E PAPER

IDEMIA Smart Identity's Recommendations in Relation to the Use of Biometric Technology in Civil ID Projects



e believe that we all hold the keys to secure access to the world: Each person's identity is as personal as it is unique. We believe in a world which, above all, guarantees that only you can be you.

At IDEMIA Smart Identity, we are aware that we have a huge responsibility concerning the challenges our society is facing today. Every day, with our products and technologies, we ensure privacy, we protect identification, and we secure your identity.

In this White Paper, we address the topic of civil identity systems and, more specifically, how the use of biometric technology, whether for authentication or identification purposes, contributes to securing civil identity documents and solutions for the benefit of the population.

The importance of civil ID projects

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For a long time, most people used to live their entire life close to where they grew up. Their entire surrounding was made of familiar faces. If they needed to go further, they would require a person of trust to vouch for them or rely on community signs of belonging to justify who they were. Now that our societies have grown more complex and that people's horizon has expanded, the need for more reliable forms of identification has become evident: what is at stake

is the inclusion of each individual in a broad community, a region, a country, the world. For a state, it is a way of guaranteeing the identity of individuals on its territory, enabling them to prove who they are without intermediaries. Having an identity is a fundamental right, so much so that the United Nations (UN) has identified the challenge of giving everyone on earth an identity as a Sustainable Development Goal for 2030.

- UN Sustainable Development Goals -

The Sustainable Development Goals (SDGs) are a collection of objectives designed to eradicate poverty, protect the planet, and ensure that all human beings live in peace and prosperity by 2030. They were adopted by the United Nations in 2015.

The SDGs are divided into 17 chapters, of which #16 is entitled "Peace, justice and effective institutions." Objective 16.9 reads "By 2030, ensure legal identity for all, including through birth registration." This objective echoes article 7.1 of the United Nations Convention on the Rights of the Child (*"The child shall be registered immediately after birth and shall have the right from birth to a name, the right to acquire a nationality and, as far as possible, the right to know and be cared for by his or her parents"*).

The World Bank plays an important role in achieving this objective as well, through its dedicated ID4D (Identification for Development) initiative which provides technical

and financial support for the implementation of identification systems, including civil registries, in emerging countries—in particular, Africa.



Of the countries included in the ID4D-Findex 2017 survey, nine out of the ten with the lowest identity coverage rates are in Africa.

Once you are able to prove who you are in a secure and unique way, it becomes easier to benefit from a differential treatment. Because certain rights are conditional (e.g., the right to vote from a certain age) and subsidies are allocated depending on people's needs to improve public spending efficiency, states have to be able to differentiate each individual from other members of the national community.



We are convinced that relying on the most natural, reliable, and distinguishing characteristics of a person—their unique biometric data, including face, iris, and fingerprint—is the safest way. Biometric identification effectively:



Protects people against identity theft and fraud, as a person can only be registered once.



Helps to improve access to public services and inclusion by being:

- more reliable: The error rate for authentication using biometric technologies is considerably lower than with other techniques, like verifying a person's identity with the naked eye based on a photo on an identity document.
- more durable: If people lose their identification documents, they can very easily prove they are who they claim to be and ask for the documents to be reissued.

- The Aadhaar system

The Aadhaar system was introduced in India in 2009, with the aim of improving the reliability of the welfare system. IDEMIA has been involved in this project, consisting of assigning a unique 12-digit number to each person residing in India, regardless of their nationality. Biometric data (face, iris, and fingerprints), together with basic information (name, gender, date and place of birth) are associated with this number. Today, over 1 billion people have an Aadhaar number. By allowing the Indian government to ensure that transactions based on the Aadhaar system are unique, it has empowered millions of Indians to access social assistance and to prove their identity.

What we bring to the table in civil ID projects

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DEMIA Smart Identity has long-standing experience in civil ID, with over 135 customers and more than 3.5 billion identity documents issued worldwide. We have extensive experience and an outstanding reputation in biometrics, with 40 years of experience in the field and multiple biometric-based projects allowing us to offer a holistic approach to digital identity.

Based on this experience, we offer the following recommendations to organizations responsible for setting up civil ID systems based on biometry.

Social Acceptability

Today, in many countries, there are still many misconceptions and fears associated with the use of biometric data, mainly in relation to fraud and the risk of invasion of privacy. Insofar as a civil ID system involves the collection and use of biometric data, IDEMIA Smart Identity recommends building up the social acceptability of such systems by:

> implementing appropriate data protection regulations recognizing that biometric data are sensitive data before the system is implemented and conducting a preliminary impact study covering the confidentiality, data protection, and human rights aspects of the project, the results of which would be made available to the public.

- communicating on the technical measures that would be implemented in order to prevent unauthorized access to the collected data.
- > restricting access to collected data to civil public services. The cooperation between public and private organizations in a civil ID scheme is of importance but needs to be carefully managed. For countries wishing to rely on the system to allow private sector companies, such as banks or mobile network operators, to confirm the identity of a person, tokenization systems should be implemented so that they do not access the full content of a person's ID but, rather, are able to answer specific questions (to the question "Is this person over 18 years old?" the system would answer "yes" or "no" but not give the actual age of the person).

Reliability and Fairness

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Biometric identification is more reliable than other identification techniques (e.g., PIN, passwords, token) and effectively improves access to public services. The implementation of such a system therefore triggers high expectations, which tend to render any potential technical error all the more difficult for the public to accept. It is important to be aware of this, have the appropriate processes in place, and make sure those operating the system know them well:



- > When building a civil registry, during the biometric data acquisition phase, the system may, in rare cases, erroneously indicate that a person already exists in the registry and refuse to add them. Processes should exist to clear "false duplicates": An administrative inquiry should be carried out to determine whether the duplicate comes from a technical error or attempted fraud.
- > IDEMIA Smart Identity's technologies have a very low error rate (<0.5% for fingerprint recognition, according to the latest NIST evaluations), which is consistent across all ages, genders, skin colors, and ethnicities—IDEMIA Smart Identity's biometric identification algorithms are regularly rated as being the fairest on the market. However, this error rate, while remaining very low, is higher for people with severely damaged fingers that usually comes from intense manual work. As a result, biometric identification should, preferably, not rely solely on fingerprints but, rather, allow identification through other biometrics like face or iris as well.
- If denying a person access to a service is likely to seriously infringe their human rights or could cause them vital harm, IDEMIA Smart Identity recommends allowing authorized agents to revert to the pre-biometrics method (visually controlling the person's ID card, for instance).



IDEMIA Smart Identity works actively to integrate these recommendations into the best practice guides and recommendations published by the working groups in which it participates: in particular, through the Secure Identity Alliance. IDEMIA Smart Identity contributed to a report published by the World Bank, entitled "<u>Principles on identification for sustainable</u> <u>development: Toward the digital age</u>."

Find out more about IDEMIA Smart Identity

- > Find out more about our <u>civil ID products</u>.
- > Find out more about our <u>CSR approach</u>.



Legends: ¹ <u>Convention on the Rights of the Child | OHCHR</u>

Unlock the world



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