LEGIC

Enabling secure and convenient mobility applications

Personal transportation is becoming more and more dynamic, requiring secure and flexible solutions.

Mobile services such as car and bike sharing, fleet management or an e-charging station network provide new mobility concepts that bring higher efficiency, eco-friendliness and flexible solutions to individual mobility.

With these mobility services, and via a simple app download, users become part of an ecosystem which brings new challenges in terms of authorization management and data integrity.

Our mobile authentication solution LEGIC Connect enables the secure distribution of access data and user authorizations to smartphones while enabling the management of mobility resources usage.

LEGIC's security technology prevents attack scenarios by unauthorized persons, benefiting users and service providers alike.

Along with end-to-end security, LEGIC Connect facilitates another success factor of mobile services – user friendliness for service providers as well as for end-customers.

Smart Life — with a Smart Key

Sharing

The trend of no longer owning items but using them as required and sharing them with others has become increasingly popular in the past few years with car, bike and scooter sharing – a market which is constantly growing.

In the sharing economy, security plays an important role for providers as well as users. Vehicle access via smartcard or smartphone must also ensure that user, system and data integrity are guaranteed.

Along with security, offline operation in parking garages and other shielded areas must be possible. User-specific configuration of vehicles based on personal preferences such as settings of navigation destinations, seats and radio stations are playing an ever-greater role.

Private sharing, also called peer-to-peer sharing, is becoming more acceptable: while you are not using your own vehicle, you can make it available to others. A vehicle's capacitiy is better used, owners earn money, and participating drivers have access to a fleet of different vehicles.

With LEGIC's technology, sharing participants receive dynamic authorizations to utilize vehicles, and are allowed to drive for a booked period. Thanks to Bluetooth Low Energy, LEGIC's technology enables offline use and, with its flexible design, adapts to the specific application and business model of each service provider.

Fleet management

Corporate fleets, consisting of passenger cars, trucks or also special-purpose vehicles such as forklifts, cranes or construction machinery, are an important mobility element for companies and often the central basis of business operations.

Vehicles must be used in a flexible way and managed in a transparent manner. Alongside the traditional key, fleet vehicles also integrate an employee's identity as an access medium and more and more frequently accept the user's smartphone as a mobile key. Along with verifying the driver's license or, in special-purpose vehicles, a training certificate, bookings must record time stamps, be assigned to a cost center or issued to people outside the organization. Together with smartcard access, smartphones also provide for open and flexible systems as well as second factor authentication for securely accessing fleet vehicles.

LEGIC's technology enables the combination of smartcards with a dynamic authorization structure configured via smartphone, plus biometric authentication options such as fingerprint or facial recognition.

LEGIC's technology adapts to the individual needs of each system, integrates existing user populations and enables flexible smartphone access based on the authorization structure defined by the management system.

Virtual vehicle keys

Car keys are becoming more and more practical and convenient – today, modern remote keys remain in the driver's pocket when opening and starting the vehicle.

Transferring these functionalities onto a smartphone makes the smartphone the best car key of all times.

Multiple authorized users, the easy and secure transfer of a key, the revocation or the time restriction of driving authorizations and especially the security of the mobile vehicle key pose challenges to system manufacturers.

The LEGIC security platform not only enables a convenient mobile car key via Bluetooth Low Energy, but also allows the integration of NFC or smartcards as alternatives for vehicle access. With LEGIC technology, a validation can be given, rights overwritten or revoked, and the underlying cryptographic key material can be dynamically and remotely managed in real time.

Benefits of LEGIC mobility solutions:

- End-to-end-security
- Guaranteed online and offline use
- Seamless integration in systems with existing credentials
- Regular security audits of potential weak points
- Flexible access management
- Support of migration scenarios
- Support of RFID smartcards combined with mobile technologies for secure second factor authentication, or as a fallback solution
- Secure management and storage of key material thanks to HSM (Hardware Security Module) and SE (Secure Element)

LEGIC implements state-of-the-art security standards with regards to individual key management. This ensures that sovereignty over the security system lies solely with the operator.

Public transport

Mobility as a service is becoming more and more popular. Standardized tickets for public transport are increasingly being replaced by personalized, digital solutions.

Users can now identify themselves with their smartphone or smartcard in every tram, bus, metro, shared bike, taxi or autonomous vehicle. Individual mobility preferences as well as flexible, customized routing are possible based on dynamic login information via smartphone.

LEGIC technology not only improves the convenience for users and service providers in these new ecosystems, but also enables secure processing of individual credentials. This also facilitates a gradual migration and parallel operation with pre-existing mobile and/or smartcard solutions.

Parking

Driving into a narrow car park and leaning out of the window to press a ticket button that opens a gate is time-consuming and inconvenient. Billing for parking spaces based on ticket machines or point-of-sale terminals will soon be a thing of the past.

With a mobile ticket on a driver's smartphone, the barrier opens automatically via a mobile app and you can enter and exit in a convenient and hands-free manner. Combined with a corresponding navigation app, individual parking spaces can be pre-booked, drivers guided to their space, and the mobile booking automatically redeemed at the car park. Billing occurs directly via a user's smartphone.

A mobile ticket ensures greater efficiency for users and operators, especially for short time use of parking space, e.g. for suppliers or visitors.

Along with smart access, LEGIC technology enables the secure allocation of parking tickets, supports different billing methods and provides a flexible platform which is especially suited to public parking spaces.

Refueling or recharging

Next-generation drive systems now work with electricity. These vehicles no longer require traditional filling stations; “fueling” today means finding an unmanned power socket via an app.

Charging stations require a secure, but at the same time open technology to connect different online ecosystems with one another. Users must be able to clearly identify themselves to enable secure end-to-end authentication and payment.

An intelligent charging station and fuel pump infrastructure recognizes different users and user groups through the use of modern smartphone technology and RFID cards. Each user is free to choose whether to use a smartphone or smartcard solution to be correctly and unequivocally authenticated.

LEGIC’s platform also supports offline operation, thus enabling complete service coverage, even for stations with no network connection.

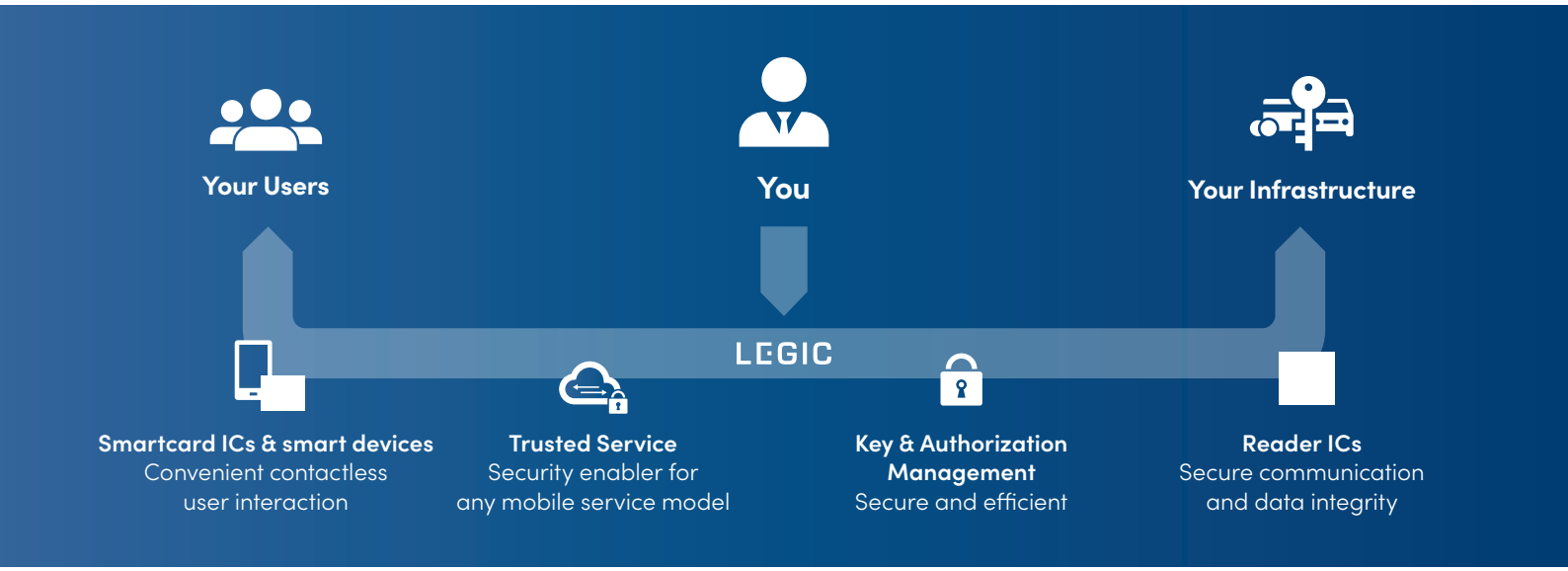
Provisions for standardized contracts and region-specific accounting regulations are supported by LEGIC technology.

LEGIC

Enabling secure mobility solutions

To create secure and dynamic mobility applications, LEGIC supplies a range of innovative technology components that work seamlessly with each other and also third party systems.

The components are equipped per default with pre-configured, customizable security, this applies both to classic RFID applications with smartcards and to mobile solutions using smart devices.



Smartcard ICs

The LEGIC smartcard IC portfolio enables multi-application capability on a variety of media. It implements modern encryption methods, provides scalable security and pre-configured, individualized key material.

LEGIC smartcard technology enables secure user authentication, supports migration scenarios and integrates seamlessly with mobile applications.

- 150M+ LEGIC smartcard users
- Security and authorization solution using LEGIC MTSC

Reader ICs

LEGIC reader ICs are the perfect choice for innovative and secure mobility solutions thanks to their robust design, compact size and low power consumption.

LEGIC reader ICs support both Bluetooth Low Energy and NFC for easy integration of smartphones or RFID media. Thanks to the EAL 5+ certified Secure Element (SE), the SM-6000 series reader chips meet the highest security and data integrity requirements.

- 5M+ LEGIC reader ICs in use
- Embedded in over 100,000 vehicles
- More than 10,000 electric charging stations equipped with LEGIC reader technology

Mobile Service

The Mobile Service LEGIC Connect enables centralized and highly flexible user management. It allows any kind of credential data to be distributed to smartphones of users located anywhere in the world.

With LEGIC Connect, it is easy to implement a variety of secure mobility and IoT solutions.

LEGIC Connect consists of two components – the central Trusted Service to distribute credential data, and the Mobile SDK to manage this data on smart devices and communicate with LEGIC reader ICs. To guarantee security, up-to-date security mechanisms and Hardware Security Modules (HSM) are used.

- 99.9% service availability
- Dedicated, geo-redundant server infrastructure (based in Switzerland/EU) with separate integration environment
- Over 5M user registrations with double-digit monthly growth

Key and authorization management

LEGIC offers powerful solutions to secure your Mobility and IoT projects. The MTSC (Master-Token System-Control) is a worldwide, unique security and authorization solution from LEGIC for contactless RFID applications based on a physical Token, the Master-Token. For mobile key management, LEGIC Orbit allows the secure management and distribution of customer- and project-specific mobile application keys and device configurations directly over smart devices worldwide.

Instead of securing administrative rights in a mobility system with volatile passwords, the security with MTSC is linked to a unique physical smartcard. In this way, each owner has full authority over an installation and preserves his or her independence.

LEGIC Orbit, on the other hand, supports the secure configuration of reader devices directly via smartphone and thus enables easy onboarding of new components. Key management and device configuration can be easily realized with a mobile app together with LEGIC's Mobile SDK, effectively replacing proprietary configuration devices.

- Full control and command of the security system independent of manufacturers and suppliers
- Security stays within the company
- Secure generation and distribution of customer-specific application keys which are never visible

Services

LEGIC actively supports its partners and customers with extensive know-how during the development of mobility solutions.

LEGIC provides development tools to help you quickly and cost-efficiently develop readers, identification media and complete customized solutions. LEGIC Academy offers interactive and personalized training courses on topics you are interested in.

LEGIC partners also benefit from comprehensive know-how of our Field Application Engineers and are part of the well-established LEGIC ID Network.

COMMON CRITERIA CERTIFIED EAL 5+ · NFC · MIFARE · RFID · Bluetooth

Enabling trusted authentication

LEGIC, with headquarters in Switzerland, is a global leading company in secure authentication and credential management through mobile and contactless smartcard technologies by means of RFID, Bluetooth and NFC.

Based on state-of-the-art security standards to ensure data integrity, LEGIC's security platform includes contactless reader and smartcard ICs, key and authorization management tools as well as the mobile service LEGIC Connect consisting of a trusted service and an SDK for creating mobile apps. Comprehensive consulting services supplement the offering. LEGIC's platform is characterized by scalable security, flexibility, simplicity, and investment protection. Our security platform reduces complexity and time-to-market for mobility, smart living and IoT applications.

For over 25 years, LEGIC has been a trusted supplier of secure access control technology to global leading corporations.

Flexibility

We tailor our platform to suit you. We know from experience that every project is different, and that each customer has their own requirements. Flexibility is therefore our guiding principle: You are free to choose the features you want.

Simplicity

Mobility systems are highly complex. We strive to make your design as easy as possible. We are just as uncomplicated as our solutions. As LEGIC customers, you will receive expert advice and support via our well-rounded consultancy service.

Scalable security

With the unique LEGIC Orbit and Master-Token System-Control, your system's security is in your hands. Instead of insecure passwords, control of your system is linked to secure smart devices based on Hardware Root of Trust.

Investment protection

Rely on our strong network. You have a long-term approach, and so do we. You should not have to worry about the future of your mobility system. As part of a solid partner network, you can rely on a team to protect your technology investment.

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