


Digital Public Infrastructure

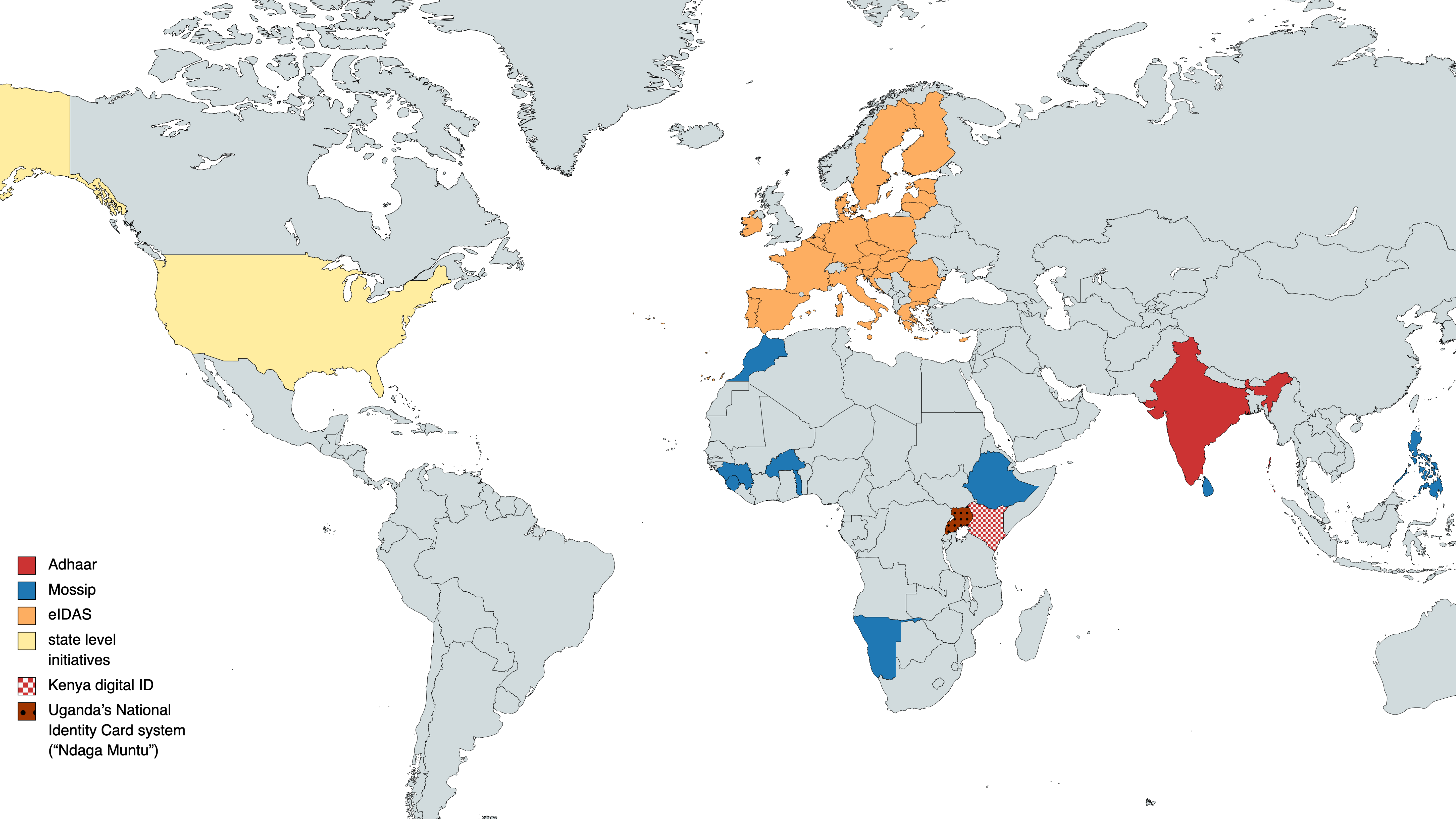
Who Governs the Operation System of the Digitised Society

Thomas Lohninger (epicenter.works)
Digital Humanism Summer School, Vienna, 3. September 2024



WHY & WHAT

Why these systems exist and how they work



- Adhaar
- Mossip
- eIDAS
- state level initiatives
- Kenya digital ID
- Uganda's National Identity Card system ("Ndaga Muntu")



TARGET

16•9

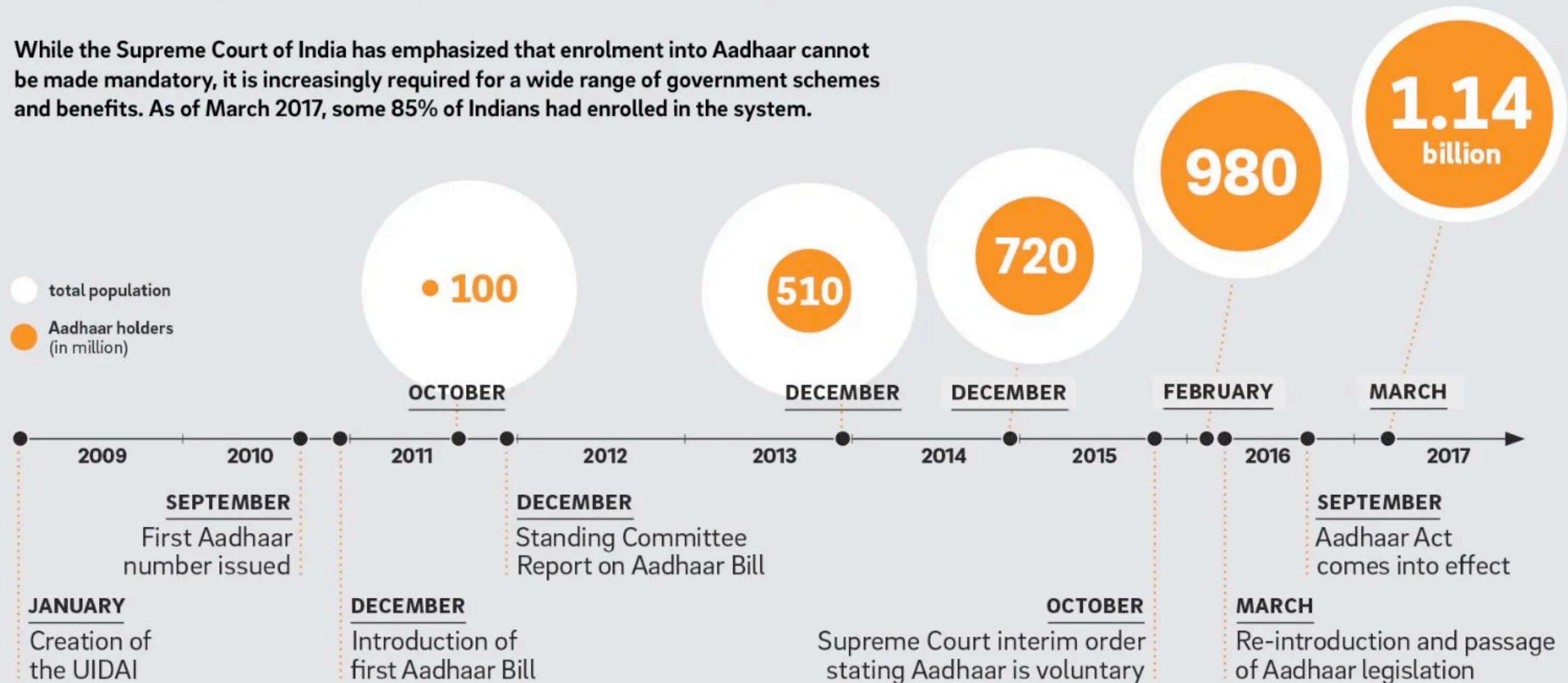


**PROVIDE UNIVERSAL
LEGAL IDENTITY**

AADHAAR: HOW IT WORKS AND HOW IT'S EVOLVED

The Aadhaar system: on the path to universal coverage

While the Supreme Court of India has emphasized that enrolment into Aadhaar cannot be made mandatory, it is increasingly required for a wide range of government schemes and benefits. As of March 2017, some 85% of Indians had enrolled in the system.




Source: state of aadhaar full report 2016-17

As States Continue To Mandate Aadhaar For RTE, Govt Affirms Aadhaar Not Compulsory For School Admissions

The clarification came in response to a question raised in the Rajya Sabha asking if the government has issued any advisory to the States on the same.

By **Sarasvati NT** Published July 26, 2023





**Aadhaar** ✓
@UIDAI

#AadhaarChildEnrolment

To enroll your child for **#Aadhaar**, you only need the child's birth certificate or the discharge slip from the hospital and the Aadhaar of one of the parents.


List of other documents that you can use for the child's enrolment:
uidai.gov.in/images/commdoc...

**#AadhaarChildEnrolment**


**TO ENROLL FOR BAAL AADHAAR
YOU ONLY NEED**

1. Child's Birth Certificate or Govt. Hospital Discharge Slip or The child's school ID*

2. Aadhaar of one of the parents**




To Locate Nearest
Aadhaar Centre
SCAN





*Photo ID issued by recognized educational institution
**The parent needs to visit Aadhaar Kendra with the child (age below 5 years) for biometric authentication

For any assistance/query: Call **1947** (Toll-free) or email at **help@uidai.gov.in**

 @AadhaarOfficial

 @Aadhaar_Official

 @UIDAI

 @AadhaarUID

4:30 AM · Jul 27, 2021

AADHAAR: HOW IT WORKS AND HOW IT'S EVOLVED

The enrolment process

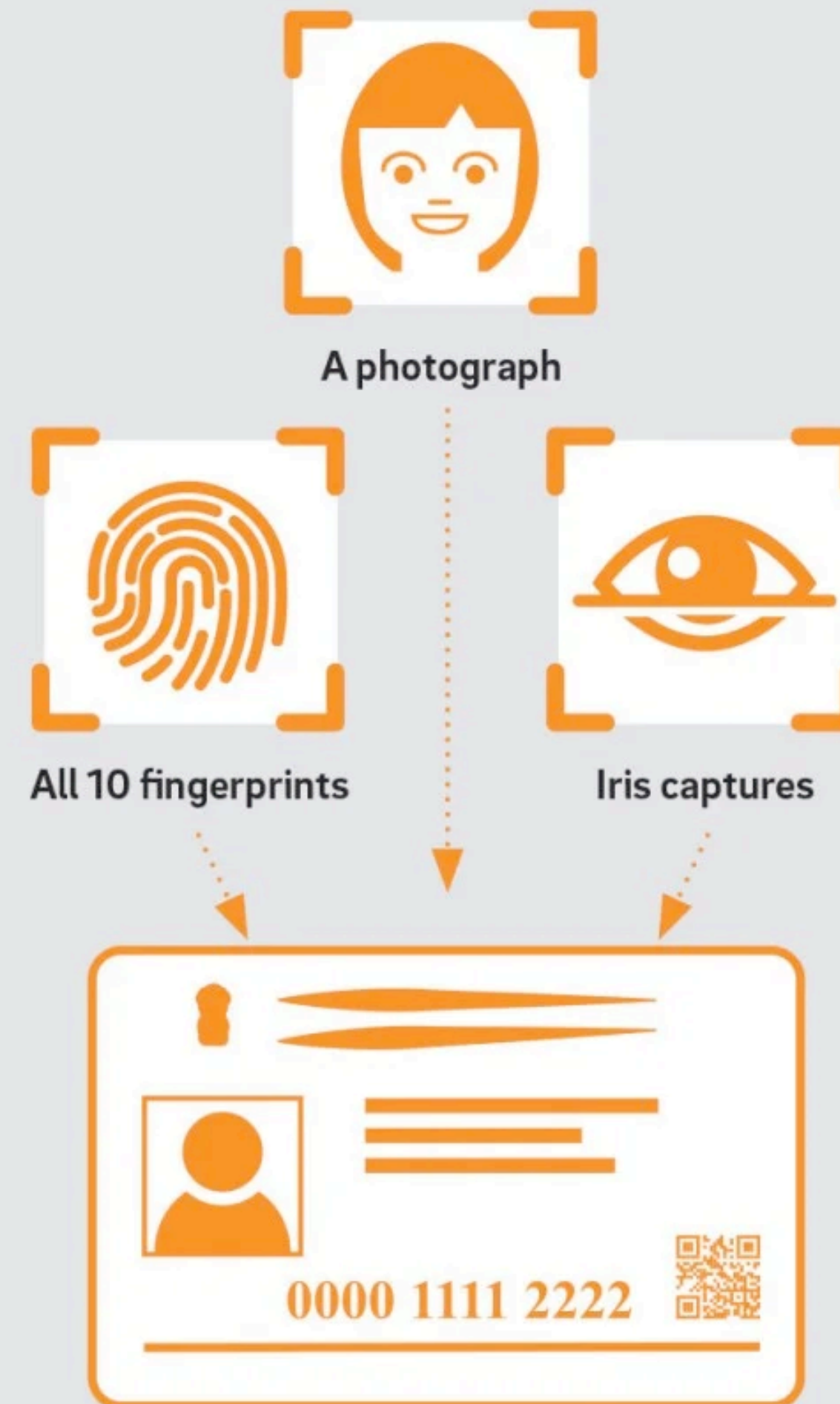
To ensure that each person receives only one Aadhaar number, the UIDAI (Unique Identification Authority of India) set up a deduplication database built on three features.

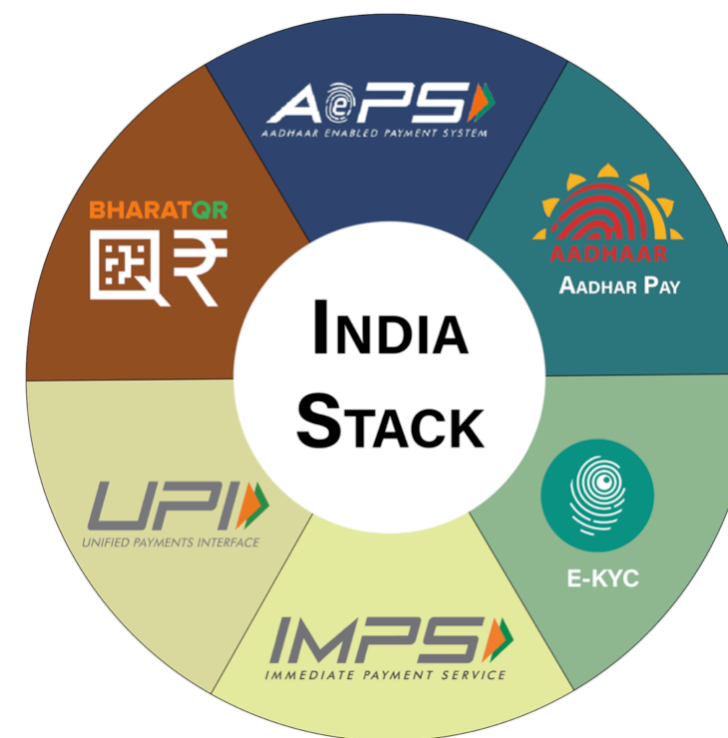
The Aadhaar Card is primarily a means of individual identification.

An Aadhaar ID is:

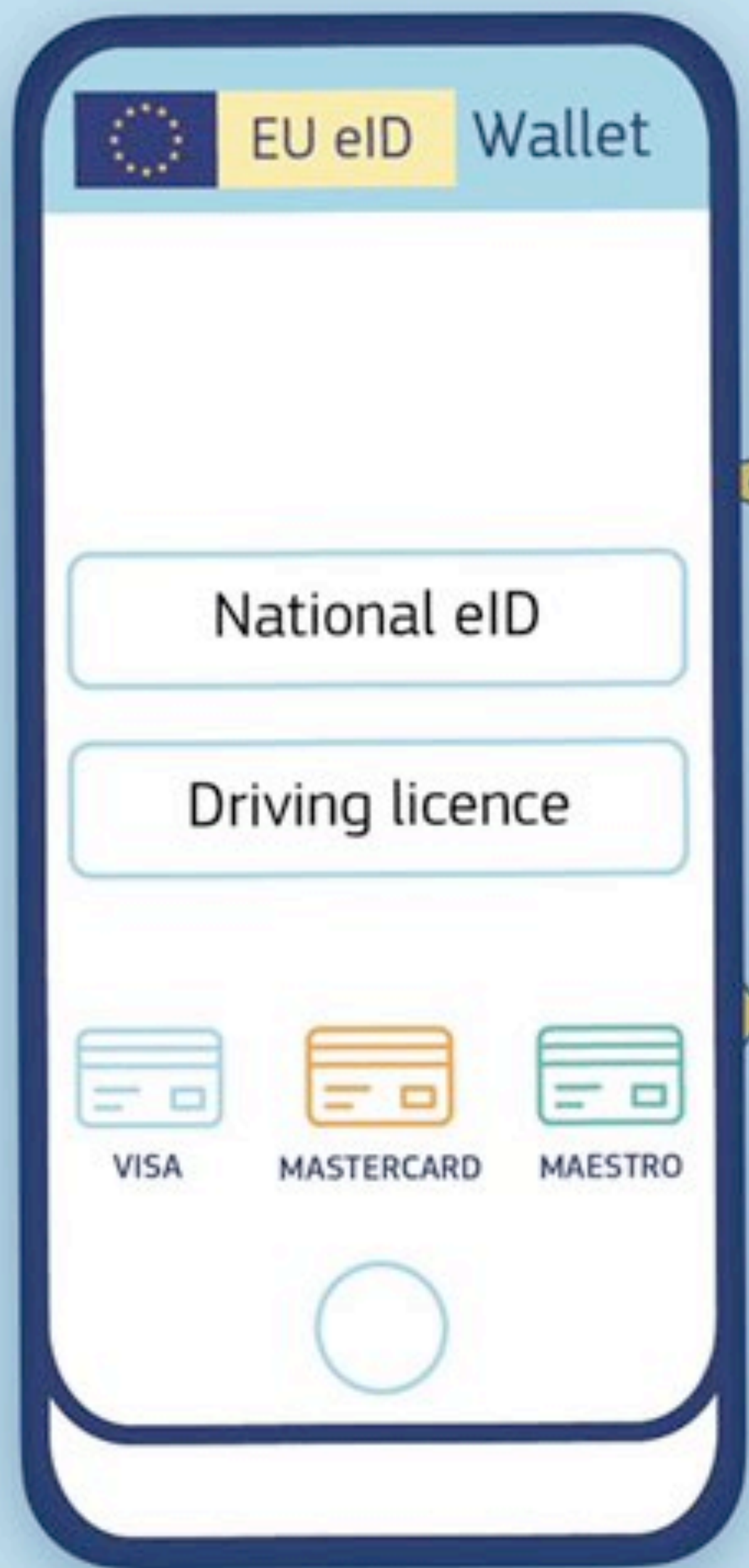
- Universal, digital and secure
- Linkable to multiple applications
- Suitable for use as a banking address

Infographic World bank snapshot 2012; United Nations





	What is it?	What is in it?	Who is the owner?	
India Stack	Consent layer	A modern privacy data sharing framework	Open personal data store	Reserve Bank of India
	Cashless layer	An electronic interoperable payment network	IMPS, AEPS,APB, UPI	National Payments Corporation of India
	Paperless layer	Easily store and retrieve information digitally	Aadhaar e-KYC, e-Sign, Digital Locker	Department of Electronics and Information Technology
	Presence-less layer	Unique digital biometric identity with open API access	Aadhaar card, Mobile Aadhaar	Unique Identification Authority of India



**EU DIGITAL
IDENTITY**

#DigitalEU

Holder



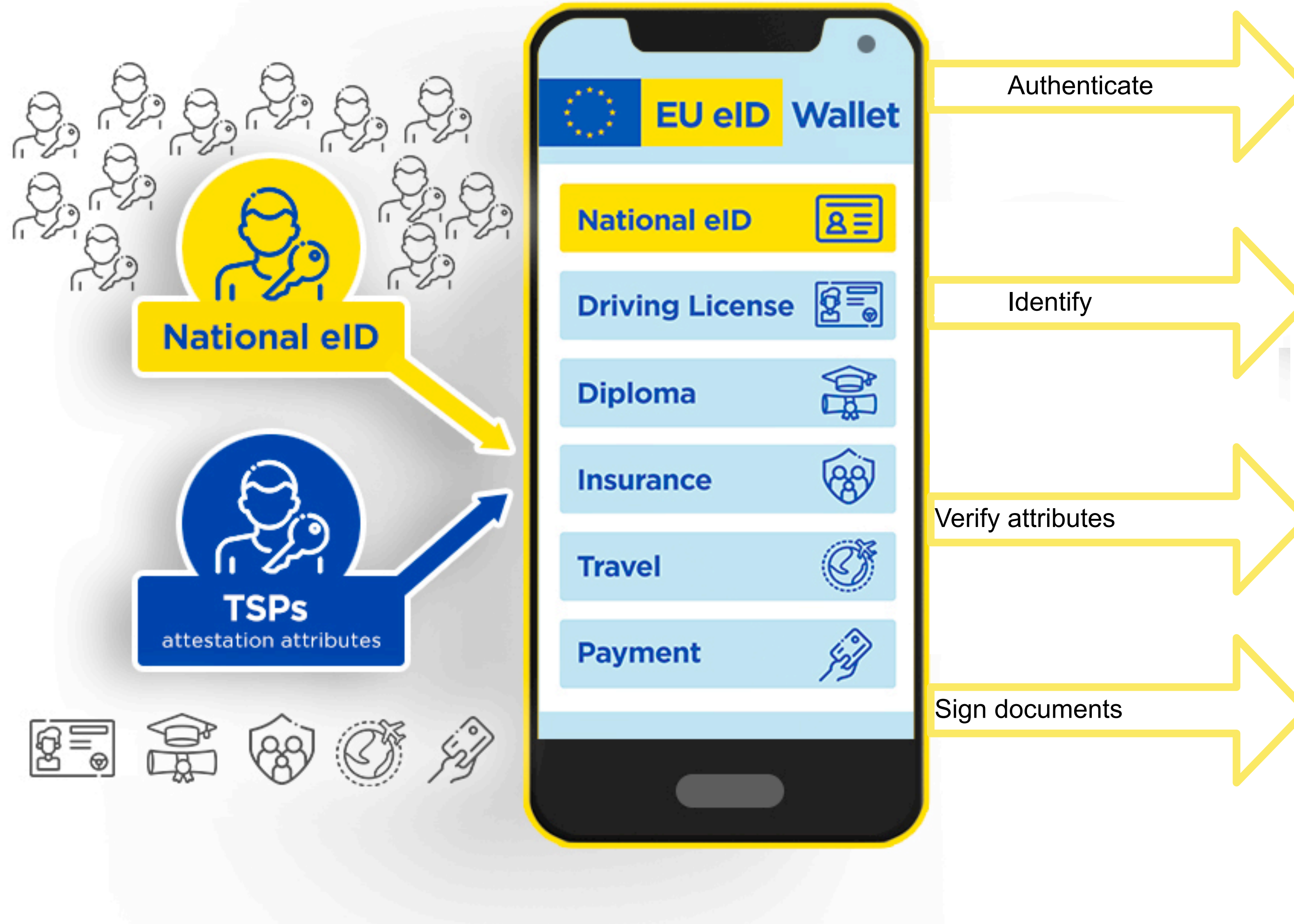
Issuer

Holder



Issuer

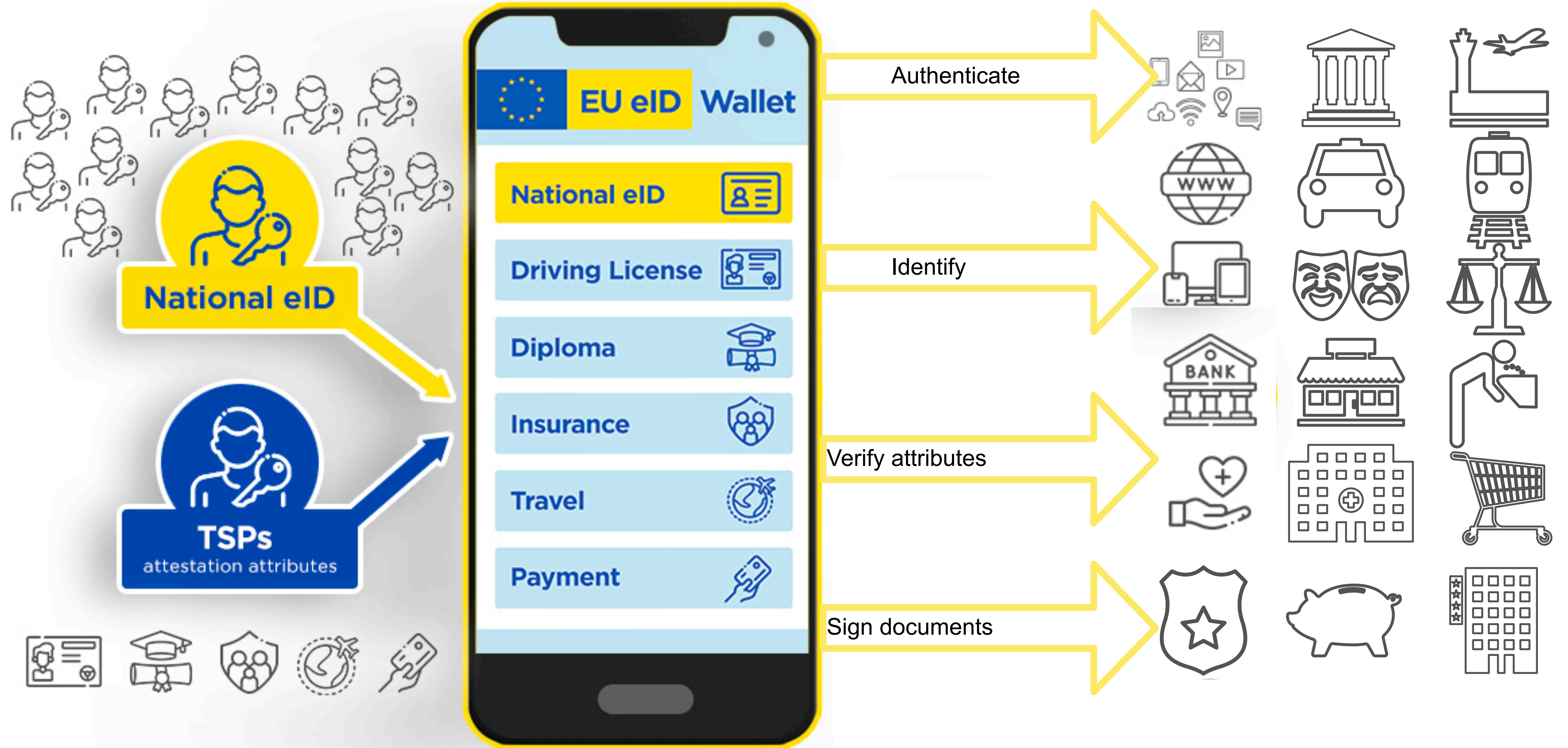
Holder



Issuer

Holder

Relying Parties



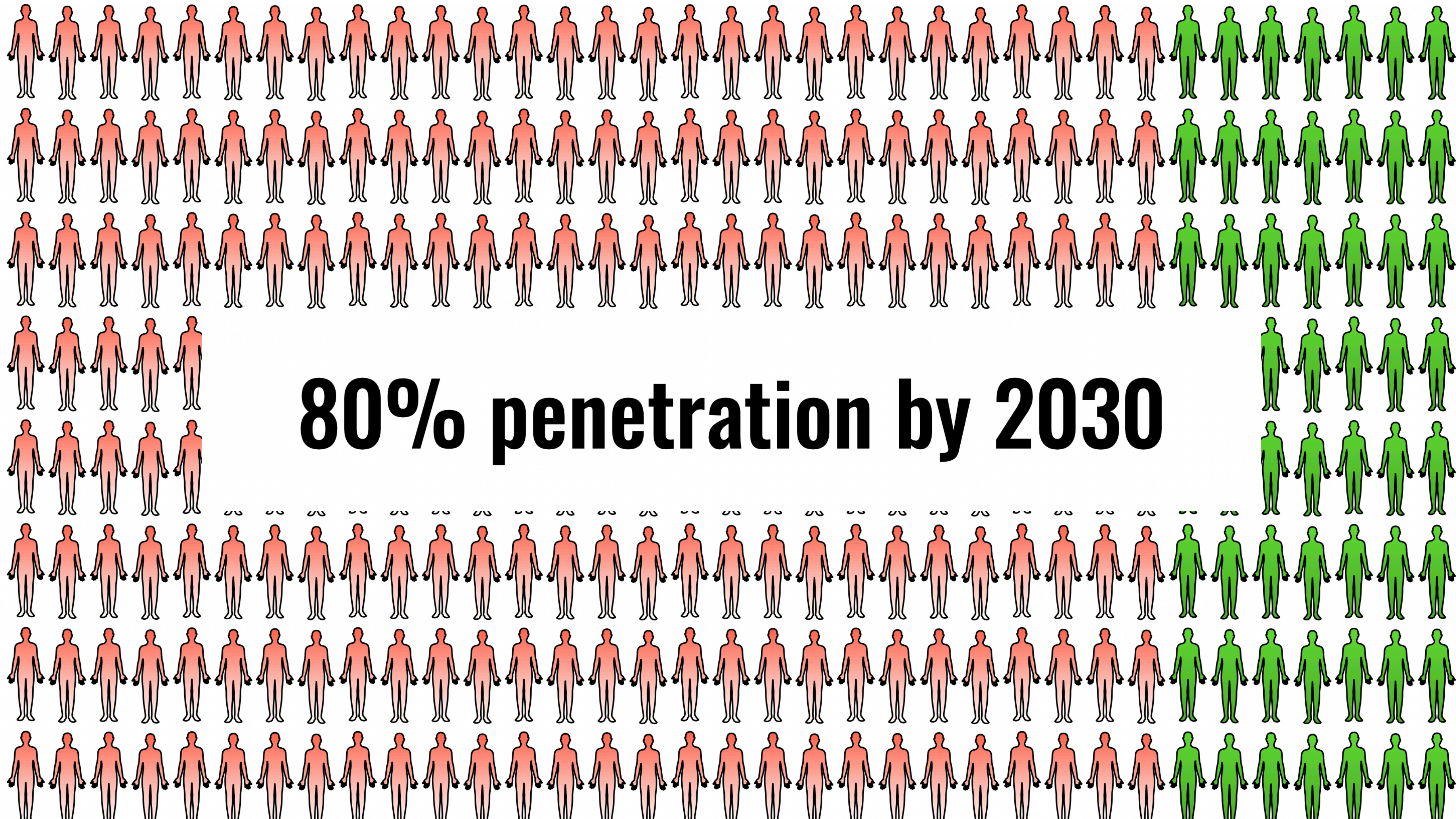
Universal Infrastructure

to identify, authenticate and verify attributes

about legal and natural persons

vis-à-vis government and private sector

online and offline.





Facebook Login



Twitter Login



Google Login



Sign in with Apple



amazon

schufa

Google

facebook



O₂ Telefónica

MOTEL ONE

Deutsche Bank

TABACCO
SHOP

axel springer

BUNDESNOTARKAMMER
KÖRPERSCHAFT DES ÖFFENTLICHEN RECHTS

OTTO





i'm not a robot

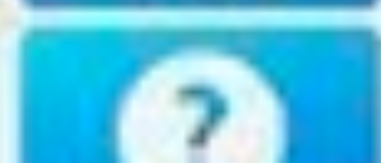
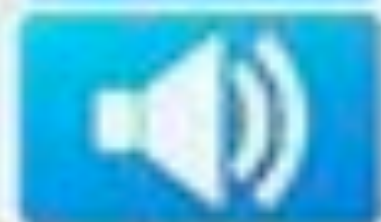


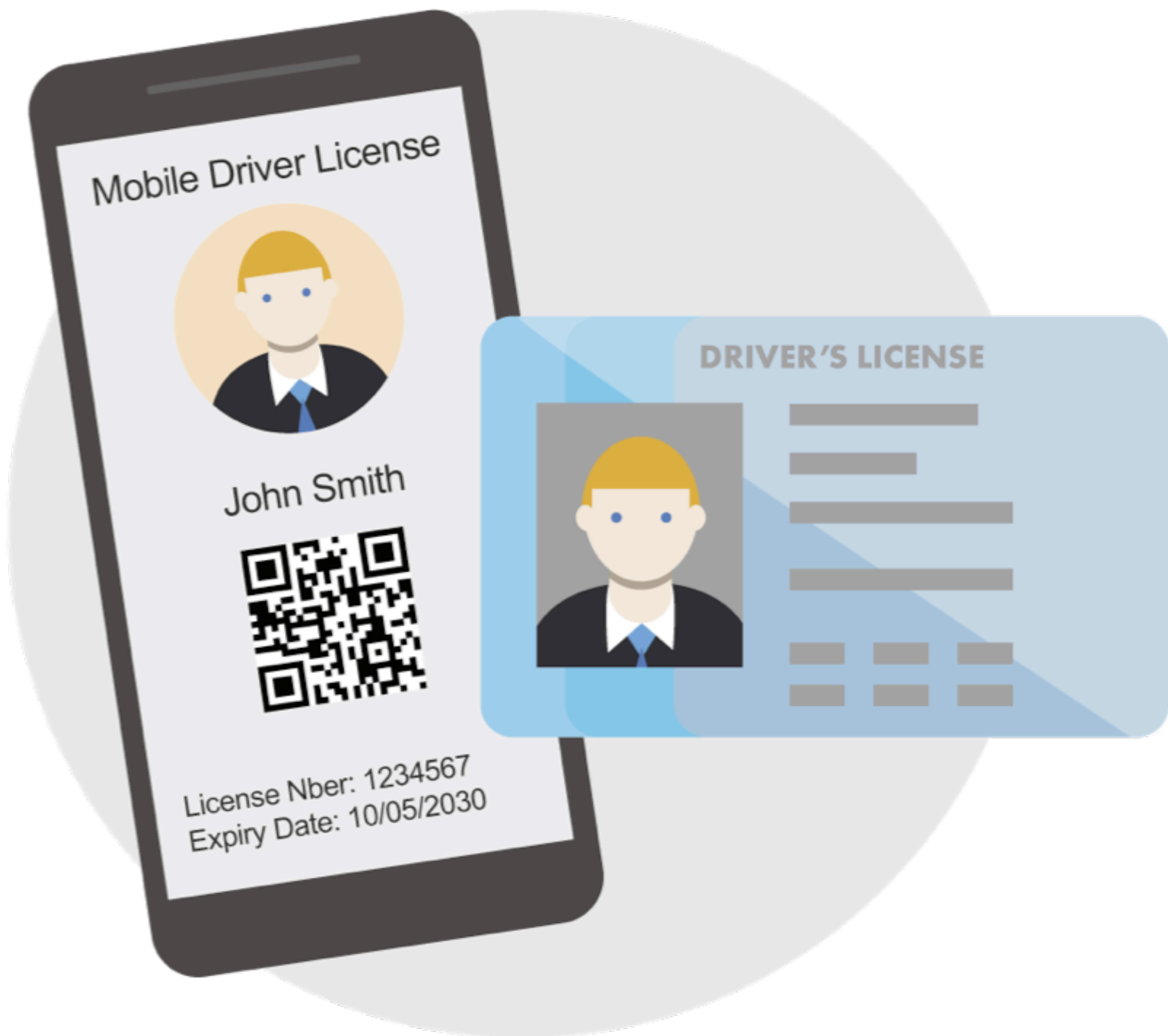
CAPTCHA

[Privacy](#) - [Terms](#)

Eps10 vector

Type the two words:





Mobile Driver License



John Smith



License Nber: 1234567
Expiry Date: 10/05/2030

DRIVER'S LICENSE



[Redacted]		
[Redacted]		
[Redacted]		
[Redacted]		
[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]



DATA





everywhere to other opportunities and services.





Putting **people**
at the center of DPI

Digital Public Infrastructure

Our goal

To encourage and equip low- and middle-income countries to adopt inclusive digital public infrastructure to advance the global Sustainable Development Goals.



Universal Safeguards for Digital Public Infrastructure

As digital public infrastructure (DPI) becomes integral to society, governance and finance, we must collaboratively establish safeguards to ensure global protection of fundamental rights.



United Nations
Office of the Secretary-General's
Envoy on Technology

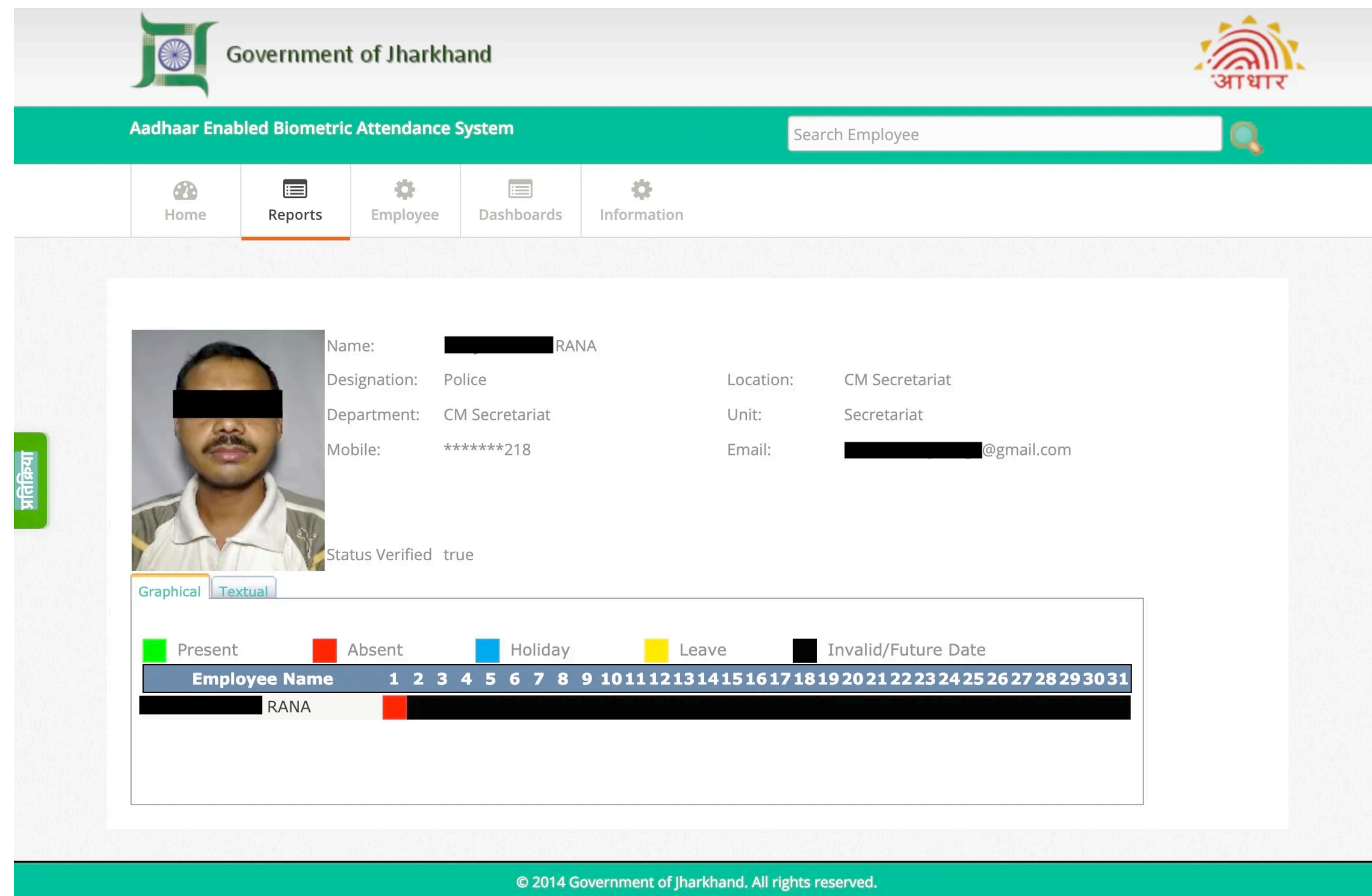
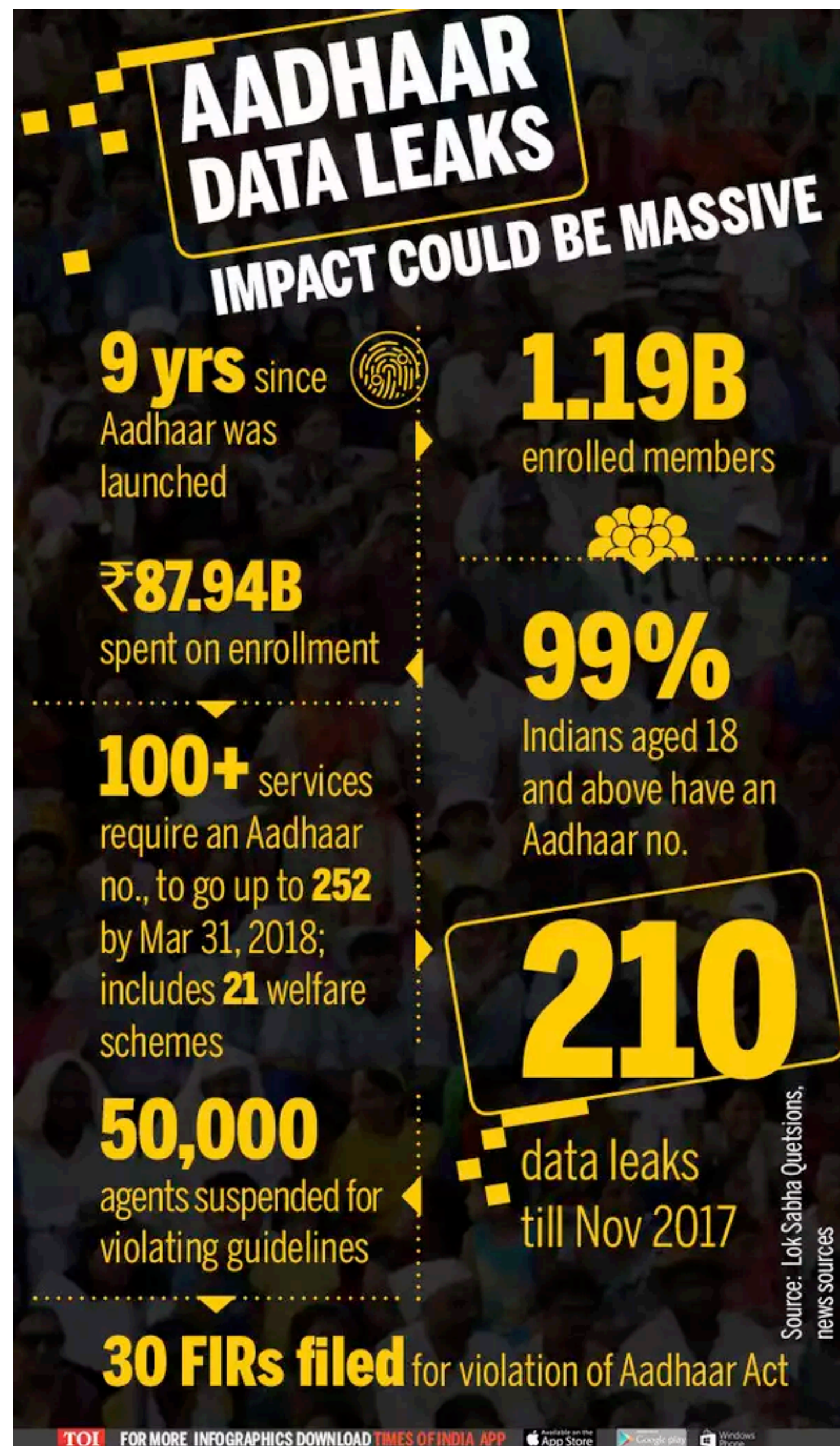


dpi-safeguards.org



RISKS

What can go wrong



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CEO Telangana
@CEO_Telangana

Link to empower - Link to progress. Don't just vote, make a difference by linking your Aadhaar card and your Voter ID today.

#ceotelangana #ecisveep #LinkToEmpower @ECISVEEP



भारत निर्वाचन आयोग
Election Commission of India

#PurityofElectoralRolls
#OnePersonOneVote

Link your Aadhaar card and Voter ID card to empower yourself
"Link for a better tomorrow"

"Link to Empower"



వివరాలకు
<https://voters.eci.gov.in> Or Call 1950
Download Voter Helpline App

సంప్రదించండి

 CEOTelangana  CEO_Telangana
 CEOTelangana  ChiefElectoralOfficerTelangana

ప్రధాన ఎన్నికల అధికారి
తెలంగాణ

www.ceotelangana.nic.in

Spokesperson ECI and Election Commission of India

7:27 AM · Apr 21, 2023 · 852 Views





8825-XXXX-7705

4529-XXXX-6789



Aadhaar Number: 8825-XXXX-7705 ✓

Name: K**** S***** ✓

Mobile: +91 88*** **28 ✓

DOB: XX-XX-1986 ✓

Gender: * ✓

Aadhaar Address: ✓ on 21.05.2016

Current Address: ✓ on 23.05.2016

Police Verification: ✓ on 28.05.2016

Enter OTP

Request Access

Aadhaar-Enabled Trust Bureau of India

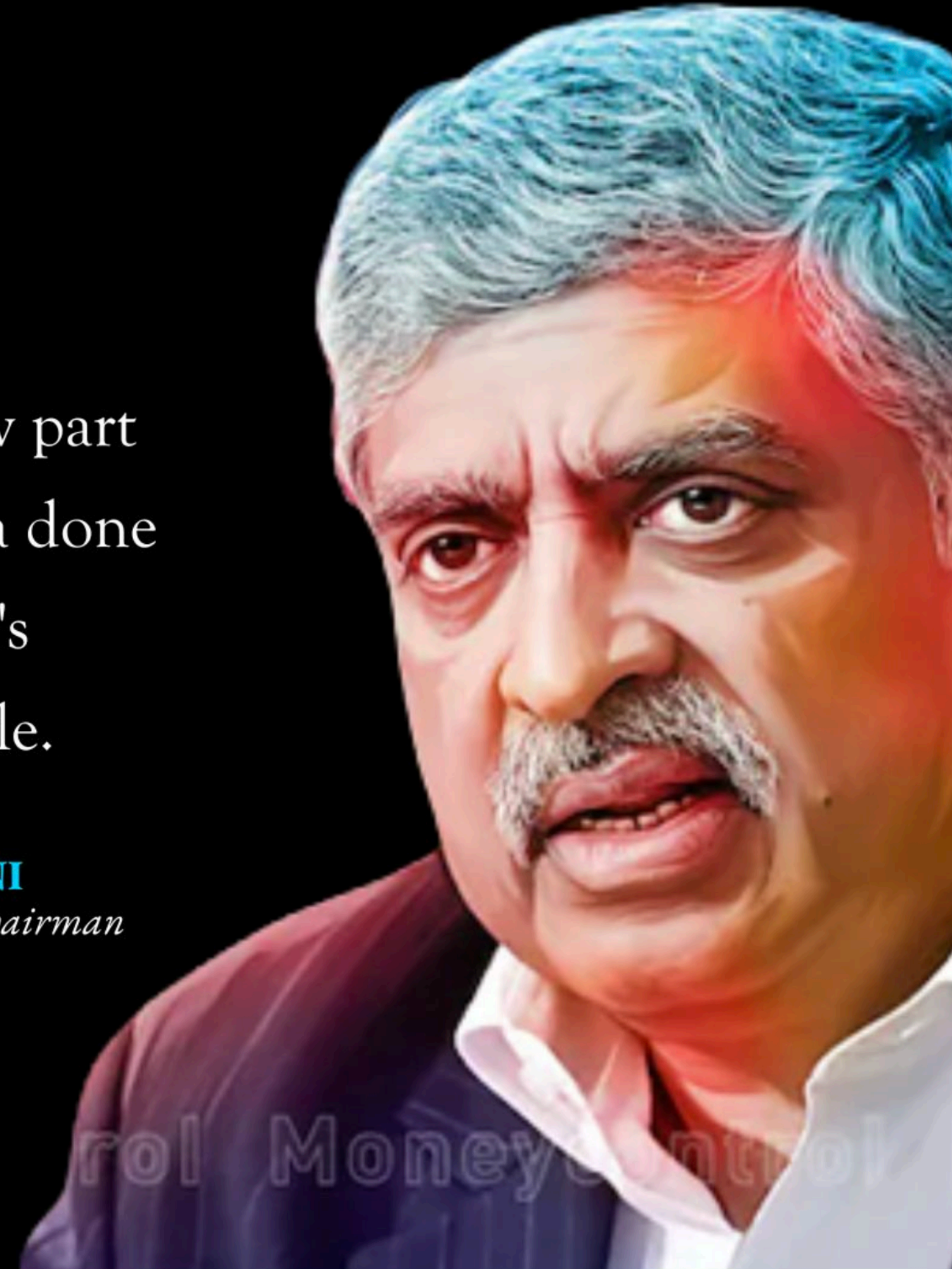
Get Started

moneycontrol

Aadhaar is now part
of culture, it's a done
deal. So now it's
yesterday's battle.

NANDAN NILEKANI

Infosys co-founder and chairman





Exclusion by design: how national ID systems make social protection inaccessible to vulnerable populations

Governments around the world are increasingly making registration in national ID systems mandatory for populations to access social benefits, healthcare services, and other forms of state support. By virtue of their design, these systems inevitably exclude certain population groups from obtaining an ID and hence from accessing essential resources to which they are entitled.



change.org/SoyMayorNOidiota





ARE SAFEGUARDS ENOUGH?

Outcome of the EU reform



The Good





Right to Pseudonymity



Zero Knowledge Proofs





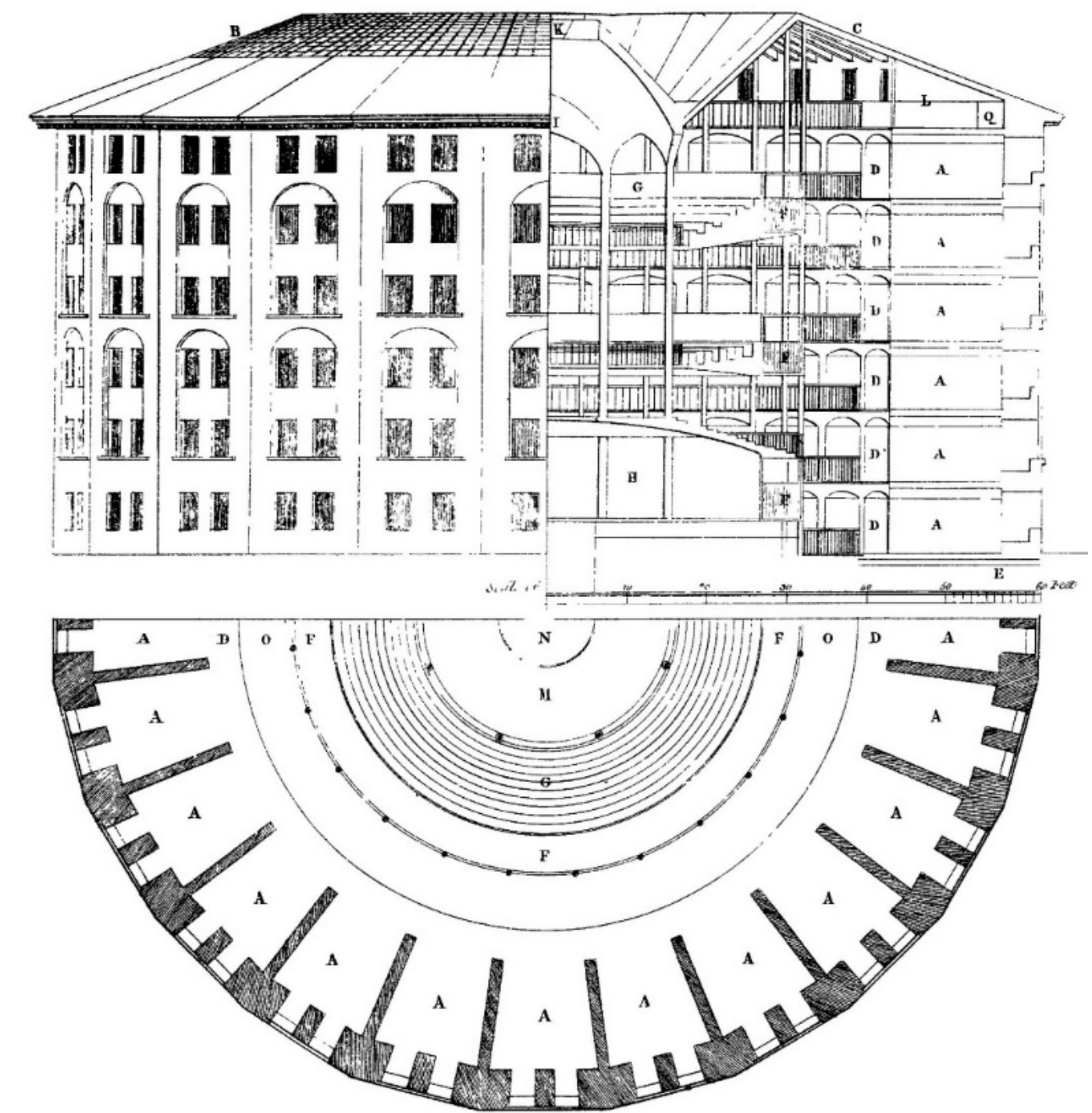


The Bad



Unobservability or Panopticon?

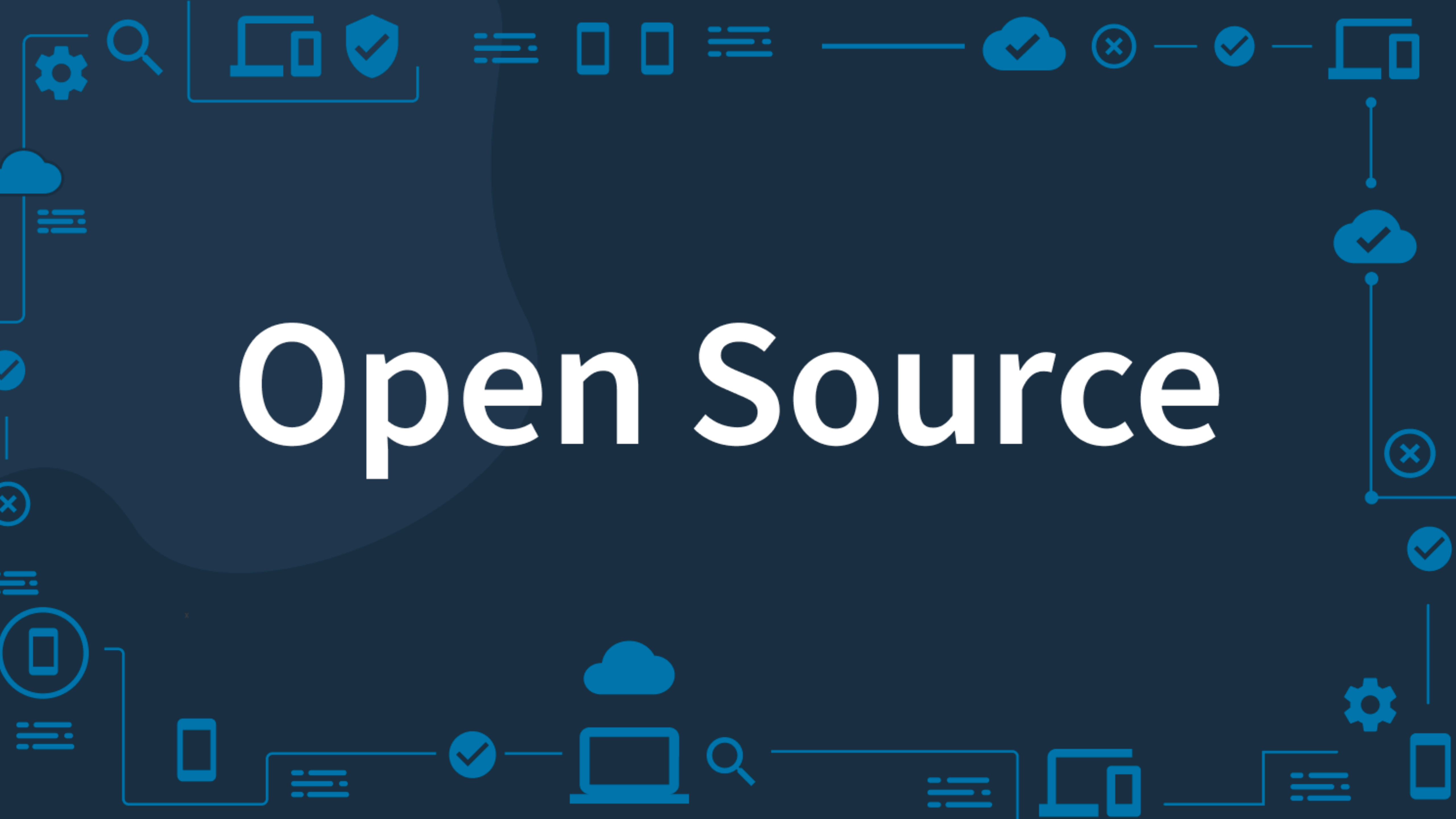
**All user transactions run via one server/
blockchain infrastructure?**



<https://en.wikipedia.org/wiki/Panopticon>

The Ugly





Open Source

Open Policy & Advocacy

Mozilla's official blog on open Internet policy initiatives and developments

> Explore

▼ Categories



AFRICA

DATA PROTECTION

DIGITAL ID

POLICY

PRIVACY

Kenya Government mandates DNA-linked national ID, without data protection law

Alice Munyua | February 8, 2019



REUTERS®

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Investigations

World

Court orders safeguards for Kenyan digital IDs, bans DNA collecting

By Humphrey Malalo and Omar Mohammed

January 31, 2020 4:00 PM GMT+1 · Updated 4 years ago

Aa






WHAT'S NEXT?

*World Domination*TM



Timetable EU

- ☑ June 2021: EC proposal
- ☑ Dec 2022: Council general approach ( presidency)
- ☑ March 2023: Plenary vote 1st reading
- ☑ 21. March 2023: Trilogue starts ( presidency)
- ☑ 2023: Trilogue ends ( presidency)
- ☑ 7. Dec 2023: ITRE vote
- ☑ 11. April 2024: Law adopted
- ☐ 12. Nov 2024: Implementing acts
- ☐ End 2026: obligation to offer Wallet

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eIDAS Expert Group (E03032)

ACTIVE

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Type D - Member State Authority (27)

Country 	Public Authorit(y-ies) 	Membership Status 
Austria	0 Behörde(n)	Member
Belgium	0 Behörde(n)	Member
Bulgaria	0 Behörde(n)	Member
Croatia	0 Behörde(n)	Member
Cyprus	0 Behörde(n)	Member
Czech Republic	0 Behörde(n)	Member
Denmark	0 Behörde(n)	Member
Estonia	0 Behörde(n)	Member

Initiatives (5)

Showing results 1 to 5

KEYWORDS

European Digital Identity Wallets

 FEEDBACK STATUS

Open

DRAFT ACT: OPEN

European Digital Identity Wallets – certification

Topic Digital economy and society
Type of act Implementing regulation
Feedback period 12 August 2024 - 09 September 2024

“Ares(2024)5786790 Certification of **European Digital Identity Wallets** This implementing act lays down the requirements on Certification of the conformity of the **European Digital Identity Wallets** under the **European Digital Identity** Regulation. Where Member States cannot use **European** cybersecurity certification schemes adopted pursuant to Regulation...define the competence requirements, and an evaluation process. **European Digital Identity Wallets – certification** This initiative aims to lay down the requirements”

DRAFT ACT: OPEN

European Digital Identity Wallets – protocols and interfaces to be supported

Topic Digital economy and society
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Feedback period 12 August 2024 - 09 September 2024

“2024)5786773 Protocols and interfaces to be supported by the **European Digital Identity Wallets** The implementing act provides essential guidelines to ensure...interfaces, which are crucial for the effective operation of **European Digital Identity Wallets**. By supporting common protocols and interfaces, **European Digital Identity Wallets** guarantee users that the issuance and presentation of identification...communication with relevant parties. **European Digital Identity Wallets – protocols and interfaces to be**”

DRAFT ACT: OPEN

European Digital Identity Wallets – integrity and core functionalities

Topic Digital economy and society
Type of act Implementing regulation
Feedback period 12 August 2024 - 09 September 2024

“Ares(2024)5786754 Functionalities and integrity of **European Digital Identity Wallets** The implementing act provides the necessary provisions to ensure that Member States set-up of **European Digital Identity Wallets** that are interoperable and that successfully enable the use of the **European Digital Identity Wallets** for all their intended purposes. These include secure online”

DRAFT ACT: OPEN

European Digital Identity Wallets – trust framework

Topic Digital economy and society
Type of act Implementing regulation
Feedback period 12 August 2024 - 09 September 2024

“ensure that the electronic notification system established by the **European** Commission acts as a secure and transparent communication channel...Commission and the Member States for exchanging information. **European Digital Identity Wallets – trust framework** This initiative is one of four initiatives on the main set-up of the **European Digital Identity Wallets**. It aims to ensure that the electronic notification system established by the **European** Commission acts as a secure and transparent communication channel”

DRAFT ACT: OPEN

European Digital Identity Wallets – person identification data and electronic attestations of attributes

Topic Digital economy and society
Type of act Implementing regulation
Feedback period 12 August 2024 - 09 September 2024

“identification data and electronic attestations of attributes issued to **European Digital Identity Wallets** The implementing act provides guidelines to ensure the smooth...issued to the wallet and can be disclosed to relying parties. **European Digital Identity Wallets – person identification data and electronic attestations of attributes**...initiative is one of four initiatives on the main set-up of the **European Digital Identity Wallets**. It aims to ensure the smooth lifecycle management of both personal”

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Universal Safeguards for Digital Public Infrastructure

As digital public infrastructure (DPI) becomes integral to society, governance and finance, we must collaboratively establish safeguards to ensure global protection of fundamental rights.



United Nations
Office of the Secretary-General's
Envoy on Technology



dpi-safeguards.org

Timetable UN

☒ Unofficial circulation of draft

☒ May report 1

☒ May-June consultation 1

☒ August Recommendations
finalised

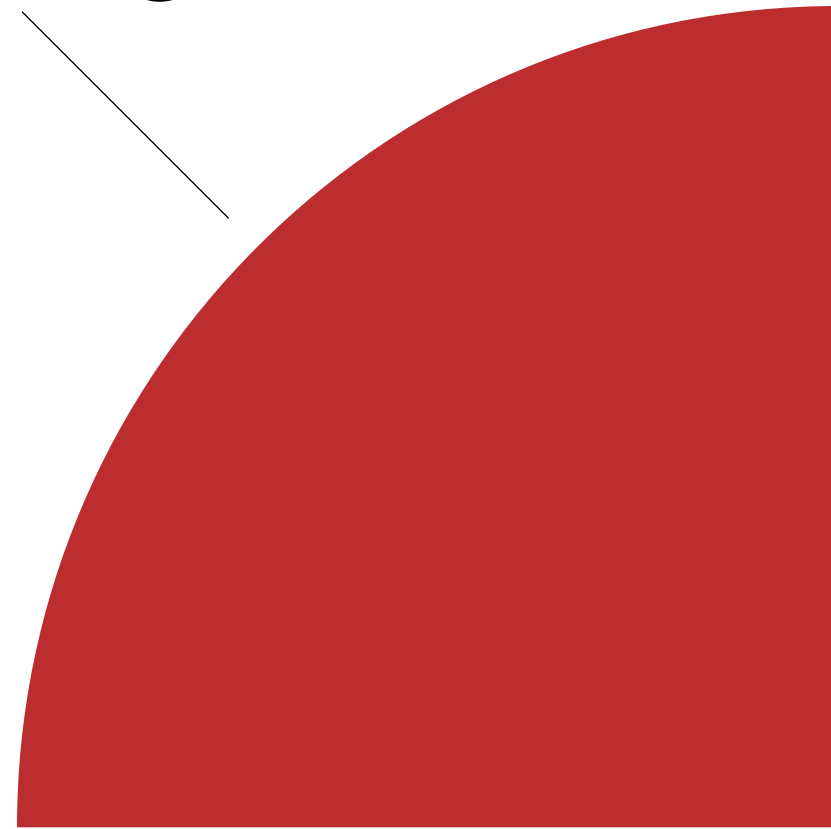
☐ 12 September public consultation

☐ 21 September 2024 Summit of the
Future (Global Digital Compact)

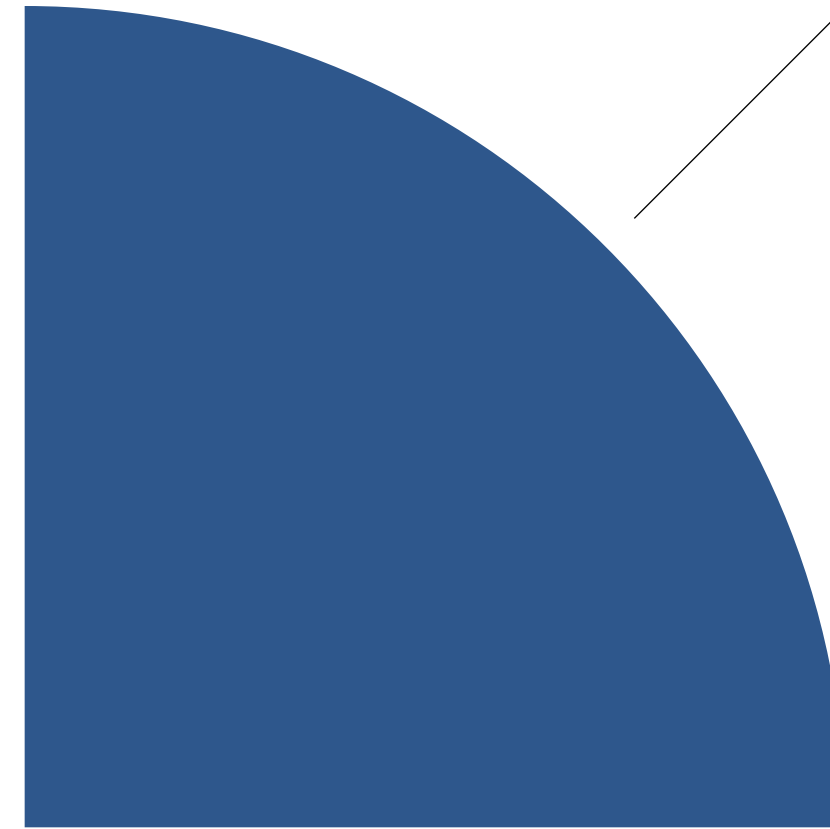
☐ December 2024 final report
released

Axes of Resistance

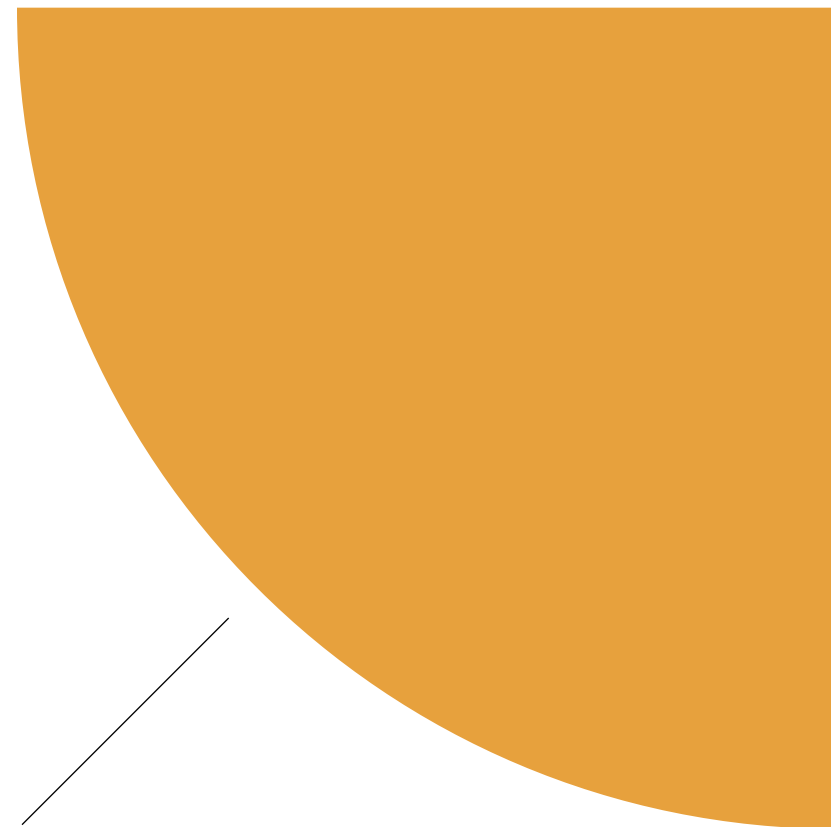
Strategic Litigation



Advocacy



Protest



Hacking



I HELPED SAVE THE INTERNET. YOU CAN TOO.

support a free internet
bit by bit here

support.epicenter.works

