



Oberthur Technologies Convergence



'NFC Now'

A new connected world

The emerging market of NFC services is taking a turn. Pilots conducted worldwide during the last five years showed the great interest of end-users but also demonstrated the limits of a one-to-one approach between a specific mobile operator and a single bank or transport authority. The challenge is now to develop an interoperable and standard solution that end-users can use whatever is their mobile operator, bank, transport authority or preferred shops.

What is NFC?

NFC is a new technology mainly used in mobile phones allowing short distance (2 - 4 cm) contactless

communication to perform NFC payment, NFC access to transport networks, offices and car parks as well as NFC loyalty programs.

What is needed to run an NFC service?

- An NFC phone with a special antenna
- A secured area in the SIM card or the mobile phone to store these payment, transport or retail applications
- A dedicated NFC platform to administrate these services remotely
- Contactless payment & transport terminals in the field to use these services



What are the benefits for the stakeholders?

Mobile operators	Banks and financial institutions	Transport authorities	Retail groups
<ul style="list-style-type: none"> ■ Subscriber's churn reduction ■ New revenue stream ■ NFC subscription fee and service stickiness 	<ul style="list-style-type: none"> ■ Convenience ■ Increase market share in consumer payment vs. cash ■ Phone is becoming stronger than the wallet 	<ul style="list-style-type: none"> ■ Reduce cash management and expand scheme to micro-payments ■ No need to issue cards anymore ■ OTA top-up and payment convenience 	<ul style="list-style-type: none"> ■ Expand the membership and usage of loyalty programs ■ Faster throughput ■ People always carry their phones when doing shopping

Oberthur Technologies' 'NFC Now' meets the requirements of the NFC ecosystem

Ranking as a trusted supplier to more than 5,000 banks, mobile operators and transport authorities, benefiting of 10 years of experience in remote administration platforms and a leader in integrated and secured personalization, Oberthur Technologies has a true expertise to answer the needs of the NFC ecosystem.

Participating actively in the development of specifications that could lay the basis of a global standard, we are among the first in the industry to offer a complete NFC services suite. Our offer bridges technical gaps and simplifies business relationships among a growing number of new business partners.

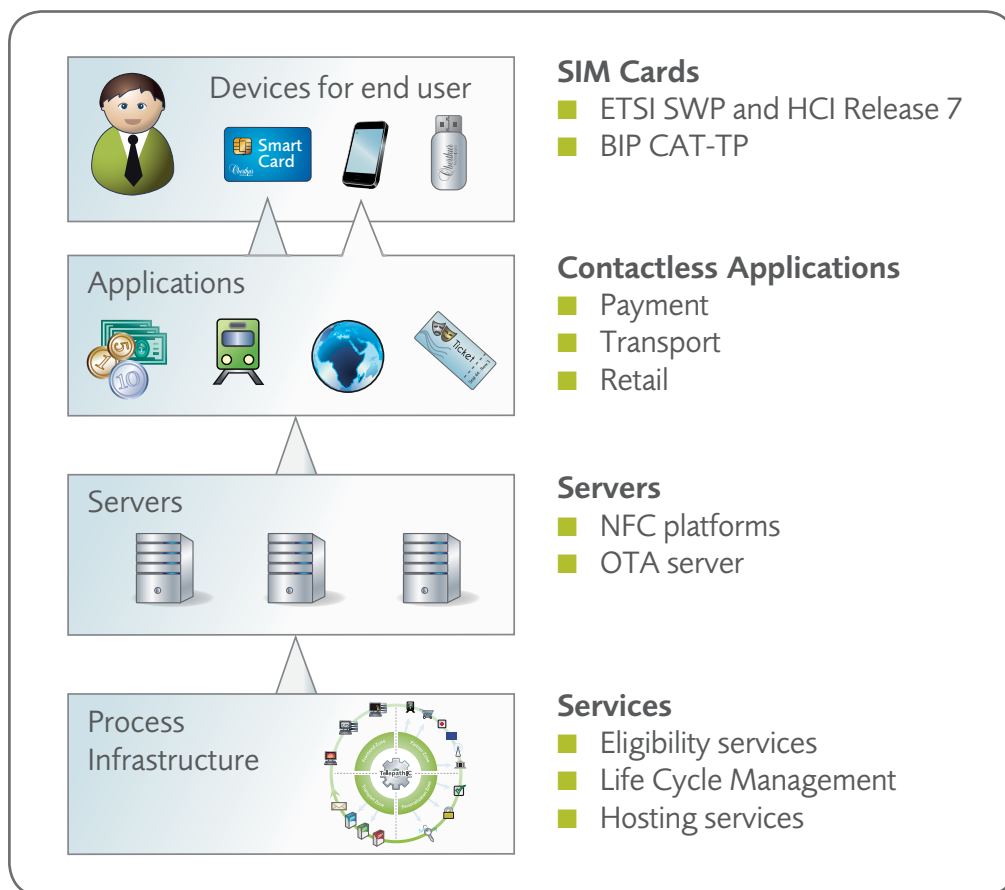
Oberthur Technologies' offer includes NFC-enabled SIM cards, a set of ready-to-use NFC applications, NFC service administration platforms as well as an

Oberthur Technologies' fully managed NFC service, if needed.

All requirements to launch an NFC service are covered, starting with customer subscription, followed by remote application download and personalization. 'NFC Now' also answers all post issuance lifecycle use-cases like mobile lost, re-found or change. The provided customer care interface allows each actor to control its dedicated services.

Oberthur Technologies' 'NFC Now' offer is composed of dedicated turnkey solutions for the different actors of the NFC ecosystem:

- Mobile operators
- Banks & financial institutions
- Transport authorities
- Retail groups



'NFC Now' for mobile operators

Renting out SIM space to third parties and paving the way for new use cases for the mobile phone will open new revenue streams to mobile operators.



Mobile operators play a key role in the NFC eco-system where payment, transport, and SIM card. For this market, Oberthur Technologies provides a new generation of services.

Oberthur Technologies 'NFC Now' offer for mobile operators also includes applications such as (eligibility management, lost/stolen-notifications, customer care, billing generation on the SIM card...),

Oberthur Technologies also designs operator 'master midlet' for NFC phones to efficiently run their specific 'service midlet' onto these phones.

'NFC Now' for banks and financial institutions

Issuing the 'top of the wallet' payment solution is the driver for many banks to propose SIM-based NFC services.

Along with the generic features mentioned above, Oberthur Technologies' 'NFC Now' offer for banks & financial institutions answers specific needs like secured remote personalization, PIN management and EMV parameter updates.

The Oberthur Technologies' NFC platform is hosted in our highly secured Service Centers certified by MasterCard and Visa.

The applications we provide are certified and comply with the latest standards for mobile payment.

Oberthur Technologies can also design service midlets giving banks the ability to deploy their mobile portal onto NFC phones.



'NFC Now' for transport

Reducing paper-based tickets and queues at counters are the key drivers for transport authorities to push for NFC ticketing.

To answer the specific needs of transport authorities Oberthur Technologies' 'NFC Now' offer includes applications such as Mifare and Calypso families as well as others.

Oberthur Technologies provides a complete NFC service for transport authorities and maintain an attractive 'NFC commerce'.

Oberthur Technologies also provides services like online timetables, ticket consultation.

transport and loyalty applications will be securely stored on the
of SIM cards with NFC capabilities.

an NFC platform for controlling SIM access by their partners.
ity check (compatibility of the handset, available memory space
n...

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muter application'.

es NFC tags which facilitate access
cket purchase or surrounding maps

'NFC Now' for retail groups

Using mobile phone—
only device always in
hand—for rewarding
customer loyal behav-
ior is innovative and
effective to generate
addiction.

Oberthur Technologies' 'NFC
Now' offer enables retail groups
to setup loyalty services such
as online loyalty programs,
dematerialization of gifts and
money-off vouchers.



The NFC platform allows setup and management of NFC loyalty services.

Oberthur Technologies also provides NFC tags as part of this service
package for retail groups to support marketing actions.

Smart Authentication

An Internet driven-world

The convenience of Internet is driving a cultural evolution in which e-shopping and e-banking are more and more becoming part of everyday life.

- 20 years ago we went to the bank and paid the invoice...
...today we do it online
- 5 years ago we went to the tax authorities and handed in the tax declaration...
...today we do it online
- 3 years ago we traveled to the 'speciality store'...
...today we do it online
- Today we go to the bank and sign a loan agreement...
...tomorrow we will do it online

Why Smart Authentication?

Online fraud is escalating with the rise of Internet usage. Fraudsters are now employing sophisticated methods to target user transactions through advanced real-time attacks such as man-in-the-middle, man-in-the-browser, social engineering and whaling.

Though financial losses due to cybercrime are a worrying reality, they should not stay a fatality. To face the new security challenges and to comply with national legislations for security measures, banks and financial institutions need to deploy secure authentication mechanisms. In fact, login security and accountability for transactions made online is a priority for every bank and financial institutions.

Oberthur Technologies' Smart Authentication suite to counter-attack online fraud

Expert in security solutions for a changing world, Oberthur Technologies has helped secure financial services for more than 20 years. We now provide a complete range of secure authentication solutions.

e-banking

Enabling secure access to online banking services.



e-shopping

Enabling secure payment on merchant websites.

A comprehensive offer

Oberthur Technologies provides a fully managed authentication service including a unique authentication server for e-shopping and e-banking as well as a complete suite of devices:

- Card readers with associated EMV or PKI smartcards
- Connected and unconnected tokens (USB dongles, keypads or one-button devices)
- Applications for mobile phones (SMS, SIMToolkit or handset-based)
- Scratch cards and matrix cards with list of one-time-passwords

With the Smart Authentication suite Oberthur Technologies now offers a complete range of services to improve security, usability and trust for online e-shopping and e-banking users. It encompasses:

- Marketing and technical consultancy
- Global integration, including device branding, server integration and key management
- Authentication device delivery operated from over 30 secured Service Centers around the world, including customization, stock management, packaging and distribution
- Server operation either hosted in these Service Centers or in the banks' premises



A turnkey solution operated from Oberthur Technologies' Service Centers

Oberthur Technologies' managed authentication service is based on servers hosted in our highly secured Service Centers certified by MasterCard and Visa.

From these Service Centers, Oberthur Technologies is able to provide a full range of customized devices as well as the required logistics, including packaging, inventory management and direct delivery.

Oberthur Technologies relies on the PIN management systems already fully running for its traditional business in each service center to securely deliver associated PINs through mail or SMS.

A reliable service

Oberthur Technologies is trusted by 5,000 banks and financial institutions to manage their keys and has also a strong experience in integrating platforms in information system back-ends.

'Expert in security solutions for a changing world,
Oberthur Technologies now provides a complete range
of secure authentication solutions'

Oberthur Technologies has a unique experience to provide 'NFC Now' and Smart Authentication Services.

A major actor in the payment market	<ul style="list-style-type: none">• A leading supplier of MasterCard and Visa• More than 5,000 banks and financial institutions• Expert in security (EAL4+, MasterCard, Visa)
An international SIM card vendor	<ul style="list-style-type: none">• Technology trusted by more than 250 mobile operators• One of two industry leaders worldwide• Latest technologies already available
A contactless payment expert	<ul style="list-style-type: none">• More than 40% market share in contactless smart cards in the US• Regularly selected for major new commercial launches• Many pilots around the world
A leader in integrated & secured personalization	<ul style="list-style-type: none">• A trusted player for hosting sensitive information• More than 20 years' experience in personalization• Unique global tool for all kinds of personalization of all smart card products personalized both in factory or through TelepathIC
An application developer expert	<ul style="list-style-type: none">• Expertise in Amex, JCB, qVSDC, Paypass, Calypso and MIFARE• Expertise in Midlet or SCWS for MMI purposes• Expertise in STK for flexible management of multi-NFC handsets• Expertise to provide application certifications
10 years' OTA platform supply experience	<ul style="list-style-type: none">• 65 references worldwide• Global OTA product range• Latest technologies such as BIP and OTA platform upgrade for NFC
An innovation-oriented partner	<ul style="list-style-type: none">• First in the industry to sell a 128kb card, a 1Mb card and first USB dongle incorporating a smartcard (AngellC™)• WebSTIC, a USB solution for secure authentication, meets the need to find the appropriate balance between security, cost and convenience
Partner offerings with global & local support capabilities	<ul style="list-style-type: none">• 6,000 employees worldwide• Over 30 service centers covering 5 continents• More than 600 million smart cards personalized per year



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