Multi Biometric System for civil document registration

Setting new performance standards

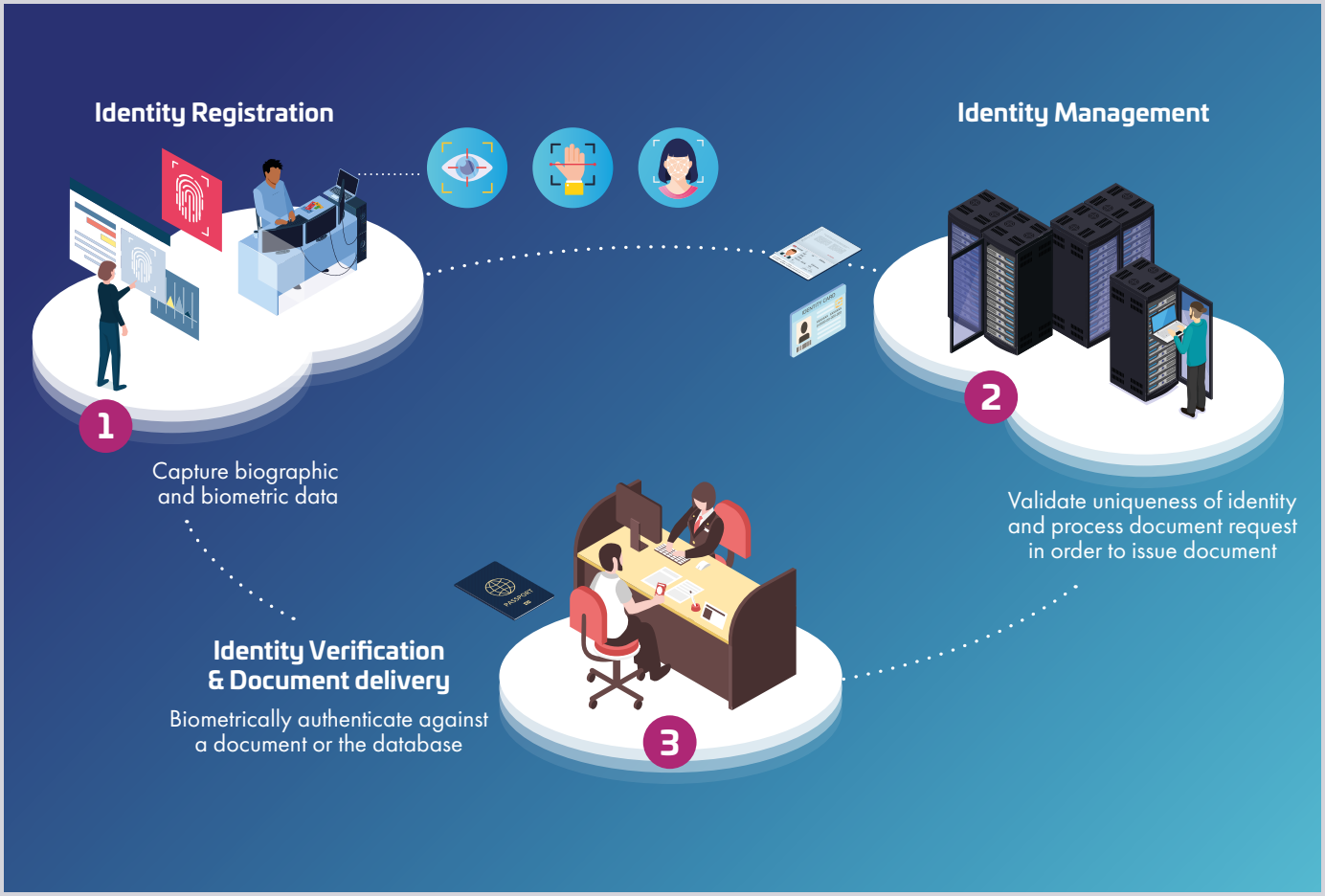
THALES
Building a future we can all trust

The ability to register and identify citizens accurately and efficiently for identity documents such as ID cards is one of the foundations of any modern state. Over the past 25 years and more, numerous governments worldwide have turned to biometrics to help with this vital task. By taking advantage of unique personal characteristics such as fingerprints, face and iris, it is possible to provide every citizen with a secure, credible and easily verifiable means of identification.

Drawing on this strong biometric-based identity, government agencies can issue a wide array of trusted identity documents. In addition to eID cards, this can include ePassports, visas and resident permits, and much more besides.

Citizens that hold these documents become more empowered. Using nothing more than unique personal characteristics such as face or fingerprints, they can prove that they are who they claim to be and access the rights and services to which they are entitled. Transactions that rely on identity documents become faster, safer and more convenient.

Where does the Thales Cogent Multi Biometric System fit in civil document registration processes?



By embedding confidence in every stage of the journey, from initial capture of a person's biometric data and personal details onwards, the strongest possible bond is forged between state and citizen.

Addressing new challenges in identity document registration

The ability of biometrics to enshrine the basic principle of 'one person, one identity' at the heart of civil document registration is now firmly established. By using unique characteristics such as fingerprint, face and iris, governments can have confidence that their civil document registers are free from duplication. The threat of fraud, and abuse of public services and welfare schemes, is addressed in the most effective way possible. At the same time, citizens can prove their identity beyond any reasonable doubt, and access the rights and benefits to which they are entitled. However, many governments are now facing significant issues with their civil document registration processes. The key challenges include:

Managing obsolete and aging systems

Some biometric systems are now entering a second or even third decade of service. Over such extended periods of time, it is inevitable that the demands placed upon them will evolve. Many governments are therefore faced with the increasingly costly and resource-hungry task of managing aging systems that were simply not designed for current requirements.

Dealing with the 'silo effect'

The issue of obsolescence is further compounded by the so-called silo or black box effect. Many legacy systems are characterised by inflexibility, further limiting their ability to meet the current and future operational requirements of government agencies. They are also failing to meet the service delivery expectations of citizens.

Integrating with other systems

Governments and citizens are increasingly aware of the potential of biometrics to facilitate safer, smoother and more trusted transactions. In many cases, governments have therefore looked to extend the use of Automated Biometric Identification System (ABIS) into new areas. For example, systems that were initially intended for the criminal justice system are now being applied to civil document use cases. In pursuit of 'joined up government', integration with other government systems is an increasingly important priority. In this respect, the age and inflexibility of existing ABIS often proves a major barrier to progress.

Supporting a growing biometric database

Databases holding biometric data and associated personal details will inevitably grow. Increases in the population, improvements in the government's ability to capture citizens' biometrics, and a rise in the number of civil document use cases are all significant factors here. If legacy systems lack scalability, migration to a new solution becomes an imperative. However, the process of migration from one database to another brings with it a raft of serious challenges. These include deduplication of records, and the need for end-to-end protection of personal and private data.

Ensuring business continuity and minimising total cost of ownership

Hands on experience of managing ABIS has highlighted the need for governments to apply effective control over lifetime operating costs. Long term reliability is also a key concern for the systems on which civil document registration and issuance processes are built. As a result, governments are carefully scrutinising not only initial capital costs, but also longer term considerations such as database migration, project management and on-going maintenance and support.

Building on the benefits of first generation biometric solutions

Today, more than 130 countries employ biometric technology in their civil document registration processes.

Leveraging the success of these deployments, an increasing number of governments are now looking to improve the performance, flexibility and security of their first generation ABIS. At the same time, others are aiming to introduce biometric processes for the first time.

In both scenarios, governments can take advantage of new and improved technologies that deliver compelling benefits to both service providers and end users. For these countries, the priorities for new investment typically include:

Adopting a more citizen-centric approach

Governments worldwide are seeking to boost the speed and convenience of biometric capture and verification, and strengthen the protection afforded to the privacy and personal data of their citizens.

Implementing stronger defences against ID theft

Biometric-based registration and identification processes are a powerful weapon against identity theft and fraud. As these threats become ever more persistent and sophisticated, governments are looking to raise the bar further in terms of security.

Migrating to multi-modal biometrics for greater inclusivity

Employing more than one form of biometric identification (such as a combination of fingerprint and iris) is another key trend. For example, in countries where a high proportion of the population are engaged in manual labour, fingerprints can become worn. The introduction of alternatives such as iris or facial recognition therefore ensures that as many people as possible can embrace biometric identification and verification.

Exploiting the latest biometric technologies

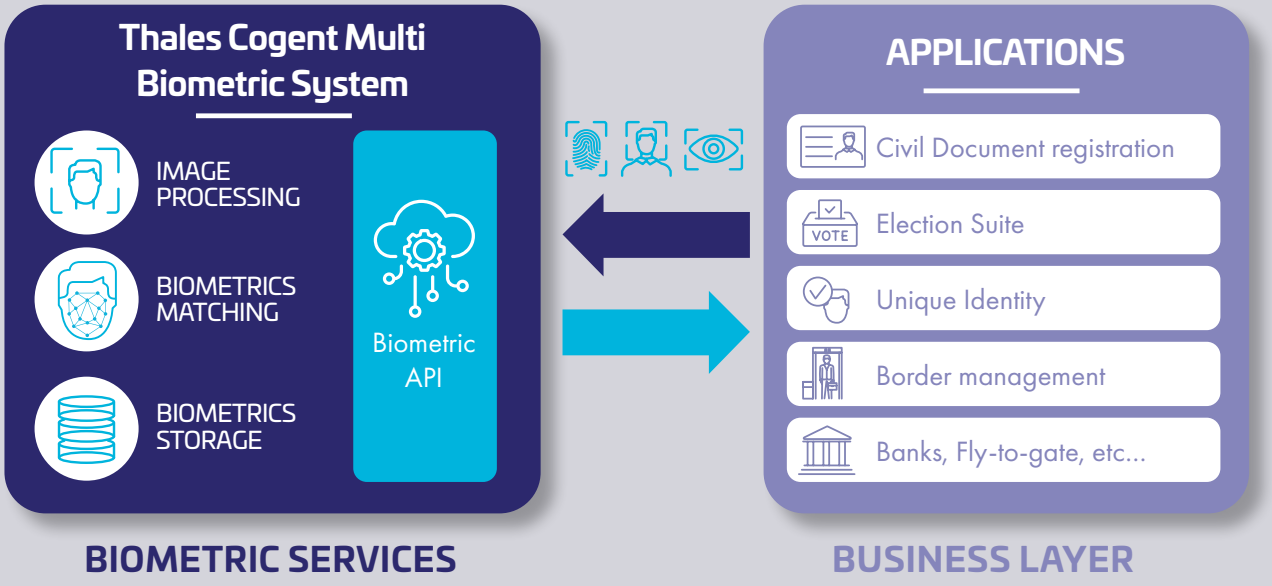
Over the past three decades, a combination of field experience, intensive R&D and third-party testing has provided a platform for significant advances in the capabilities of best-in-class ABIS. By investing in the latest generation of technology, governments are demonstrating a willingness to innovate on behalf of their citizens.

Reaping the benefits of open standards for greater interoperability

Vendor lock-in is undoubtedly one of the biggest challenges and frustrations facing many current operators of ABIS for civil document registration. However, by leveraging a new wave of open standards for the identity ecosystem, governments are now ensuring they have the freedom to choose the best available solutions. Integration with legacy systems is eased, and optimum flexibility assured for any future upgrades, enhancements and expansions.

Setting new performance standards

Building on over thirty years' experience of successful deployment of biometric systems in over 80 countries, Thales has now launched a completely redesigned version of its proven biometric system for civil document registration based on state-of-the-art technology. Thales Cogent Multi Biometric System has been developed to meet the current challenges facing governments, and to provide optimum flexibility and scalability to support both their current and future operational requirements.



Key features and benefits

Class-leading biometric matching performance

Thales has optimised the speed and accuracy of biometric matching through the use of AI and deep learning enabled algorithms. In independent, industry recognised NIST (National Institute of Standards and Technology) testing, Thales consistently scores amongst the highest ranked results in this domain.

Fully integrated support for multi-modal biometrics

Thales Cogent Multi Biometric System enables governments to surpass the accuracy levels of legacy single modality systems by introducing face, finger, iris and biometric fusion capabilities. This ability to deliver muti-modal biometric services improves both security and inclusivity. Our algorithms are demographics agnostic, providing unbiased results despite gender, race, age, etc, differences.

Comprehensive commitment to open standards

Thales Cogent Multi Biometric System relies on open standards, including OSIA. This open standard set of interfaces (APIs), widely adopted in the industry, enables seamless connectivity between all the component parts of an identity management ecosystem, independent of technology, solution architecture or vendor.

It integrates easily with other business applications. By avoiding the threat of vendor lock-in, government agencies benefit from the highest level of flexibility to add new use cases and capabilities, and reuse existing resources. In the future, this also allows them complete freedom to choose solutions that best match their operational requirements.

Improved deployment and system availability

Microservices architecture and OCI compliant containers enable rapid deployment in the cloud or on premise. They also simplify the administration and maintenance of the system by using well known tools such as Kubernetes. Further benefits include high levels of performance and availability.

Optimum scalability both in the cloud and on premise.

Thales' new ABIS architecture enables outstanding scalability, whether it is deployed in the cloud or on premise , with no downtime when enlarging the biometric gallery size. Governments therefore enjoy the confidence of a solution that will grow seamlessly and efficiently in line with future demands.

State-of-the-art security and citizen privacy by design.

Thales is recognised as a world leader in cryptography, cybersecurity and data protection. Thales Cogent Multi Biometric System embodies this expertise and experience. Building on Thales' security governance principles, it ensures the end-to-end data encryption, at rest and in transit, that is essential to maintain citizens' privacy, and compliance with relevant data protection regulations.

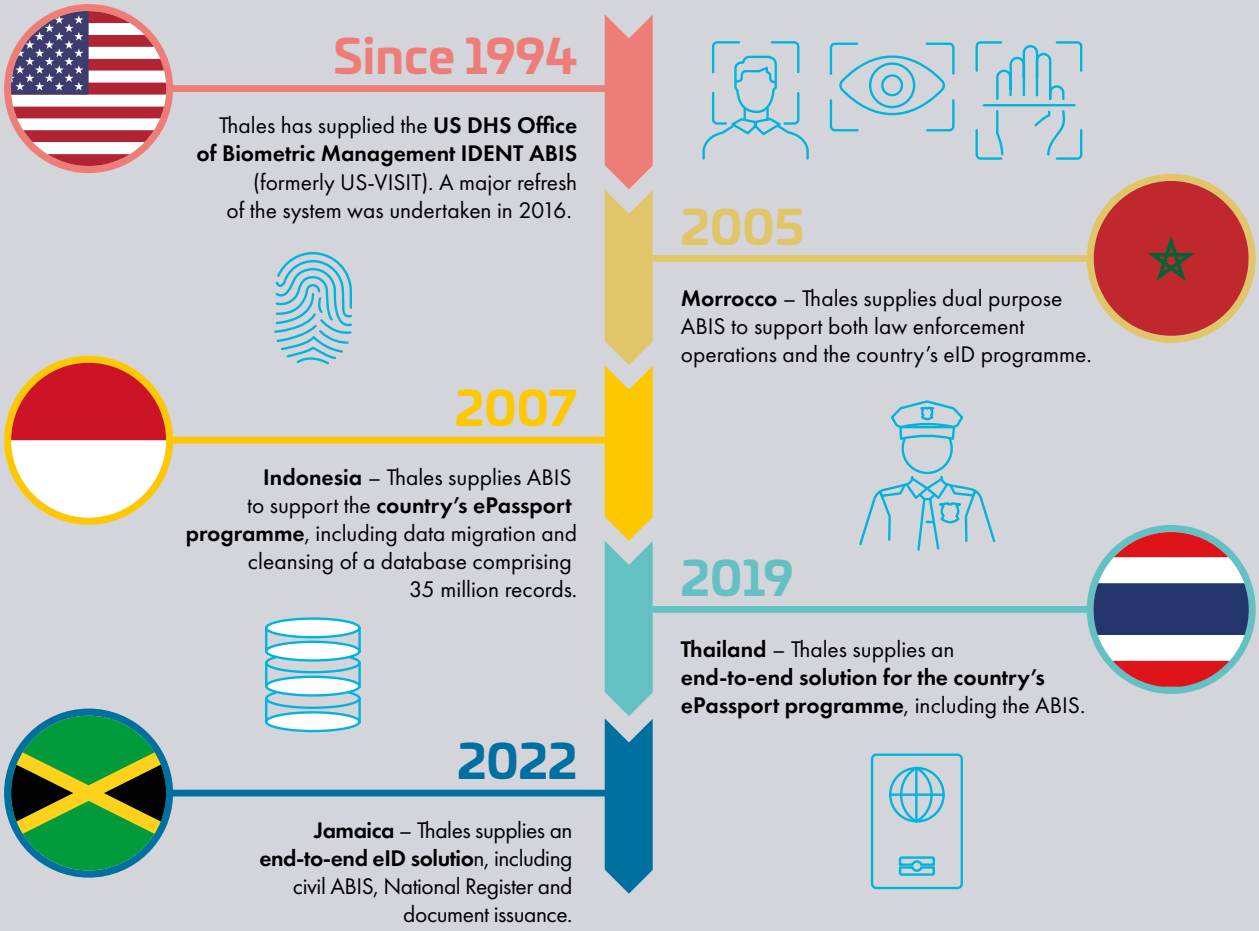
Qualified, experienced and locally based project management and support.

Thales has certified IPMA and PRINCE2 qualified professionals based around the world. Full compliance with ISO37001 ensures transparency and accountability. Specifically, Thales has extensive, hands-on experience of the critical task of migrating biometric databases from legacy systems to new solutions. To date, over 100 million records have been migrated and converted. Moreover, dedicated support and maintenance teams ensure the highest levels of responsiveness to on-going requirements, optimising long term reliability and minimising total cost of ownership.

Values-led solutions.

Thales' commitment to TrUE Biometrics (Transparent, Understandable, Ethical) ensures an open and accountable approach to the design and implementation of biometric systems in the civil domain.

Selected Thales references



WHY THALES?

- **For over 30 years,** Thales has been recognised as an industry leader in the field of biometrics.
- **TrUE Biometrics:** Thales is committed to an ethical and accountable approach to the use of biometrics.
- **Open standards:** Thales is a key player in the OSIA initiative, which enables seamless connectivity between all elements of the identity ecosystem, regardless of vendor, technology or architecture. Thales is also a partner in MOSIP (Modular Open Source Identity Platform), the open source platform for national foundational IDs.
- Thales provides the **full chain of trust** in end to end document systems, incorporating every step of journey from enrolment to issuance.
- To date, over **100 million biometric database records** have been migrated for Thales' worldwide customer base.

THALES

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