

Committed to securing your identity

Identity & Biometric Solutions

Unique identities require unique security solutions. Citizens and governments alike must be able to trust that identities are being used safely and protected at all times. Thales' smart cards for identification and authentication, equipped with innovative physical and digital security features and manufactured with advanced materials and technologies, are the best-in-class for securing identities.

Trusting your uniqueness

From birth onwards, every identity in the world is unique. It must be protected. It must be safe. It must be trustworthy. Thales is at the forefront of innovation and is committed to offering both citizens and governments high-quality solutions to secure every identity and make their verification easy and reliable.

Emily Alexandra Taylor, born in 1995 and a citizen of the Republic of Utopia, is unique. Her personal and biometric data, and their combination, distinguish her from every other individual in the world. These physical attributes can be measured, quantified and described precisely. They are recorded in civil registries and stated on her identity documents.

Secure identity documents allow the safe and trusted identification of every physical person. They can be verified as authentic by anyone, without specialist knowledge or equipment.

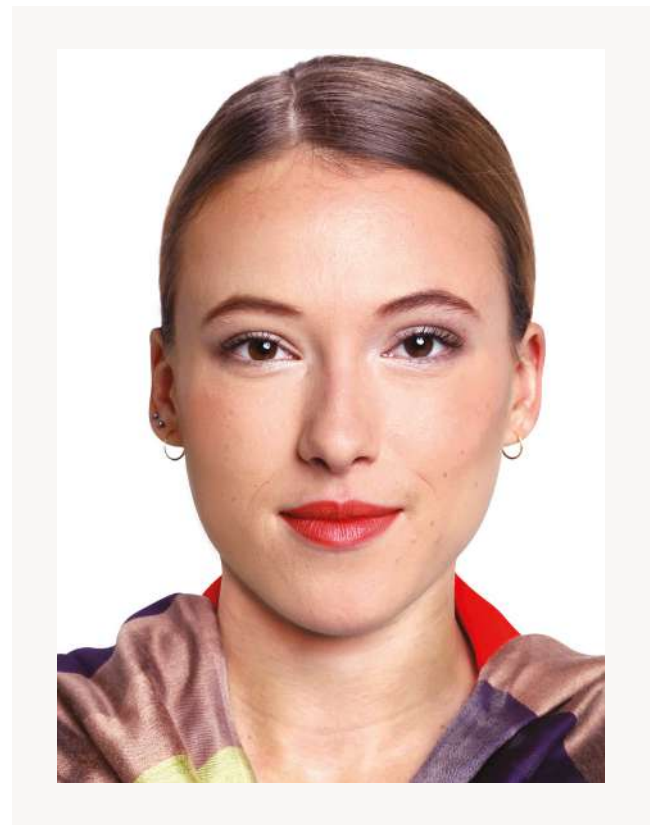
As a citizen, Emily will exercise her rights and obligations: participate in elections, pay taxes, and access education, health care and social benefits. Furthermore, she will use her identity credentials to interact not only with governmental authorities but also private service providers for the necessities of everyday's life: open and manage a bank account, sign a contract and more.

With an electronic card, the identity and rights of every person can be verified easily and securely, visually and digitally, by both public and private service providers.

A global security strategy is paramount to protect the safety and reliability of the citizens' identity documents. Thales proposes a three-step approach: start with a holistic security design, select the right combination of innovative printed, built-in and personalization security features and enhance the physical security with digital security.

At Thales, we are committed to providing the best solutions to protect Emily's identity and rights, establishing a strong foundation of trust.

Discover how we do this and what we can offer you.

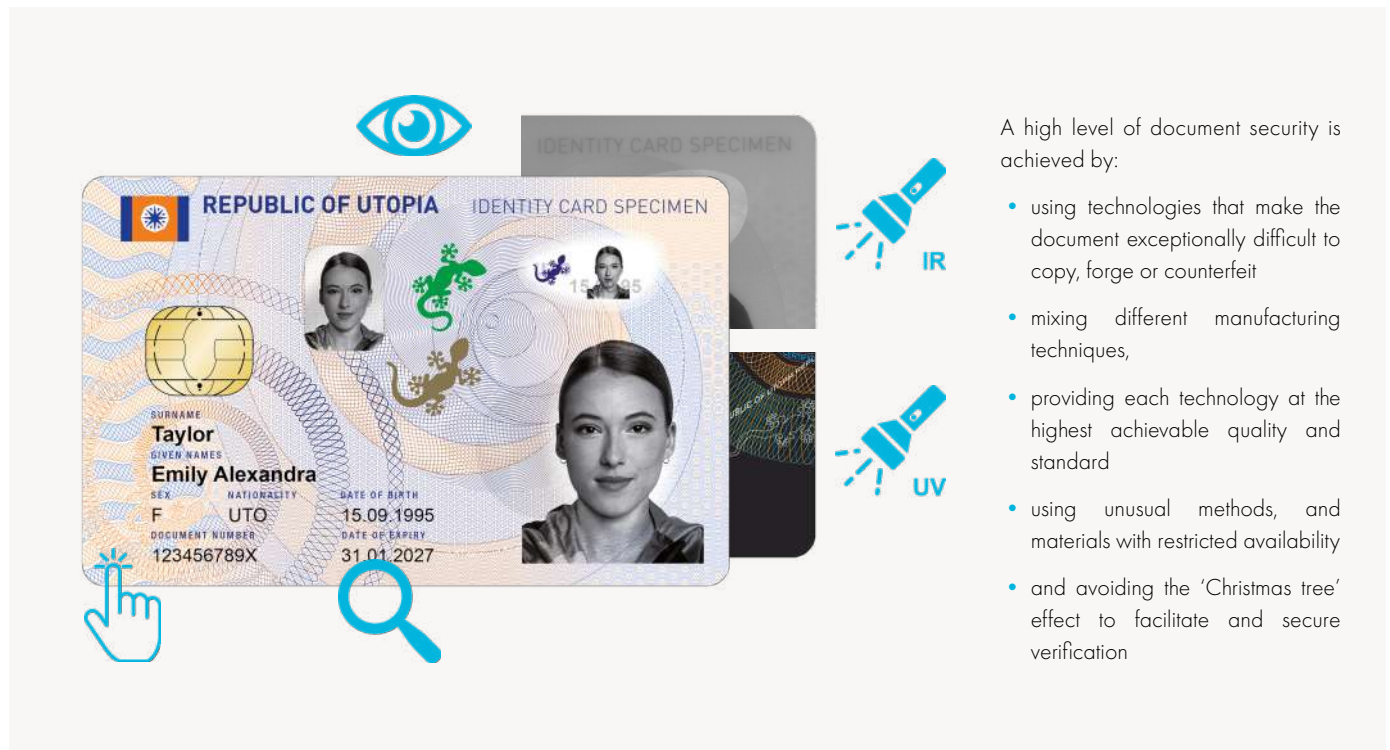


Holistic security design

Our goal is to design a document so secure that its authenticity can be trusted beyond any doubt.

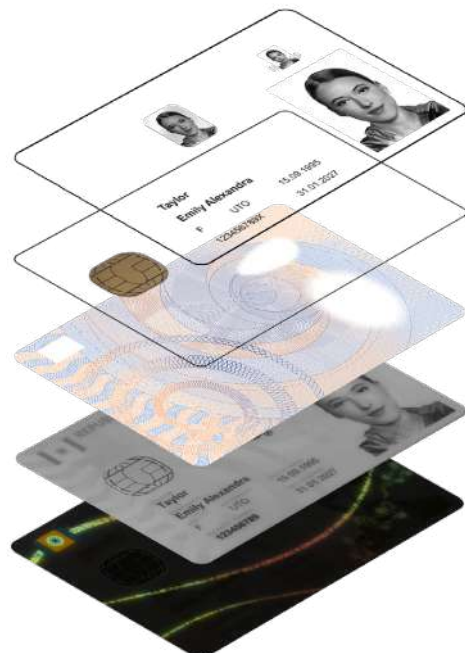
We focus on protecting both the document and the citizen's data. Security relies on the card design, its production environment as well as the personalization process. A strong design demands the association of security features that are simple to check and tough to alter with a

card structure that protects its integrity. Therefore, we typically aim to use the same design elements throughout different security features at various security levels and use distinct techniques to reproduce them. Thanks to this philosophy, combined with our expertise and our power of development, our solutions are at the edge of innovation – and always way ahead of fraud or manipulation.



What makes a good ID design? And how is it achieved? Here's our five-step guide to success:

- Combine and connect all the elements
- Define the right materials and unique production processes
- Mix the artwork and security design as early as possible
- Protect the document and the citizen data through duplication of personalization elements into security features on different security levels
- But always remember – less is more!



Printed security

Innovative and sophisticated printing solutions lay the foundation for document security.

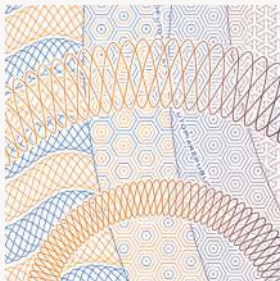
They reduce the risk of either the card or holder data being altered, copied or reproduced.

In combination with the card holder's specific details, for example their photograph or date of birth, innovative and sophisticated printing

solutions are solid basis of any secure document. Identity documents with an elaborate design are the pride of both the country and its citizens, and recognized immediately as trustworthy evidence of identity.

OVI Optical Variable Ink

Colors change when looked at from different angles



Guilloche

Intricate pattern of highly precise continuous lines



Microlettering

Text printed in very small size



Rainbow printing

Colors change smoothly and continuously from one to another



Raster printing

Image created by variation of thickness and density of dots of special shapes or characters



Duplex printing

Highly precise overlap of colored patterns to create additional colors



Relief pattern

Impression of 3D effects by subtle modulation of the printed lines

Personalization security

Personalization is an integral part of document security.

Thanks to innovative solutions and technologies, fast, reliable and easy verification can be performed to ensure that the claimed identity is correct and belongs to the authorized card holder.

Secure laser engraving

- Irreversible laser engraving with unsurpassed detail and contrast in photo
- Additional security with tactile personalization elements
- Personalization inside the card and on multiple layers
- No consumables needed to create or protect the personalization
- Visible evidence of any attempt at fraudulent alteration



Thales Gemalto Edge Sealer

- Laser engraving at the edge of the card
- Secures the document and its integrity
- Unique for each document with card serial number
- Difficult to copy



Thales Gemalto Laser Engraved Floating Image

- Next generation of CLI/MLI
- Laser engraved images appear to float when tilting the card
- Strong protection of personalized data
- Swift switch from one personalized image to the next when flipping the card



Thales Gemalto Secure Surface

- Combining light reflection, movement and tactile effect
- Enhanced security with flexible design options
- Protection against tampering with personalized data
- Hard to copy or reproduce
- Simple verification by touching, looking or tilting





Thales Gemalto Color Laser Shield

Thales Gemalto Color Laser Shield is a unique solution for securing a color photo within a polycarbonate ID document. Powered by four color lasers hitting a special ink in the document's inner structure, this new issuance solution achieves the highest levels of resolution and counterfeit protection.



Built-in security

Because they are very hard to copy or reproduce, structural features ensure strong protection of the document.

They protect the personalized data and the card from falsification, alteration or deconstruction with the aim of changing its properties. And they reinforce the effect of numerous security features and printed elements.

Thales Gemalto Window

- Visually attractive security and design feature
- Safeguards against grinding, copying and reproduction
- Easy to understand and verify



High quality image
under transmitted light

Thales Gemalto Window Lock

- Secondary portrait created by laser ablation of metallic layer integrated in the window
- Strong protection against copying and alteration of the portrait and attempts to split the card
- Easy verification



Negative image when looking
at the card from above

Thales Gemalto Reveal Plus

- Reveals hidden personal data encoded into the secondary portrait in a window
- When tilting the card, different data becomes visible through a decoder lens integrated into a window
- Strong protection against counterfeiting, alteration of portrait and personal data, and splitting or grinding attempts



Thales Gemalto Translucent PC Card

- Security beyond the traditional materials and personalization methods
- Transparency creates a new dimension in card design
- Highly flexible in size and form of windows
- Difficult to counterfeit
- Easy verification



Covert security

Innovative elements hidden in the card body prevent the reproduction of an identity document. Professionals can verify the authenticity and integrity of a card, either with simple tools, such as a UV lamps, or specific laboratory equipment.

Thales Gemalto True Vision

- High resolution true-color images visible under UV light
- Impressive and representative customer-specific images thanks to excellent color reproduction and high brilliance
- Enhanced document security, hard to copy or imitate
- Verification under UV light



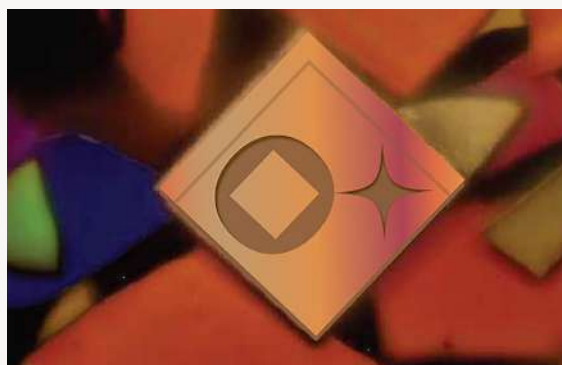
Infrared printing (IR)

- Printing visible only under IR light
- Protects against copying and reproduction
- Verification under IR light



Micro particles

- Printing with special inks containing micro particles
- Customer-specific particles can be used
- Micro particles cannot be recreated
- Forensic-level security element
- Verification possible only with specialized know-how and equipment



Digital security

Electronic identity documents equipped with a microprocessor and Thales' secure applications add another dimension to the security offered by physical features. We have unparalleled expertise in security-critical domains and master of smart card solutions end to end, from chip design, operating system, crypto library and application development, to in-house manufacturing of our own modules, inlays and cards. Data confidently stored inside the Thales chip solution is virtually impossible to illegitimately read or alter and allows reliable automated verification and easy machine readability.

Smart security

- Use of the latest and strongest cryptography to secure the data
- Open and versatile chip operating system with highest security certification
- Full set of Thales applications for versatile use cases
- Ability to securely update and fix potential vulnerability of cards in the field
- Biometric data with Thales efficient matching algorithms for reliable identification
- Highest level of certified privacy and security
- Confidential encrypted communication by contact, contactless, or dual interface (both combined)

Secure applications

- Secure data storage, identification, authentication and digital signature
- Protection by PIN or multimode biometrics (fingerprint, face or iris)
- Multi-application smartcard use for citizen identification and rights verification, cross-border travel with eGates, payment and much more



Opening the door to eGovernment and private eServices

Smartcards are widely deployed worldwide – and their use continues to grow.

For an increasing number of governments and citizens, digital identity services using electronic ID cards has therefore become a reality.

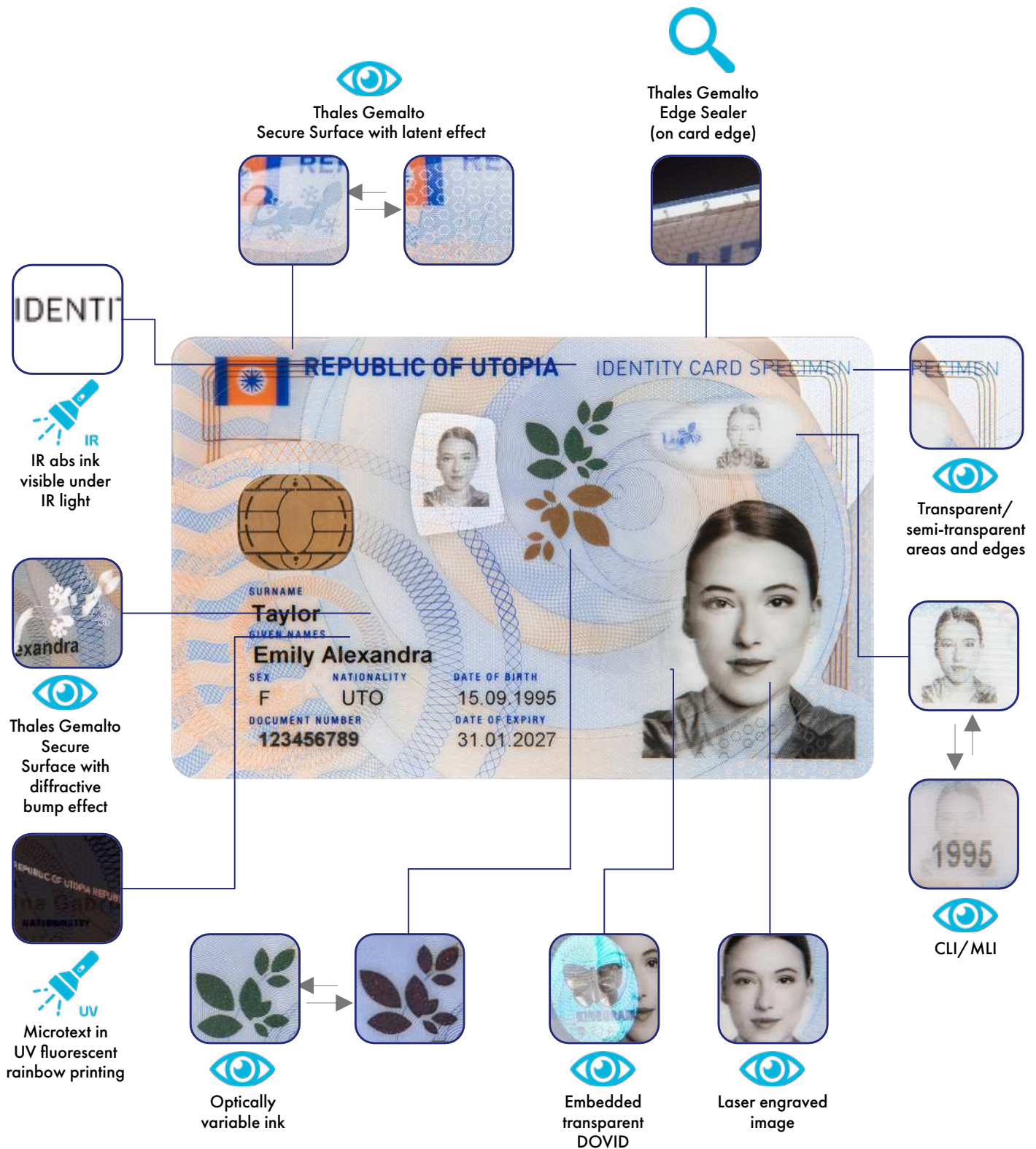
Secure eID cards are also the ideal trusted anchor for their digital companions residing on smartphones.

Trusted eID cards – and their derived mobile ID and Digital ID Wallet smartphone apps – are the secure and convenient keys to a multitude of public and private eServices.



Combined security

We offer more than 40 different security features. These include a number of unrivaled innovations, enabling almost limitless design potential to be combined with the highest security level. Moreover, our design experts can provide guidance on the choice of the features to fit your needs and requirements.





Thales Gemalto
True Vision
under UV light



Thales Gemalto Window /
Window Lock / Reveal Plus



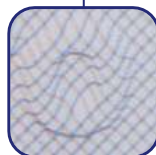
Security
background
with guilloches,
special raster,
rainbow printing



Negative
guilloches



Positive and
negative microtext
in rainbow printing



Relief pattern
in duplex printing

Form follows function

Governments have a wide variety of requirements to issue identity documents for their citizens and foreign residents.

We design and manufacture all documents according to the specific needs, using the most advanced technologies and processes. We work with different materials depending on individual demands in terms of security level, personalization methods and document durability.



Identity Card

An essential and highly secure identity document for every citizen



Driver's License

A document used to prove one's entitlement to drive specific vehicles and often also one's identity



Residence Permit

An ID document for foreign residents -growing in importance worldwide



Health and Social Security Card

The basis of modern national eHealth and Social Security schemes



Crew Member Card

An ICAO compliant identification card to facilitate the movement of crews at international airports



Tachograph Cards

European tachograph cards for enhanced safety for all road users

Global expertise

In the civil identity sector, Thales provides secure documents, robust identity solutions and services that address government programs for ID management and road safety, eGovernment/mGovernment infrastructures for trusted eServices, and border and visa management requirements. Thales also addresses public safety and law enforcement challenges, offering best-in-class forensic solutions.

The company's products and solutions are deployed in over 300 active programs worldwide, with specific expertise in secure document issuance, biometrics, document readers, authentication, ID management and data protection. Thales collaborates with its clients to report and share best practices.

70+
ID, eID, eRP, mID programs



20+
eHealth schemes



35+
Tachograph projects



40+
DL and eDL programs



Thales has six certified security printing sites worldwide and more than 150 years of experience in this domain.



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