Initiative for NFC-interoperability

Introduction to the
„Open Eco-system for mobile services"

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Objectives

eCommerce and the increasing use of mobile devices are dominant global trends:

– Outstanding relevance for citizens and businesses → critical infrastructures

Public authorities target an infrastructure that serves the needs of citizens and businesses and guarantees fundamental rights:

– Open market for online services, competition between providers and freedom of choice for consumers

– Open access for service and technology providers (especially SME)

– Appropriate, accountable level of information security and safety, technical safeguards to prevent internet crime and fraud

– European principles concerning data protection and privacy

Targets can only be achieved by a specified, open "Eco-system"

Concept for an open Eco-system

Principles for an "Open Eco-system" for online services:

- Based on open standards

- Defined rules and safeguards to enforce IT security and privacy

- Supports entire eCommerce business life cycle e. g.:

    (1) 1st contact between service provider and consumer → establishing the user account, provision of user data e.g. by using an primary eID

    (2) Secure, convenient login → 2 factor authentication

    (3) Secure ePayment

    (4) Loadings contents, obtaining products

- Interoperability with existing service infrastructures

Existing assets

The German government and businesses established important building blocks for open Eco systems

(1) eID-service solution of the citizen's eID-Card

– Primary electronic ID, 2FA, electronic signature,

– more that 30 mio shipped, contactless interface ISO/IEC14443

(2) ePayment schemes

– Rollout of contactless payment infrastructure (EMVCo)

– Mobile phones or contactless cards as payment media

(3) Security and certification

– Technical guidelines for crucial algorithms, systems and selected applications, Evaluations labs and certification bodies in place

However, an "open Eco-system" will not develop on its own

⮑ High complexity, requires a lot of stakeholders and influence on international standardization → can't be handled by single market players or sectors

⮑ Competition by proprietary Eco-systems

Role of the NFC interface

Especially for mobile services, the NFC interface is a crucial part of the Open Eco-system:

(1) The NFC interface connects NFC mobile devices with
- eID-cards
- Authentication tokens
- ePayment infrastructures and customer media
- Infrastructures of other applications like Public Transport or Access Control

(2) Secure and privacy-friendly
- Supports strong crypto, short operating range mitigates certain privacy risks

(3) Very high safety and robustness
- No battery required for cards or tokens, no open contacts

> ⮑ **Reliable implementation of "Interoperable NFC" on the way**
>
> - Interoperability with ISO/IEC14443, ISO/IEC18092 and EMVCO
>
> - Introduction of testing and certification for all NFC mobile devices
> *Currently being addressed by the NFC Forum and GSMA*

Introduction NFC-Initiative

1. Scope

- Implementation of an open „Eco-system" for mobile services in Public Transport as defined by current specification activities
- Preparation of field rollout, not just another pilot
- „Public transport plugfest" in cooperation with the NFC Forum planned

2. Objectives

- Demonstrate value of „open NFC-based Eco-systems" compared to „truncated", proprietary NFC-implementations
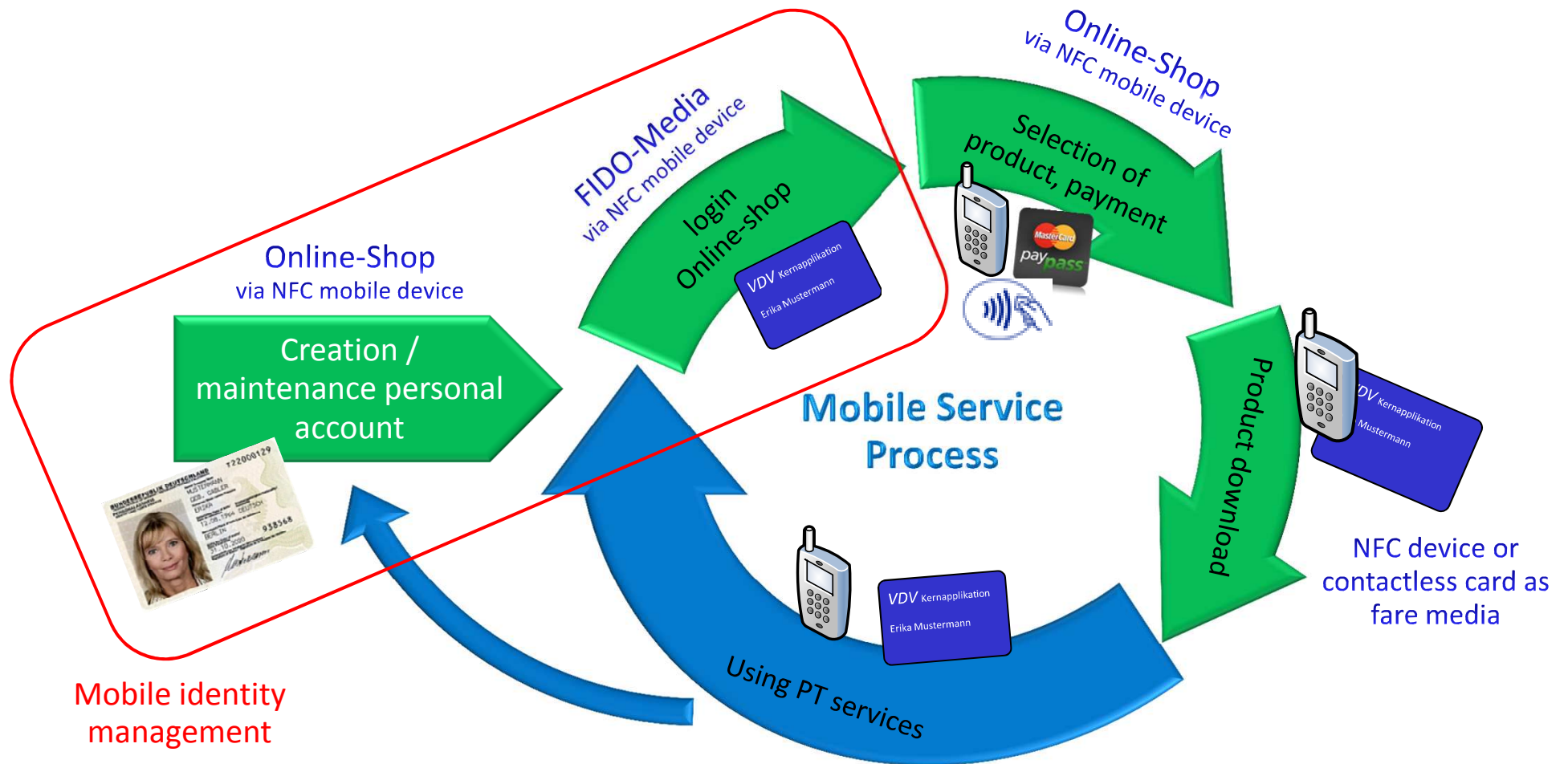- Proof of concept for standardization work by the NFC Forum

3. Project organization

- Public supporters: Ministries of Transportation, Interior and Economics
- 14 confirmed participants covering all aspects of the Eco-system incl. coexistence of competing service offers

4. Project status

- Project started, coarse project plan and budget defined
- Waiting for standardization work and decision on funding (expected for July)
- Project start planned for Q4 2015

Example: Mobile service life cycle in Public Transport

Interoperable NFC

Online-Shop
via NFC mobile device

Selection of product, payment

FIDO-Media
via NFC mobile device

login Online-shop

Online-Shop
via NFC mobile device

Creation / maintenance personal account

VDV Kernapplikation
Erika Mustermann

MasterCard paypass

VDV Kernapplikation
Mustermann

Mobile Service Process

Product download

NFC device or contactless card as fare media

VDV Kernapplikation
Erika Mustermann

Using PT services

Mobile identity management

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