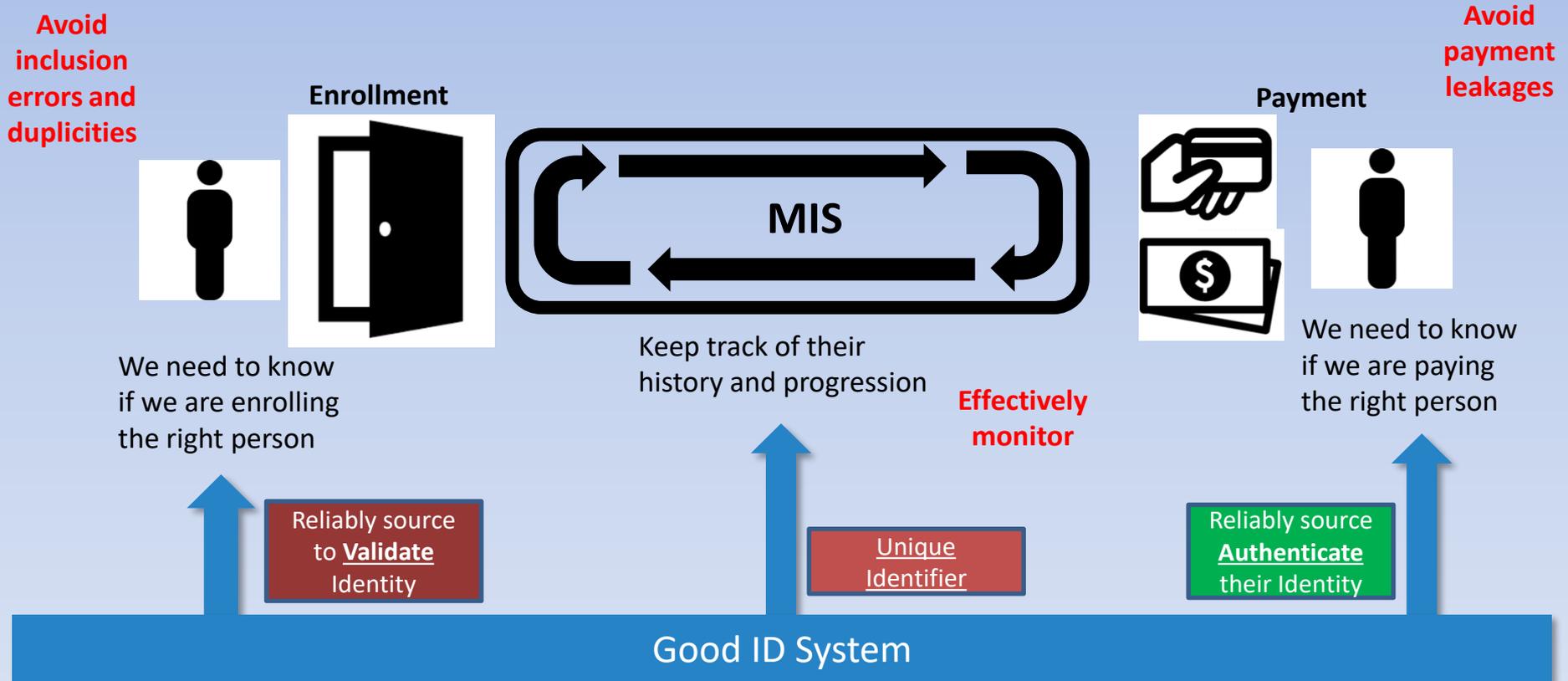
Dirección General del Registro Nacional de Población e Identificación Personal

**CURPS ISSUED: 186 million**  
**Mexican population: 130 million**

# Three things that SP programs need

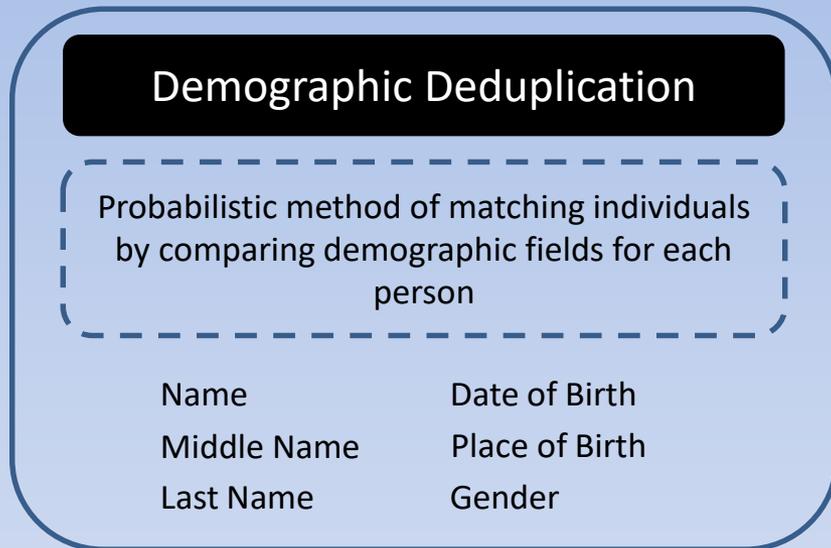
- Uniqueness (1:n)
  - Without it, there are duplicates and the other two ID functions are compromised
- Authentication (1:1)
  - Without it, there is fraud and leakage
- Links across databases
  - Without it, integration of SPJ policies is compromised and targeting is less accurate

# Why ID matters for Social Protection

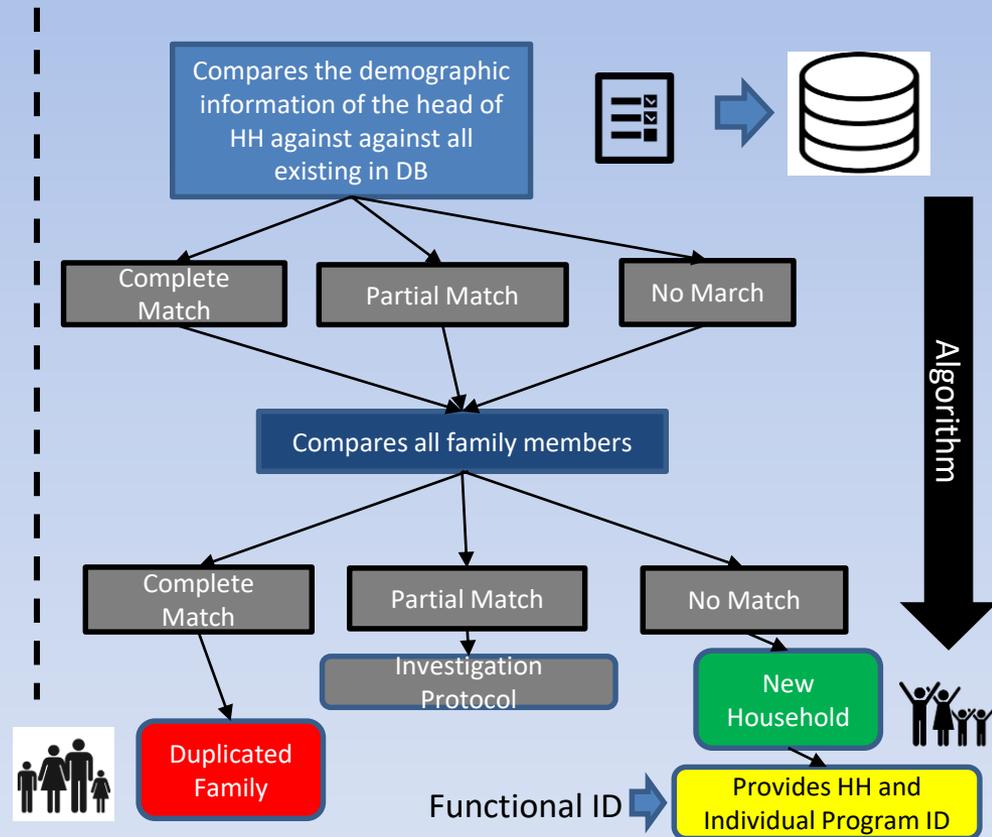


Source: Chavez (2018)

# Uniqueness: difficult without biometrics



Source: Chavez (2018)



and since no one program covers the entire population, the identity established is program specific and not unique in the SPJ system

# Authentication: various options

**Security**

*Least*



*Most*

<b><u>Manual verification</u></b> Some form of ID is shown to the agent/official and may be manually recorded	No electronic record generated at point of transaction	
<b>Electronic</b>		
<b>What you have</b>	Card/SIM/voucher read by POS and e-record created	Off-line or on-line
<b>What you have and know</b>	Card/SIM plus PIN	Off-line or on-line
<b>What you have and what you are</b>	Card plus biometric verification	Off-line or on-line
<b>Combination of above</b>		

# Manual authentication

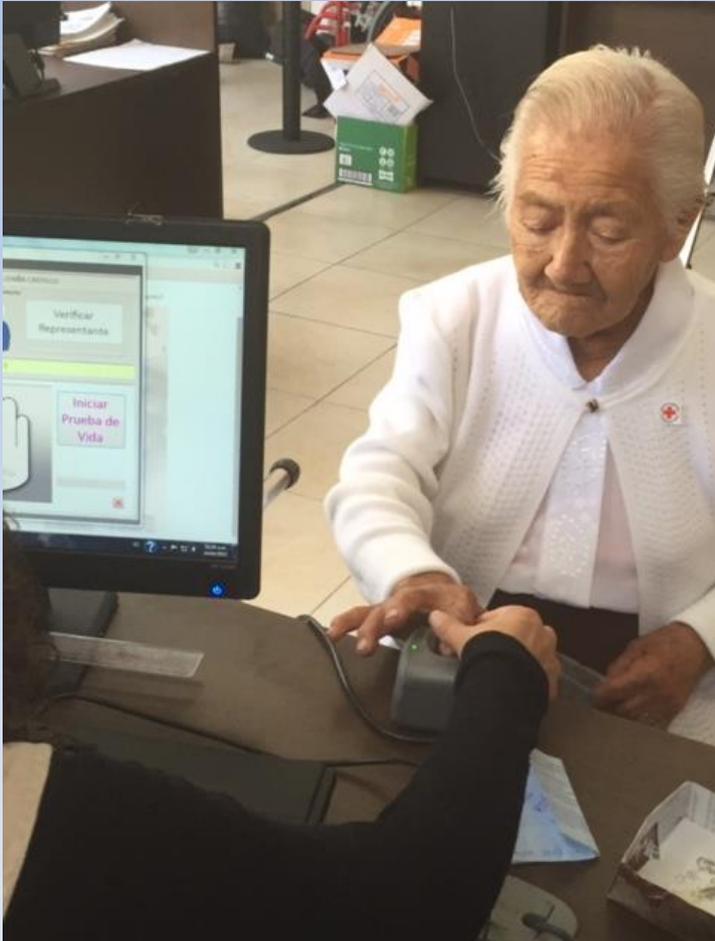


India

Ethiopia



# Biometric authentication for pensions

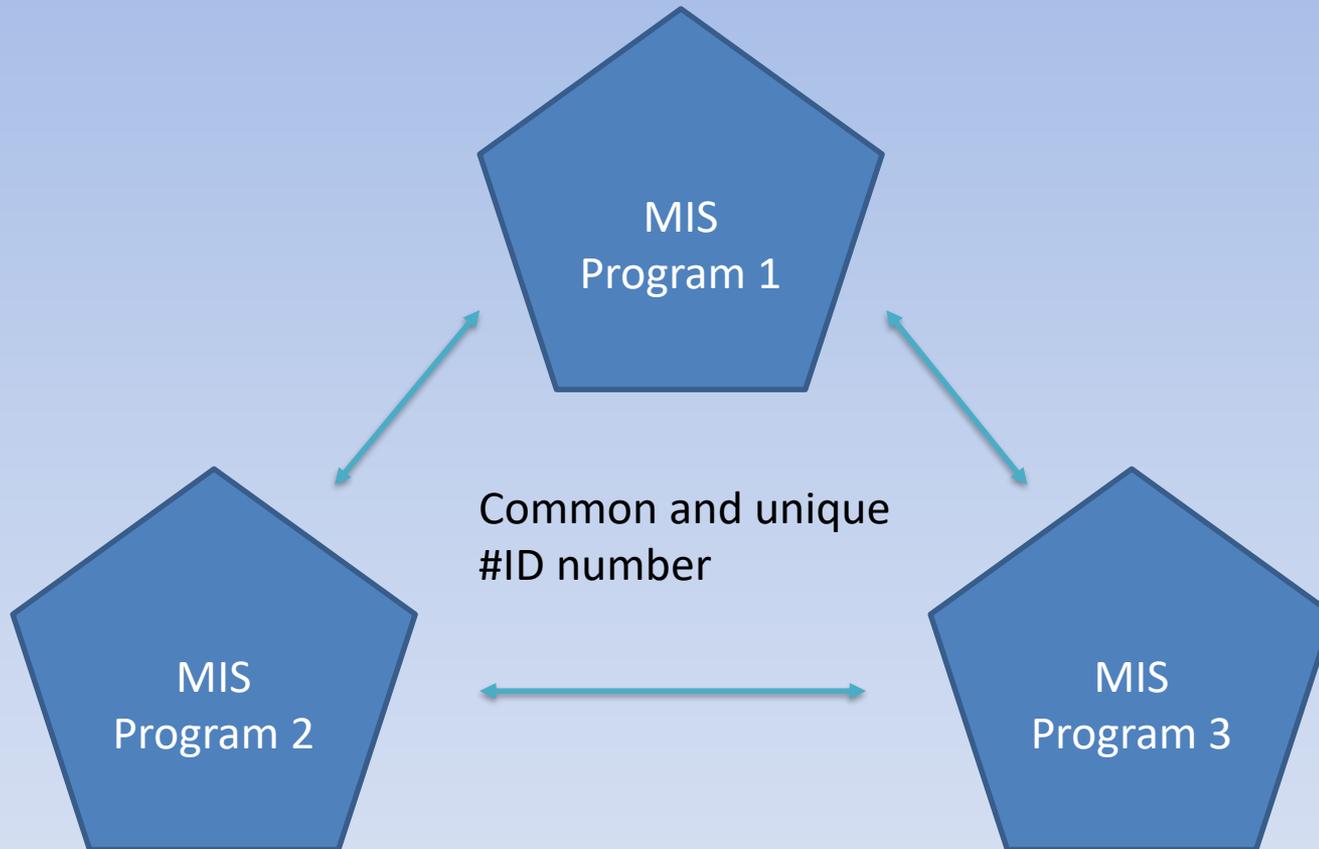


Mexico



India

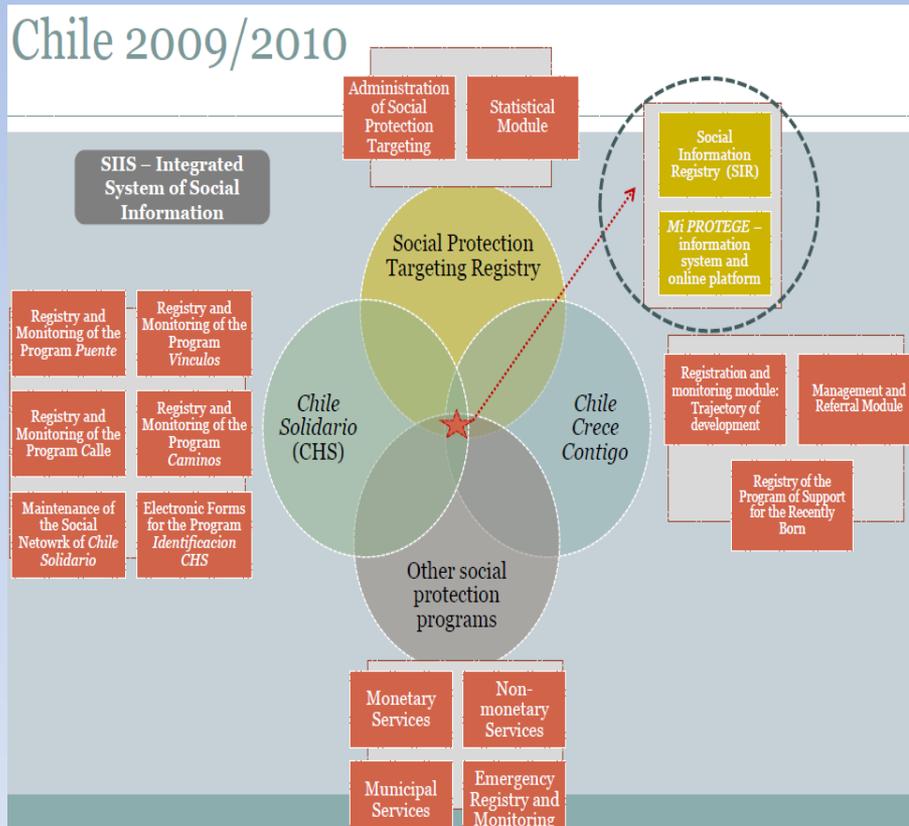
# Linking databases



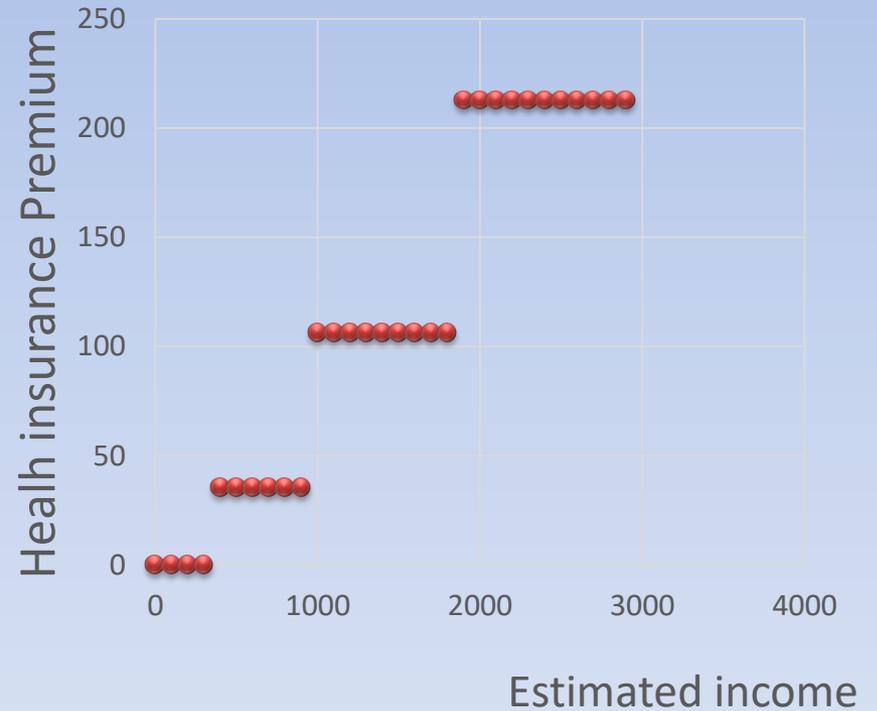
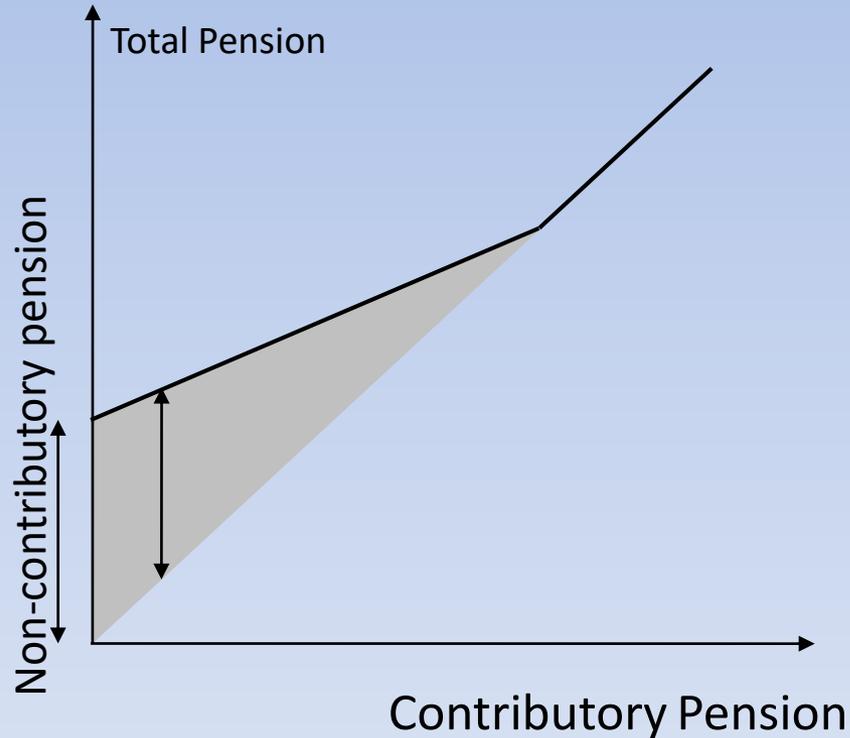
## Examples:

- Compare Social Insurance to Social Assistance
- Compare Social Insurance to income tax
- Update address w/utility bill
- Check CCT education conditions met

# Advanced cases – Chile and Turkey



# Advanced cases – Chile and Turkey



# But links raise privacy concerns...

- 2018 was the year of the Facebook scandal, the Indian Supreme Court decision on privacy and the GDPR
- Many countries do not have personal data protection rules and/or the ability to enforce them
- *Does your agency have clear policies regarding personal data and privacy?*

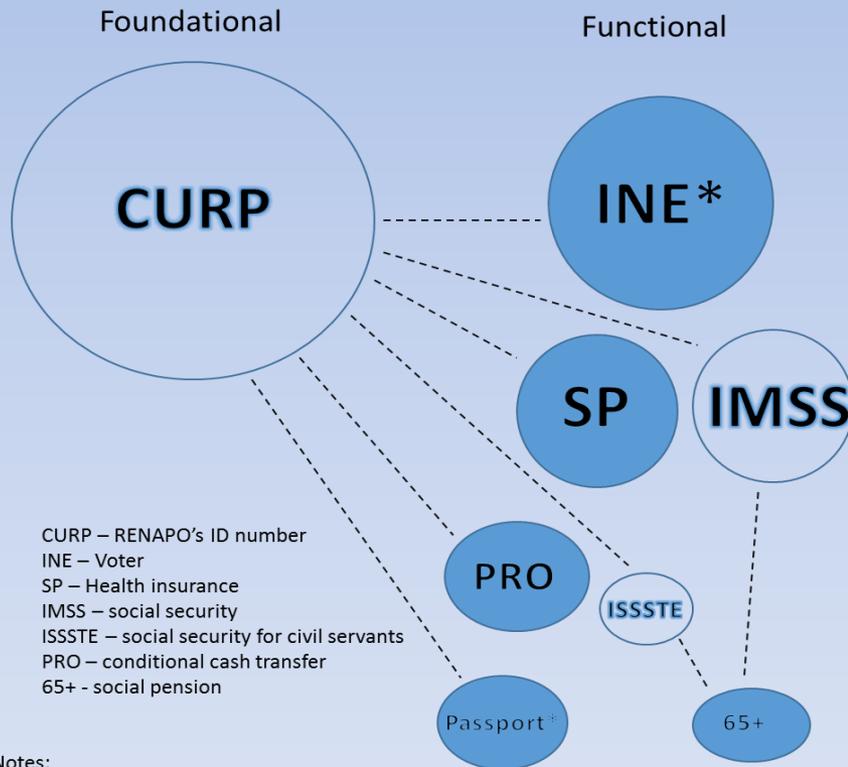
Question:

Does your program/agency use the national ID or its own functional ID?

# Functional or foundational

## Mexico's silos

## Why silo's exist



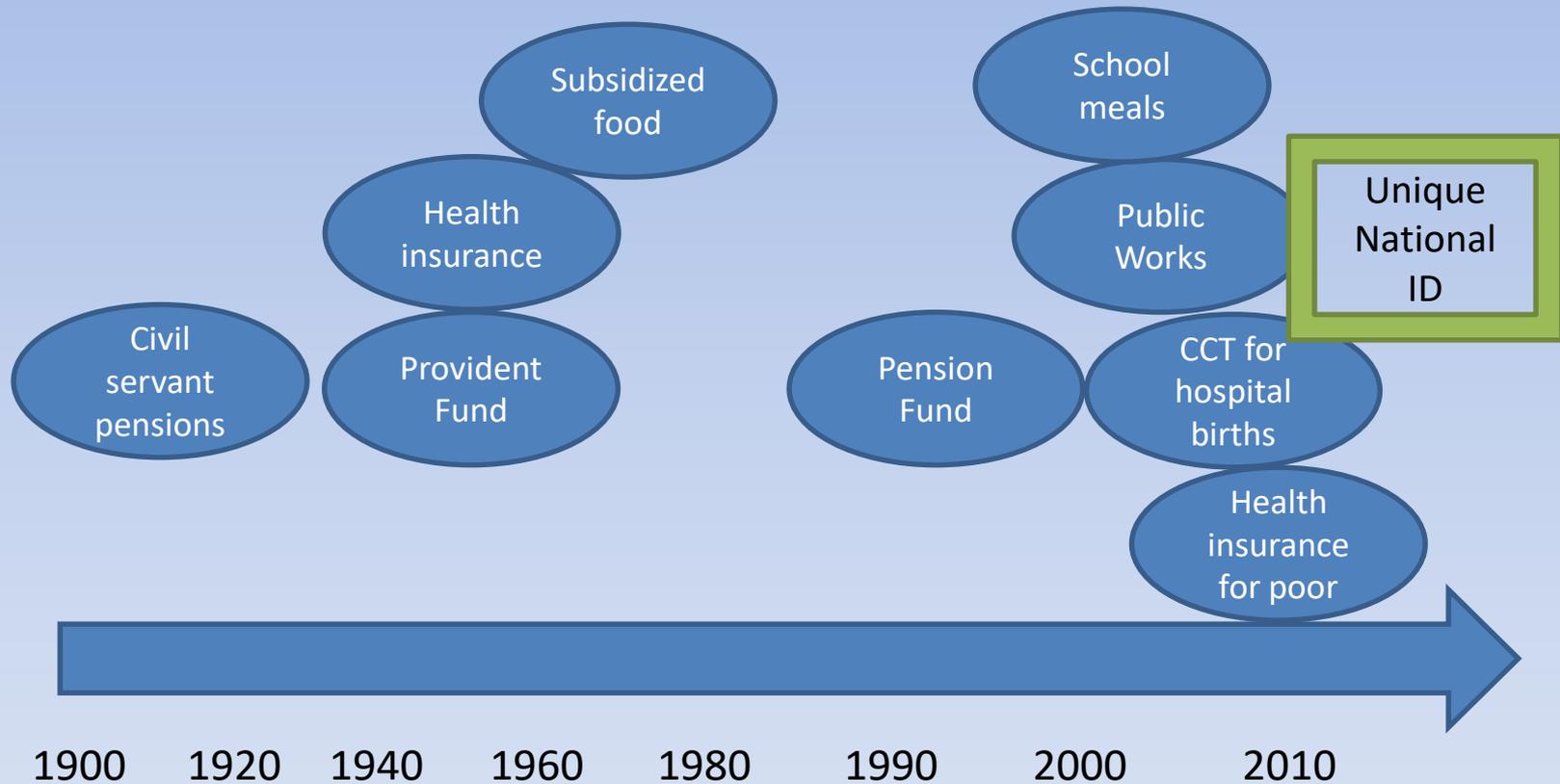
Notes:

1) \* = deduplicated

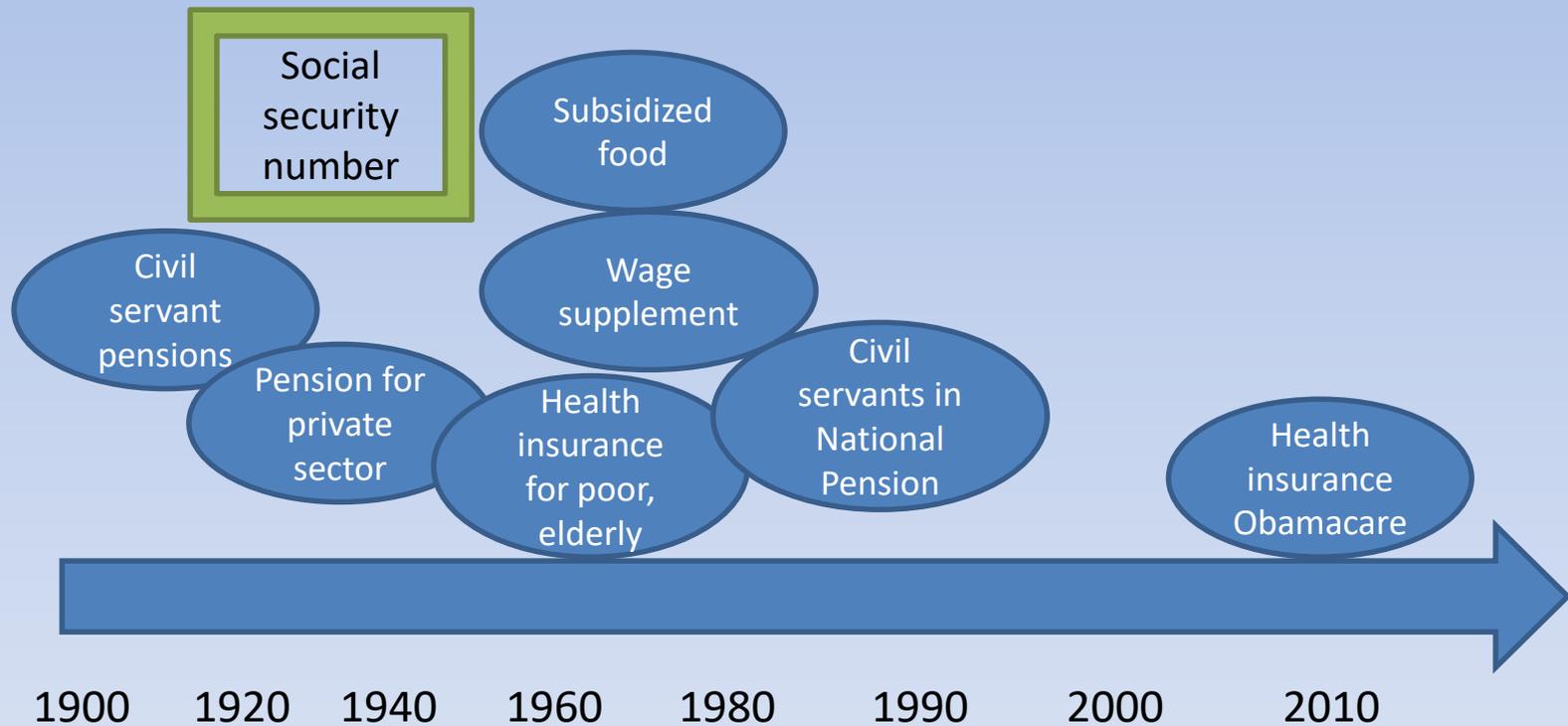
2) White = manual or no credential; Blue = electronic credential

- Low coverage of national IDs and civil registers
- NID and CR not robust or trustworthy
- National ID system does not offer authentication services
- Legacy systems and turf battle

# Social Protection Programs in India over the last century



# Social Protection Programs in US over the last century



# Challenges of 'silo' functional IDs

## 1. Limited ability to ensure uniqueness

- Deduplication without biometrics has larger errors but the cost of ABIS for individual programs may be prohibitive
- It is not a one-off exercise as people move in and out of the program due to changes in their income and labor market status
- As a result, many programs don't know how many people they actually cover, duplicates enter the system with costs to beneficiaries and government

# Challenges of 'silo' functional IDs

## 2. Limited ability to authenticate

- Many programs cannot authenticate securely and this has contributed to massive fraud
  - Billions of dollars of 'leakages' in the largest SP programs like subsidized food or fuel in India and Indonesia
- This has led programs to invest in e-IDs with more secure authentication but this results in a plethora of cards, lack of interoperability and lots of extra cost
  - A household in Indonesia could receive 17 cards
  - RSBY in India collected biometrics for 130 million people most of whom are being enrolled again biometrically by Aadhaar
  - Mexico has spent hundreds of millions on five different program biometric IDs with overlapping populations

# Challenges of 'silo' functional IDs

3. Lack of common identifier limits ability to coordinate across programs in order to:

- Improve targeting, e.g., comparing social insurance and social assistance registries
- Monitor social spending – who is receiving benefits from multiple programs? Who is excluded?
- Provide better service to beneficiaries (one-stop shop, common on-line platforms)
- Scale up and expand during natural disasters
- Universality – you have to know the universe

# A few concluding observations

- Social protection programs need good IDs; the ideal would be a robust and unique identifier for the entire resident population from birth to death
- In its absence, suboptimal functional IDs have emerged and impose a significant cost on society
- Your social insurance and pension agencies can have a symbiotic relationship with NID agencies with benefits flowing in both directions

Thank you