Summary of IN Groupe's white paper
May 2026

Digital identity: infrastructure that changes everything

The secrets of countries that have achieved scale

1. INTRODUCTION

Digital identity is the foundation upon which Digital Public Infrastructure (DPI) is built. Without it, payments cannot be attributed to verified individuals, data exchanges cannot be authorised, and access to public services cannot be secured.

Yet, despite the availability of proven technologies, most countries are still struggling to deploy digital identity at scale – not for lack of tools, but for lack of clarity on the key success factors. This white paper aims to fill that gap in understanding.

Drawing on the most recent and comprehensive global database on digital public infrastructure, covering 210 countries and territories across 17 variables, we have applied our own analytical framework to address an essential question: what distinguishes countries that have successfully built high-performing digital identity systems from those that have not?

This in-depth analysis, enriched by our operational experience working with governments around the world, brings to light findings that challenge conventional wisdom.

2. KEY INSIGHTS

- **Only one third of countries have reached digital identity maturity**
  Just 33% of countries (69 out of 210) are identified as "Leaders", with a comprehensive digital identity infrastructure. A similar share remains at an emerging stage, without a fully operational system, while the final third sits at an intermediate level, having developed either a solid technological infrastructure or a robust regulatory framework.

- **Technology and governance are necessary, but not sufficient. The truly differentiating factor lies in multi-sectoral deployment and ecosystem adoption**
  The capacity of public and private actors to deploy and use the system at scale is the decisive lever of success. Leading countries are not necessarily those that have chosen the most advanced biometrics, nor the wealthiest: they are those that have treated digital identity not as a government system, but as an economic platform, designed alongside the sectors that structure daily life – for example, finance, health and telecoms.

- **A country's wealth does not determine its capacity to deploy a high-performing digital infrastructure**
  Thirteen low- and middle-income countries have reached Leader status, demonstrating that governance choices outweigh GDP as the principal driver of performance.

- **A major risk to the sustainability of infrastructures deployed technologically without a strong legal and governance framework**
  Eighteen countries operate digital identity systems without an adapted legal framework, posing a structural risk to their longevity and to the protection of citizens.

- **Trust remains the main barrier to adoption**
  In 94% of countries at the emerging stage, no legal recourse mechanism is provided for citizens, creating a systemic barrier to adoption and to reaching scale.

- **Africa embodies both the greatest challenges and the greatest opportunities**
  The continent combines countries identified as "Leaders" (13%), with high-performing digital identity infrastructure, alongside a significant share of systems still "Emerging" (48% of the continent), revealing contrasting dynamics but considerable potential.

3. DIGITAL IDENTITY: AN ECONOMIC, SOCIAL AND SOVEREIGNTY IMPERATIVE

Before addressing the question of digital identity, it is worth recalling a reality that is too often underestimated: nearly 800 million people worldwide still hold no proof of legal identity – no ID card, no passport.[1]

In addition, 2.8 billion individuals have no access to any secure digital identity service, including in countries where such systems formally exist. And in 23 countries, legal, social or mobility-related obstacles still prevent women from independently accessing an identity.[2]

When deployed at national scale, digital identity generates measurable economic and social benefits: it can unlock between 3% and 13% of gross domestic product, significantly reduce fraud, and decisively improve the efficiency and inclusiveness of services.[3]

Several examples illustrate these effects:

- In India, the integration of digital identity with electronic verification (eKYC) has drastically reduced customer verification costs (from $10–20 to $0.27 per transaction), while driving financial inclusion atscale.
- In Brazil, the Pix instant payment system, built on trusted digital identity, has generated significant efficiency gains (up to 0.5% of GDP per year) and brought 40 million citizens into the formal financial system.
- In Nigeria, the interconnection between digital identity and the banking system has contributed to a substantial reduction in fraud-related losses (-51% in one year).
- In the Philippines, the introduction of digital identity has enabled several million people to access banking services for the first time (more than 8 million new users).
- In Estonia, digital identity allows citizens to complete administrative procedures in just a few minutes (under 5 minutes for a tax return), illustrating the potential for country-wide transformation.
- In Denmark, the national digital identity platform provides near-universal access to banking, healthcare, public services and cross-border European Union services through a single identifier. The Danish public administration ranks among those with the highest levels of citizen satisfaction in Europe, with digital services available 24/7 and no need for physical presence.

Where digital identity works, it is never an accessory: it is the foundation on which financial inclusion, the efficiency of public services, the fight against fraud and economic growth all rest. The United Nations has integrated it into Sustainable Development Goal 16.9 – legal identity as a prerequisite for full participation in collective life.

1 World Bank & ID4D Global ID Coverage Estimates / 2025

2 World Bank & ID4D ; Global Dataset ; Global ID Coverage Estimates / 2021

3 McKinsey Global Institute report, Digital identification: A key to inclusive growth / April 2019

4. SEVEN OPERATIONAL PRINCIPLES TO BUILD A HIGH-PERFORMING DIGITAL IDENTITY AT SCALE

Seven principles guide action and condition the success of a national deployment:

1. **Design for use**
   Sectoral deployment – in finance, telecommunications, health or education – must be anticipated from the design phase. This is not a later step, but a prerequisite for adoption. In this regard, 91% of the most advanced countries integrated a multi-sectoral approach from the outset.

2. **Establish the "right" governance**
   Sovereignty is rooted first and foremost in a clear institutional framework. It requires the establishment of a national identity authority with an explicit mandate, alongside the definition of a structured, sovereign financing model – ahead of any technological choice.

3. **Inclusion by design**
   An effective identity system is one that is inclusive by design. It must be conceived to reach the most distant populations as a priority, drawing on diversified enrolment channels, accessible devices, biometric alternatives and particular attention to equality, notably gender.

4. **Build trust in the system**
   Trust is the bedrock of any identity infrastructure. It rests on a set of essential mechanisms: a robust legal framework, solid technical guarantees, independent oversight, and the ability for every citizen to correct and control their data. Without these elements, adoption and scaling cannot follow.

5. **Preserve architectural sovereignty**
   The choice between open-source and proprietary solutions must be guided by strategic and sovereign logic, not by ideology. In most cases, a hybrid approach is the right answer. Conversely, dependence on a single supplier constitutes a major risk, incompatible with genuine sovereignty.

6. **Choose technology at the right moment**
   The deployment of advanced technologies (multimodal biometrics, security certifications (EAL5+ / EUCC), post-quantum cryptography, eIDAS 2.0- and ISO-compliant digital wallets, interconnection with civil registries) must follow a progressive trajectory, calibrated to each ecosystem's level of maturity.

7. **Design the financing model**
   Financing an identity infrastructure rests on a balance over time: an initial public impetus, complemented progressively by public-private partnerships as the ecosystem develops, alongside multilateral funding. To date, no country having reached a high level of maturity relies exclusively on private financing.

Societies and economies cannot function at scale without trust. And in the digital age, trust cannot exist without a sovereign and inclusive digital identity infrastructure. Every seamless transaction, every secure data exchange, every effective public service rests on this single foundation. Without it, digital public infrastructure remains a promise without substance."

AGNÈS DIALLO,
Chairwoman & CEO, IN Groupe

5. IN GROUPE'S UNIQUE APPROACH

A specialist in identity, secure transactions and digital services, IN Groupe is the world leader in secure identity and trust services. Drawing on a historic partnership with governments, the Group serves public and private organisations across the world.

Thanks to its mastery of the entire identity value chain, IN Groupe extends its expertise from citizen identity to professional identity solutions and services, fulfilling its public-interest mission: to guarantee individuals – citizens, consumers and professionals alike – "the right to be oneself" in both physical and digital spaces.

Driven by an ambitious growth strategy, in 2025 the Group successfully integrated the products and services of NETS e-ID and IDEMIA Smart Identity into its portfolio. With these latest acquisitions and the full range of its affiliated brands, IN Groupe now offers complete solutions that address every identity challenge faced by governments and by public and private enterprises.

With 4,000 employees across 40 countries, the Group supports its clients in some 130 countries, drawing on a global network of 20 research and development centres and 10 industrial sites. Its consolidated revenue stands at close to one billion euros.

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