

IDEMIA Position Paper on AI and Facial Recognition *For the European AI White Paper Consultation*

Paris, 14 June 2020

As a global leader in biometrics, **IDEMIA has built a unique expertise on personal identification** in several fields, including fingerprint, iris and facial recognition. As such, IDEMIA is investing large amounts (€1bn over 5 years) including in EU research and development (R&D) projects that cover both the technology's science and impact on society.

Facial recognition, a software designed to automatically authenticate or identify someone, is an increasingly important technology in today's society that benefits countless activities such as the retail and consumer industry¹, public security², police investigations³, and community protection. It is expected to become more widely adopted in an ever more contactless and paperless world.

Recent progress in biometric Artificial Intelligence (AI) has amplified facial recognition's capabilities and powers. Nevertheless, AI applications nowadays require a vast quantity of data to ensure that algorithms accurately recognize faces. While the technology is still quickly evolving, it calls for a legal framework that brings legal certainty but is also flexible enough to allow future innovation and development.

In response to the European Commission's AI White Paper consultation, this paper offers some initial **recommendations on setting up a clear AI regulatory framework** in which facial recognition technology could be developed in line with strong European values and standards. We may augment or amend these suggestions in the event of other opportunities for input later this year.

Our **main recommendations** are:

- Put forward a harmonized, balanced, carefully crafted but firm AI regulation following the risk-based approach suggested by the European Commission;
- Set-up clear rules on data collection for AI research;
- Introduce a European framework and responsible body for evaluation and certification of trustworthy facial recognition technologies; and
- Ensure that citizens are well-informed of the benefits of facial recognition.

Navigating the legal framework

IDEMIA is currently impacted by the legal uncertainty around the application of facial recognition. Generally, this affects both the European industry (from the supply side) and other industries or public authorities (from the demand side). **A clear legal framework**, which would take into account the protection of fundamental rights and freedoms, **would help solve issues around**, for example, the collection of personal data.

Personal data underpins everything we do as it is used to train algorithms. While IDEMIA only collects data in strict compliance with privacy regulations, the General Data Protection Regulation (GDPR) does not authorize the processing of special categories of data (for facial recognition purposes) for scientific research activities except when permitted by Member States' laws or when the consent by the data subject is obtained. While Germany and the Netherlands are allowing the processing of biometric data for scientific purposes without the data subject's consent in their national laws, other EU Member States such as France are not taking this approach.

This **leads to a lack of harmonization across EU countries**. Additionally, relying on the data subject's consent is not always possible. IDEMIA would welcome a harmonized legal framework that would allow for the development of solutions to current technological biases.

¹ Identification for mobile banking transactions, remote bank account or phone line set-up, and facilitates mobile and mobile apps use (e.g. iPhone X).

² ID checks by border control staff or Government bodies setting up and using online digital identities.

³ Assisting police investigations into crime and terrorist attacks.

Another challenge to consider in the upcoming AI framework is **society's acceptance of facial recognition**. The general public is sometimes negatively influenced by misinformation on facial recognition. We believe that a harmonized legal framework should also ensure that citizens are correctly informed about the benefits of facial recognition⁴ and how their fundamental rights are protected.

IDEMIA's internal checks and balances

To manage potential risks arising from facial recognition, IDEMIA has introduced a number of internal checks and balances. IDEMIA is a longstanding **partner to government authorities**. In France, for example, we work closely with the CNIL (French data protection authority) and participate in hearings and public consultations. We have also put in place **strict research policies**:

- IDEMIA has been proactively applying during the last 10 years **strict internal processes and policies on data collection**, developed in collaboration with the French Data Protection Authority (Commission nationale de l'informatique et des libertés - CNIL);
- IDEMIA's scientific research activity procedures and infrastructures are **ISO 27001-certified**;
- We **maintain our R&D centers in Europe**, primarily located in France, Germany and Poland.

IDEMIA's R&D efforts to overcome challenges associated with AI

Addressing head-on the issue of biases in Facial Recognition has been a priority for IDEMIA for a long time and we support the European Commission's intention to tackle this in its upcoming legislation. We have **developed technical approaches to the problem** and a recent evaluation of the US National Institute of Standards and Technology (NIST) focusing specifically on ethnic and gender bias confirmed their effectiveness in eliminating the bias. At the moment, NIST is the only public body that is undertaking performance and bias testing on facial recognition technologies. IDEMIA, together with academic partners with the Pr[AI]riE⁵ organization and Telecom Paris in particular, is pushing forward the State of the Art in this field.

In addition, in order to help solve ethical and technical issues that may arise from the lack of accurate data, IDEMIA is developing the use of **synthetic data⁶ for algorithm training**. As of today, working with synthetic data has not yet reached a satisfactory maturity level; we therefore do not yet train algorithms with synthetic data for the most critical applications IDEMIA addresses. Nevertheless, we strive to improve this approach that would resolve issues related to the shortage of available data, which notably arises from the issues of obtaining consent or providing information on the collection and processing of data.

Recommendations to EU policymakers

We understand that the European Commission intends to put forward a **legislative proposal on AI in Q1 2021**. **This paper outlines some initial recommendations** regarding how the legislative proposal could be elaborated to meet its stated goals to 1) achieve an "ecosystem of excellence"; and 2) create an "ecosystem of trust".

IDEMIA would welcome the **introduction of a balanced, carefully crafted but firm regulation** on artificial intelligence that would enable R&D activities to carry on and effectively compete against other regions in

⁴ Road safety (e.g. helping drivers with the 'Driver Monitoring System'), sustainable development (e.g. safe carpooling solutions), travel (e.g. local public transport tickets that have embedded passenger biometric data), easy access to countless places for disabled people.

⁵ Pr[AI]riE (PaRis Artificial Intelligence Research InstitutE): a French institute for interdisciplinary Research and Education in AI founded by 5 academic institutions (CNRS, INRIA, Pasteur Institute, PSL, University of Paris) and 16 major industrial members.

⁶ The technique of adding computer-generated data to genuine, real world data to a training dataset introduces more variety with the objective of making the dataset more robust when there is scarcity of real-world data. This approach has proven highly beneficial in many use cases, but so far, the complexity and sheer variety of human faces and environment conditions have made it not applicable to facial recognition.

the world that are benefiting from a more flexible legal framework. Such regulation should ensure the development of facial recognition and its application in an environment respecting ethics and data privacy, thereby avoiding recent abuses⁷.

Given the potential far-reaching implications of facial recognition applications, we firmly believe that the European Commission should take into consideration the following **guiding principles**:

- Conduct an **assessment of the benefits** arising from deploying the application;
- Set-up **independent testing** of the implementation of the application **to check performance and potential bias** with regards to the intended mission and expected benefits;
- Put in place **strong oversight** over the application to ensure that the usage of the application remains within its intended use and prevent mission creep. This is fundamental to safeguarding fundamental rights.

We understand that within the **risk-based approach framework** envisaged by the European Commission, the degree of oversight needed for a given application will be highly dependent on its sensitivity. In that regard, we support the European Commission's approach to assess the severity of the risks pursuant to a given application.

Besides a firm regulation on AI following a risk-based approach, we would like the European Commission to explore further options such as introducing a **European framework and responsible European body for the evaluation and certification of trustworthy facial recognition technologies**. Given that facial recognition may be used by government agencies (e.g. for border checks purposes) guaranteeing the technology's source underpins national sovereignty (including by stopping malicious suppliers from introducing weak points), the European Commission's consultation on the AI White Paper and the ongoing work on the issue represents an opportunity to introduce such a standard.

Following recent developments and statements by technology players to temporarily self-restrain the use of facial recognition services by law enforcement agencies until a legislative framework is in place, we also support the **swift introduction of a clear legal AI regulatory framework where fundamental rights and freedoms play a key role**. In the timeframe necessary to introduce such a framework, legally **enabling technology experimentation** would be extremely beneficial to fostering a better common understanding at the EU level of capabilities, vulnerabilities, issues and benefits associated to deployment of AI systems. As a key player in this field, IDEMIA stands ready to support the European Commission and the other EU institutions in their efforts to develop this regulatory framework.

Finally, in an ever-tougher competitive market, we also call for **clear rules on data collection and usage for research** that protect users and their private lives while also promoting the industry's competitive edge and **ensure that citizens are well-informed of the benefits of facial recognition**.

About IDEMIA

IDEMIA, the global leader in Augmented Identity, provides a trusted environment enabling citizens and consumers alike to perform their daily critical activities (such as pay, connect and travel), in the physical as well as digital space.

Securing our identity has become mission critical in the world we live in today. By standing for Augmented Identity, an identity that ensures privacy and trust and guarantees secure, authenticated and verifiable transactions, we reinvent the way we think, produce, use and protect one of our greatest assets – our identity – whether for individuals or for objects, whenever and wherever security matters. We provide Augmented Identity for international clients from Financial, Telecom, Identity, Public Security and IoT sectors. With close to 15,000 employees around the world, IDEMIA serves clients in 180 countries.

⁷ In some countries we have witnessed the development of 'unconstrained' face recognition databases with no regulatory oversight nor consent from the relevant people and the uncontrolled introduction of facial recognition systems.



Finally, we are a longstanding partner to government authorities. In France, we have participated to a number of hearings and consultations organized by the CNIL (the French Data Protection Authority), an authority we are in close and regular contact with.

Find out more information on www.idemia.com

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