A growing number of government agencies around the world are introducing microprocessor-based passport, national ID card, healthcare card, driver’s license and visa schemes containing biometric and other personal data. That’s why operating proven, trusted issuance solutions has become more crucial yet to ensure that projects run smoothly, safely and securely—without at all compromising trusted relationships with citizens.
Secure issuance solutions for the public sector

Your visa to secure document issuance

> Security
Reinforcing security is a chief priority for document issuance. The shipping and handling of blank and personalized documents introduces security risks that require an overhaul of the entire issuance architecture. Secure traceability and encryption mechanisms must be implemented to ensure end-to-end security from the application process through to delivery of the personalized document to the citizen.

The introduction of a microprocessor in the document also necessitates additional security. This is precisely why government agencies must be able to rely on trusted issuers implementing stringent issuance procedures featuring the latest security processes and features.

> Technology
With the introduction of new chip-based products and anti-counterfeit materials, other new technologies must also be adopted to ensure smooth migration to chip-based infrastructure and equipment. Issuance solutions must be designed to communicate securely with any legacy environment, together with a Public Key Infrastructure and document/card management system. It is also essential that issuance solution providers offer high-availability systems with flexible and scalable architecture to be able to integrate further updates.

> Service Levels
Trust is implicitly established through the quality of services provided to citizens. Increasing service levels is essential—in fact, issuers must remain at the forefront of this trend. Issuance solutions must be flexible enough to work with various issuance processes, including centralized or decentralized issuance, instant issuance capability, and express order management. They must also offer a range of fulfillment and delivery methods and provide SMS notification services. Issuance solutions must also be customizable, in order for the issuer to easily set up specific government issuance campaigns.
The Gemalto Issuance Solutions

> **Flexibility**
Because every project is unique in scope and can involve different technologies and suppliers, Gemalto Issuance Solutions ensure flexibility by:
  - Adapting to customers’ specific issuance schemes, be they centralized, semi-centralized, decentralized or incorporating instant personalization
  - Interacting with local players by offering integration, consulting and business continuity services
  - Integrating with any leading suppliers of personalization equipment and PKI systems
  - Managing different product types: passports, national ID cards, healthcare cards and driver’s licenses with dedicated processes and service levels
  - Incorporating the capabilities to deploy new applications at a later date thanks to inherently modular and extensively scalable platform design

> **Security**
Gemalto Issuance Solutions have been designed with maximum levels of security in mind, using:
  - Exclusive security features that draw on Gemalto’s in-depth expertise in logical security—such as sensitive goods management
  - Gemalto’s stringent security processes applied in its own personalization centers and validated by the latest information system security standards and norms
  - Identification and secure communication with external systems
  - Strict issuance data protection, with encryption and signature mechanisms to prevent inadvertent or fraudulent operations by internal or external sources
  - Strict access control management, with different roles and authentication mechanisms
  - Systematic logging and archiving of all actions performed on the system

> **Liability**
Gemalto Issuance Solutions are hassle-free:
  - They capitalize on our experience successfully delivering more than 40 customer projects, as well as internal usage at Gemalto personalization centers issuing billions of documents annually.
  - They offer the highest possible levels of reliability. All core software components are developed by Gemalto R&D department.
  - They incorporate third-party qualified components from suppliers at the forefront of the industry.
  - All come with guaranteed long-term support and maintenance.

> **Cost-Effectiveness**
Gemalto secure issuance solutions are used worldwide by many customers from both the public and private sectors, as well as in Gemalto’s own operations. Cost sharing by a large customer base as well as Gemalto’s experience in Public Private Partnership financing models - such as BOO or BOT - all translate into a significant reduction in the Total Cost of Ownership for the end customer.
Gemalto Issuance Solutions overview

>Features

Gemalto Issuance solutions implement all necessary features for document personalization whatever the issuance scheme: centralized, decentralized or mixed; the document volumes, the document form factor (ID1 or ID3) and the document material (Polycarbonate, PVC, PET, Teslin and more).

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<th>Reporting and monitoring</th>
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>Software components

Gemalto Issuance solutions are designed to be inherently modular, extensively scalable and multi-product capable. They are based on a multi-tier architecture built according to current industry standards. Gemalto Issuance Solutions contain several components that perform well-defined operations according to the workflow definition. All components composing the complete solution communicate securely one with another.

Production Manager

- Personalization workflow management
- Data processing & storage
- Reports & statistics

Certificate Authority

- Issuance Requests
- Certificates

Manufacturer

- White List
- Virgin Documents

Enrolment

- Issuance Requests
- Notifications

Document Management System

- Locks

Document Signer

- Locks

Personalization

- Locks

Quality Controller

- Locks

Packaging

- Locks

Shipment

Issuance platform

KMS
> Gemalto Production Manager

Gemalto production manager is the main component defining the full range of workflows, products, and applications to handle. This central component communicates securely with the external world (issuing request system, certificate authority, etc.). It securely manages issuance requests, making requests checking, processing, prioritization, sorting, batching and rework. Throughout the process, data confidentiality, integrity and traceability are all guaranteed. In addition, it provides administration and monitoring features like customizable production dashboards, production follow-up reports and inventory management to manage daily operations efficiently. Gemalto production manager offers an interface to integrate any type of personalization equipment or mailing machines. The architecture of this component is built on a core platform and incorporates functional plug-in modules that make the component easy to scale up and customize.

> Gemalto Key Manager

Gemalto Key Manager is used to generate keys, request certificates from the Certification Authority and store data securely. It is also used to perform any cryptographic operations required during data preparation, personalization or quality assurance. Keys are never handled in unencrypted form within the system, except in the secure and tamper-proof memory of the Hardware Security Module (HSM).

> Gemalto Document Signer

Gemalto Document signer is used to create the digital signature for MRTD called Document Security Object. It generates the document signing keys and the certificate request that will be submitted to the Country Signing Certificate Authority (CSCA). Gemalto Document Signer is CSCA agnostic and is already integrated with several of them. Support for new CSCAs can be done efficiently thanks to standardized interfaces.

> Gemalto Issuance Station

Personalization equipment is selected according to personalization volumes, personalization process, the material of the secure document to be personalized and any other specific needs the customer may have. Gemalto Issuance Station can manage both visual personalization and electrical personalization using scripting language. It is fully independent from the equipment manufacturer and is already compatible with a wide range of equipment.

> Gemalto Quality Controller

Quality control carries out vital controls and verifications of both visual and electrical aspects. Gemalto Quality Controller is equipped with all the necessary peripherals (scanners, readers...) to ensure the technical quality of any secure documents produced.

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**Key features**

**Compliance with industry standards**
- ISO/IEC 7816 (contact T=0 & T=1)
- ISO/IEC 14443 (contactless Type A & Type B)
- ISO/IEC 19794
- ISO/IEC 24787
- ISO/IEC 18013
- Global Platform 2.1.1
- JavaCard 2.2
- Multos™
- ICAO Doc 9303
- PIV / FIPS 201
- HSM FIPS 140-2 Level 3

**Ready-to-go applications**
- ICAO LDS 1.7 Security mechanisms: BAC/SAC/PA/AA/EAC
- IAS
- Biometric matcher
- PIV / FIPS 201 approved by GSA
- EU Digital tachograph
- EU Driving License

**Personalization equipment already supported**
- Datacard
- Diletta
- DIS
- Evolis
- IAI
- IXLAA
- Muhlbauer
- NBS
- Ruhlamat
- Trigenion
A few of our customer implementations

In the public sector, Gemalto Issuance solutions and operated services contribute to more than 40 national programs with specific expertise in national IDs, travel documents, healthcare cards and numerous driver’s license and vehicle registration projects.

**Algerian eHealth solution: centralized issuance and back-up center**

The Algerian national health insurance authority (CNAS) selected Gemalto in July 2006 as prime contractor to manage the entire project, including delivery of a complete Gemalto Issuance Solution configured for a high-volume centralized personalization environment and color photo printing by dye sublimation technique.

By the first quarter of 2014, over 9,000,000 CHIFA cards had been issued. With the support of Gemalto, CNAS also opened its personalization back-up site in Laghouat, located 450km from Algiers.

**Partnership with French national printer**

In 2008, the Imprimerie Nationale—France’s national printer—selected Gemalto Issuance solution to personalize second-generation biometric passports with digital biometric information like fingerprints. As of May 2012, the French electronic document (TSE or Titre de Séjour pour Etranger) now incorporates two fingerprints in addition to the bearer’s portrait in the chip located on the back of the credit-card size card. The same Gemalto Issuance solution is enabling the personalization of an annual production of 800,000 Residence Permits.

**Turkish electronic passport**

For Turkey’s 75 million citizens, electronic passports are now standard issue as of June 1, 2010. Gemalto deployed the Gemalto Issuance personalization solution including the certificate authority solution at two service centers in Turkey: one located on the premises of the Ministry of Foreign Affairs and the other housed in the Turkish Police center in Ankara. Gemalto has also undertaken the training of the staff operating the solution. Each and every new ePassport is sent directly to its holder from the personalization center.
In 2013, Gemalto provided an end-to-end solution to the Sultanate for the new electronic passport. The turnkey solution encompasses Gemalto’s ICAO compliant Sealys ePassport documents, and a full Gemalto solution suite to enroll citizens, personalize and issue secure documents.

Operated issuance services for the Swedish ePassport and eID

In January 2012, Sweden began issuing the second generation of its electronic passport and national eID. The same infrastructure and procedures are maintained for the National eID card as for the ePassport. This has made significant savings possible in terms of equipment, processes, systems and staff training. Gemalto manages the end-to-end delivery process including the live enrollment solution in Sweden, production of all secure travel documents, as well as operated issuance services from its premises based in the Stockholm area.

In December 2014, “La Société de l’assurance automobile du Québec” [SAAQ] selected Gemalto to provide the new driver’s license for Quebec. The complete solution combines the Sealys Secure Document and the field-proven Gemalto Issuance Solution, both of which meet the government’s goal of reinforcing identity protection for license holders in Quebec. Gemalto also provides the full implementation and maintenance of SAAQ’s personalization infrastructure. This enables SAAQ to offer Quebec drivers a seamless and speedy renewal service when obtaining their new driver’s license.

In May 2009, the Gabon national health body entrusted Gemalto with the prime contractor role for the national electronic health insurance card program. Gemalto supplied a solution which included enrollment of beneficiaries, the health insurance cards, its Allynis Issuance operated personalization services and an identity data verification system.
About Gemalto

Gemalto, a Thales company, is a global leader in digital security, bringing trust to an increasingly connected world. We design and deliver a wide range of products, software and services based on two core technologies: digital identification and data protection.

Our solutions are used by more than 30,000 businesses and governments in 180 countries enabling them to deliver secure digital services for billions of individuals and things. Our technology is at the heart of modern life, from payment to enterprise security and the Internet of Things.

We have built a unique portfolio of technology and expertise including physical and digital identity credentials, multiple methods of authentication – including biometrics – and IoT connectivity as well as data encryption and cloud service protection. Together, these technologies help organizations protect the entire digital service lifecycle from sign-up to sign-in and account deletion with data privacy managed throughout.

Gemalto is part of the Thales group, a €19bn international organization with more than 80,000 employees in 88 countries worldwide.