

Atos' EU-wide strategies in the growing market of regulated PKI services for IoT applications

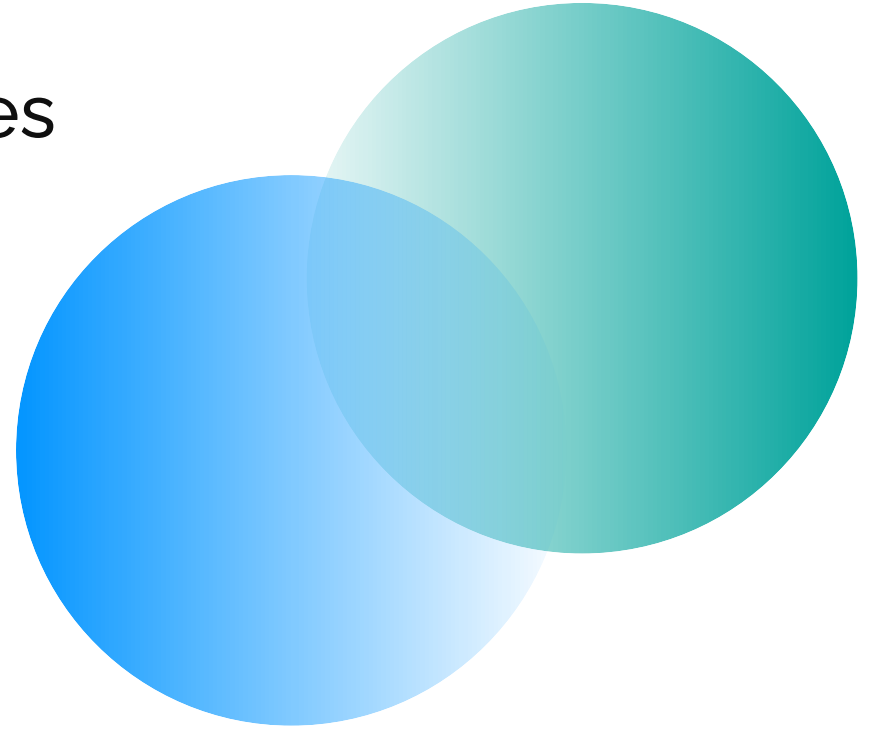


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Content overview

01. Regulated PKI services on the rise
02. Atos Trustcenter services
03. Holistic offering around the security value chain

01. Regulated PKI services on the rise



Digital transformation drives market of PKI-services

Complexity of regulations increases

- The European Commission presented on 9. March 2021 a vision and avenues for **Europe's digital transformation by 2030**.
- To reach the digital targets and objectives, the European Commission accelerates and facilitates the launch of multi-country projects, large-scale projects that no single member state could develop on its own.
- More and more national and EU-wide digitalization projects are based on **secure (= public key-based) digital identities** that need to comply to regulations (specifications, standards, guidelines, certifications etc).
- The most important trend fueling the growth of PKI services is the rapid expansion of **IoT devices and applications**.

Atos PKI Portfolio: C-ITS EU root CA

Example of EU-wide regulation

Cooperative Intelligent Transport System EU root Certification
Authority including Enrolment Authority and Authorisation Authority



Business Challenge

Deployment and operation, on behalf of the European Commission, of the C-ITS EU root CA and PKI, one of the key central security elements of the C-ITS ecosystem.

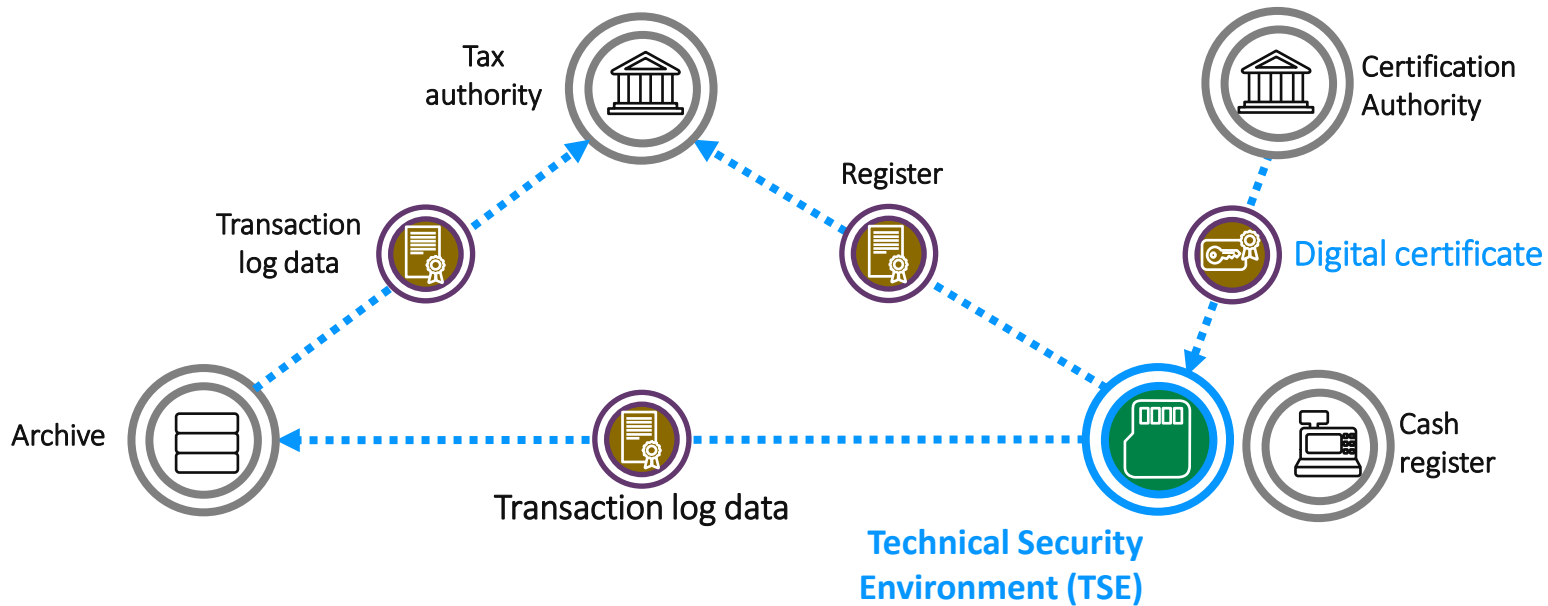
Available for all stakeholders willing to deploy European C-ITS services, it delivers capacity at internal and external levels.

Solution

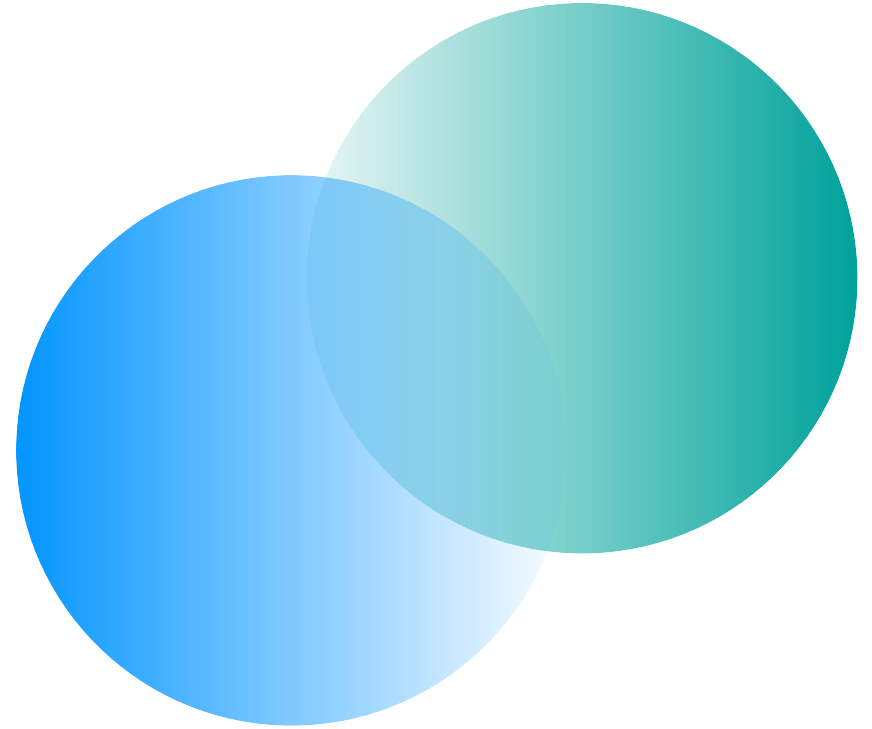
- **Implementation** of integration, preproduction and production platforms
- **Production** of all C-ITS PKI related deliverables (naming and key ceremonies documents, technical architecture, operation manuals, CPS)
- Standards and regulation (CP) **compliance management** for successful external audit of the solution
- **Operation** of the related services and cryptographic secrets management on behalf of the European Commission

Fiscalization in Germany according BSI TR-03153

Example of national regulation



02. Atos Trustcenter Services



Example of regulated PKI services: Smart Meter and Fiscalization

Secure the connected living with Atos IoT PKI Services



trust and compliance



The increasing networking and distribution of data requires timely, effective protection measures for users and companies. Through standardized and certified PKI services, the Atos Trust Center provides a secure and integrative solutions for all kinds of IoT devices

Benefits

- Shared service with multitenancy support
- High-available, scalable, cloud based
- Secure and compliant to standards like BSI TR-03145, ISO 62443
- Reduce efforts, time-to-delivery, staff and required expert knowledge
- Reduce risk and efforts during run
- Partnership with Worldline and cryptovision

Atos Smart Grid CA

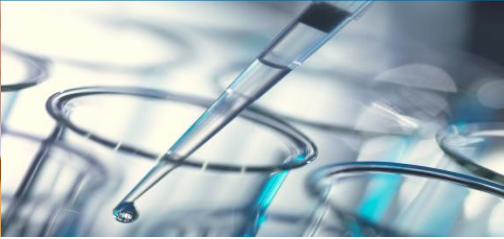
- PKI services for [Smart Meter Gateways](#) (SMGWs), their manufacturers and administrators (network operators, energy suppliers) and external market participants (service providers)
- Protection of the communication of measuring data as well as the connected energy devices
- Operation of a [BSI compliant](#) and audited CA
- Smart Metering Sub-CA is part of the German federal official [Smart Meter PKI](#)
- [Cloud solution](#) on a shared infrastructure

Atos Cash Register CA

- PKI services for [Cash Registers](#)
- Forgery-proof protection of the cash receipts
- Support for innovative and flexible implementation of [KassenSichV](#)
- [BSI compliant](#) and audited CA
- [Cloud solution](#) out of the high available and secure Atos DCs

Example of regulated PKI service: eHealth

We secure the German healthcare system



trust and compliance



The electronic healthcare card provides the basis for a secure exchange of medical and administrative data. The purpose of this is to qualitatively improve patient care and make it more efficient and economical.

ITSG Trust Center

Secure data exchange in the German Healthcare
Operated by Atos since 1998, almost **25 years**

More than **120.000** users in the use case
„employer to insurance“

30.000 users in the use case „care provider to
health insurances“

Atos delivers on behalf of the German top-level
healthcare organisation „GKV-SV“

eGK Trusted Service Provider

Issuance of certificates for the German healthcare card (**eGK**)
Secure personal health data

Atos is the Trust Service Provider for more than **40 Mio.**
insured persons

More than **700 Mio.** certificates issued since 2007

Issuance of **Medical Doctor Card**
(based on qualified certificates)

Customers are the main health insurances in Germany: **TK,**
AOK Bundesverband, KKH, BARMER and more than **40**
industry-specific health insurances

gematik CVC Root-CA

CVC-Root is the central instance of trust for
all **70 Mio.** insured persons in Germany

Issuance of CA certificates for
all German eGK Trust Service Providers (TSP)

Customer since 2013: **gematik**
(gematik is the governance organisation
behind the eGK)

Atos

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MINDSHARE
2022

PKI Consulting and Turnkey Solutions

We consult and deliver along the entire IT lifecycle



trust and compliance



Our approach is holistic advice on all aspects of PKI topics. We therefore consult and support, starting with the strategy, through concept and design, to implementation, operation and audit.

PKI Consulting

- PKI Strategy, Policies, CPS
- PKI system design
- Product evaluation
- PKI documentation
- Security Policies, Operating Concepts
- Key Management / Key Ceremony
- Audit preparation and support
- Operation, Help Desk
- Training

Turnkey Solutions

- Enterprise PKI based on the market leading products
- Multifunctional employee ID cards
- IOT PKI systems
- Windows PKI
- Hardware security modules (HSM) Products
 - IDnomic, Microsoft, Primekey, Nexus
 - Utimaco, Atos Trustway, Safenet, nCipher

Customers

- Pension insurances
- Engine manufacturer
- Chemical company
- Industrial group for steel production
- Health care insurances
- Power plant operator
- Electronics and electrical equipment manufacturing company
- Large industrial manufacturing company

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Highlights of Atos Trustcenter Services

Summary

Trusted Partner in PKI Services

Approved by major players of public administrations and governments, industry and private service providers

01

Proven Security

Atos PKI Services and Products with highest standards and certifications: ISO27001, ETSI EN 319 401+ 411, FIPS140-2 level 3, PCI PTS HSM, EAL 4+

02

Well Known-CA

Atos Trustcenter ROOT CA is trusted by all major Web browsers (Microsoft, Mozilla, Google, Apple and Adobe)

03

Holistic Responsibility

Responsibility and full control of all services and solutions through the whole lifecycle: R&D, Software Development, Operations and Consulting

04

Governance of Trusted List

Atos has previous experience of European Project handling complex & large ecosystem. Specifically with large number of stakeholders (i.e. C-ITS of the European Commission).

05

Scalability and Flexibility

Scalability and flexibility without restrictions in performance; Several operational modes can be used/mixed: Shared, Hybrid, Dedicated

06

Well-defined Onboarding

Detailed planning of Transition with clear responsibilities ensure a smooth Onboarding

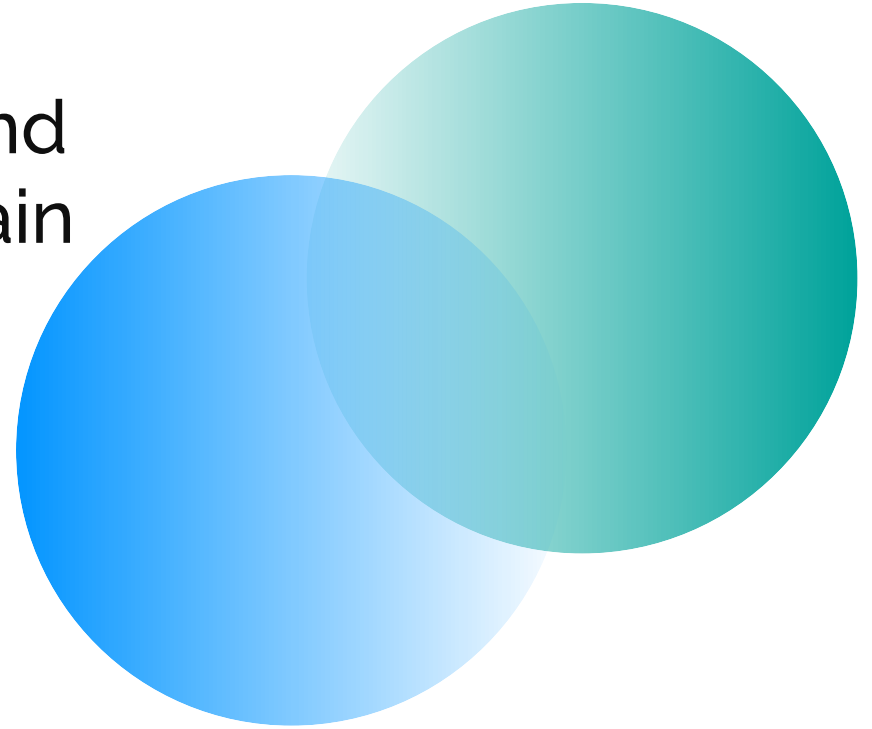
07

Reversibility

Definition of transition scenario from the start prevents lock-in situation in case of provider change

08

03. Holistic offering around the security value chain



Industrial IoT and edge devices are targets for cybersecurity attacks

Increased demand for end-to-end security



By 2023

50%

of enterprise data will be generated outside of the core.

*Gartner 2021 Strategic Roadmap for Edge Computing
November 3, 2020*

By 2025

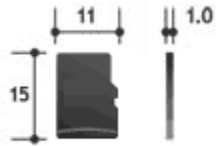
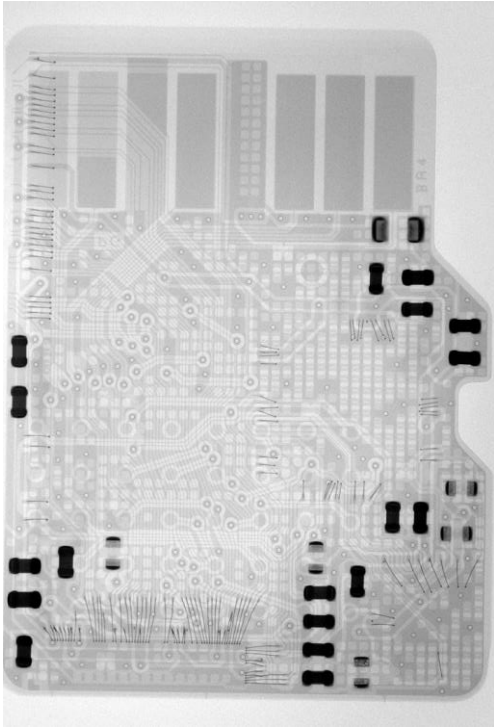
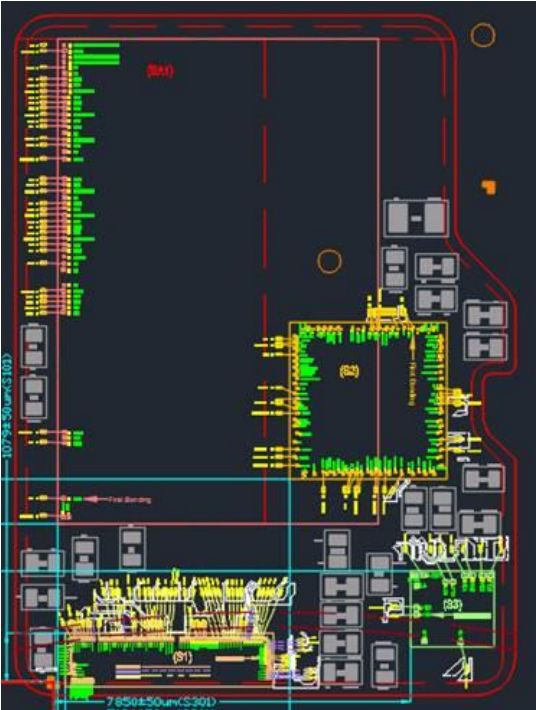
75%

of data will be processed outside the traditional data center or cloud.

*How to invest in edge computing, Nasdaq,
November 2020*

Atos designs their own hardware security moduls

Leading 4 chip solution allowing agnostic business logic implementations

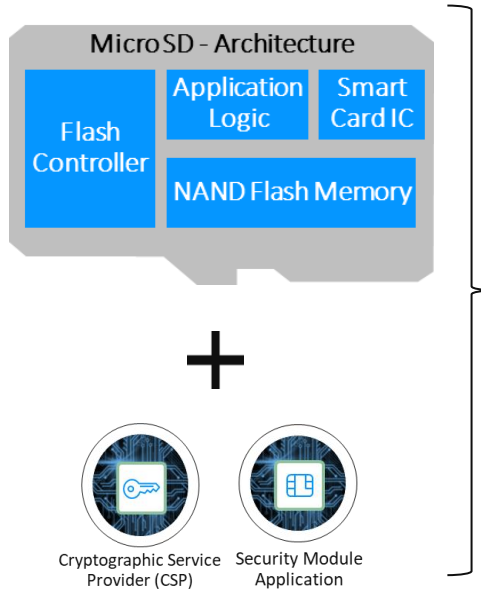


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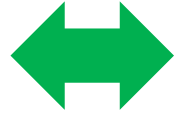
microSD is the most challenging form factor

Smartcard-based solution for regulated signing of transaction

Future-proof 4-chip plus CSP/SMA architecture for IoT markets



Transfer to other IoT relevant form factors



IoT segments

- Automotive
- Medical
- Factory Automation
- Energy
- Data Center
- Edge Computing
- Aerospace Defense
- ...

Holistic offer to customer and partners to secure IoT Projects

PKI services, smartcard technology and regulation expertise



Atos PKI Services

Through standardized and certified PKI services, the Atos Trustcenter provides a secure and integrative solutions for all kinds of IoT devices.



Atos device anchor of trust

Through smartcard technology (smartcard IC + OS + applets + optional flash) in various form factors, any IoT device receives highest and future-proof end-to-end security.



Atos expertise on regulations and certifications

Through manifold experience in regulations and certifications related to both PKI services and smartcard technology, Atos supports IoT Solution Provider and IoT device makers to meet compliance of national and / or EU-wide regulations.

Questions

Thank you!

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