

Business models for NFC payments

White Paper

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Starting point

Mobile NFC payments:

Why there are so many pilots but so few commercial implementations?

Why has NFC mobile payment technology not been more widely adopted?

Objective

To analyse potential business models for mobile contactless (NFC) payments taking into account all the stakeholders involved

Scope: Mobile NFC card payments at the POS in developed markets

How to do the analysis

- ▶ *Many stakeholders*
- ▶ *Different technical solutions*



A lot of possible implementations



Defining a methodology

Creating the NFC ecosystem

Secure Element (SE):

The owner (or issuer) of the SE has a major stake in the control of the ecosystem. Relationships inside the ecosystem depend on which SE is chosen; so ultimately the business model adopted depends on the SE.

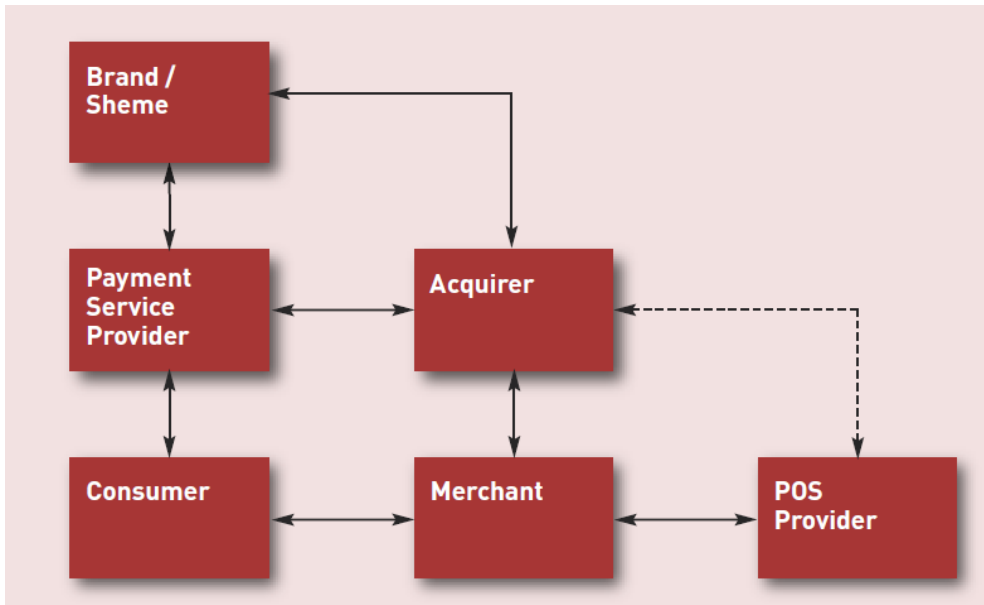
Selected SEs:

- *UICC*
- *Embedded chip*
- *microSD*

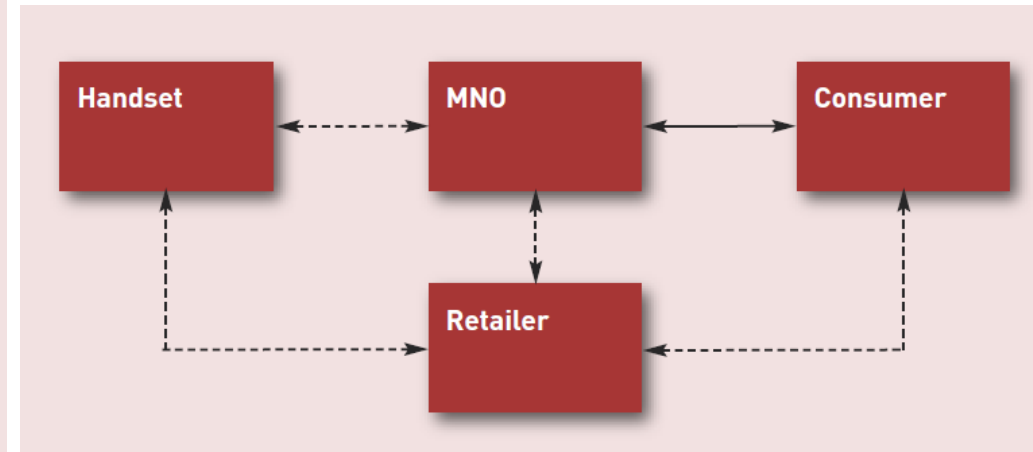
Ecosystem dependencies

NFC payment ecosystem is based on existing ecosystems
adding new stakeholders

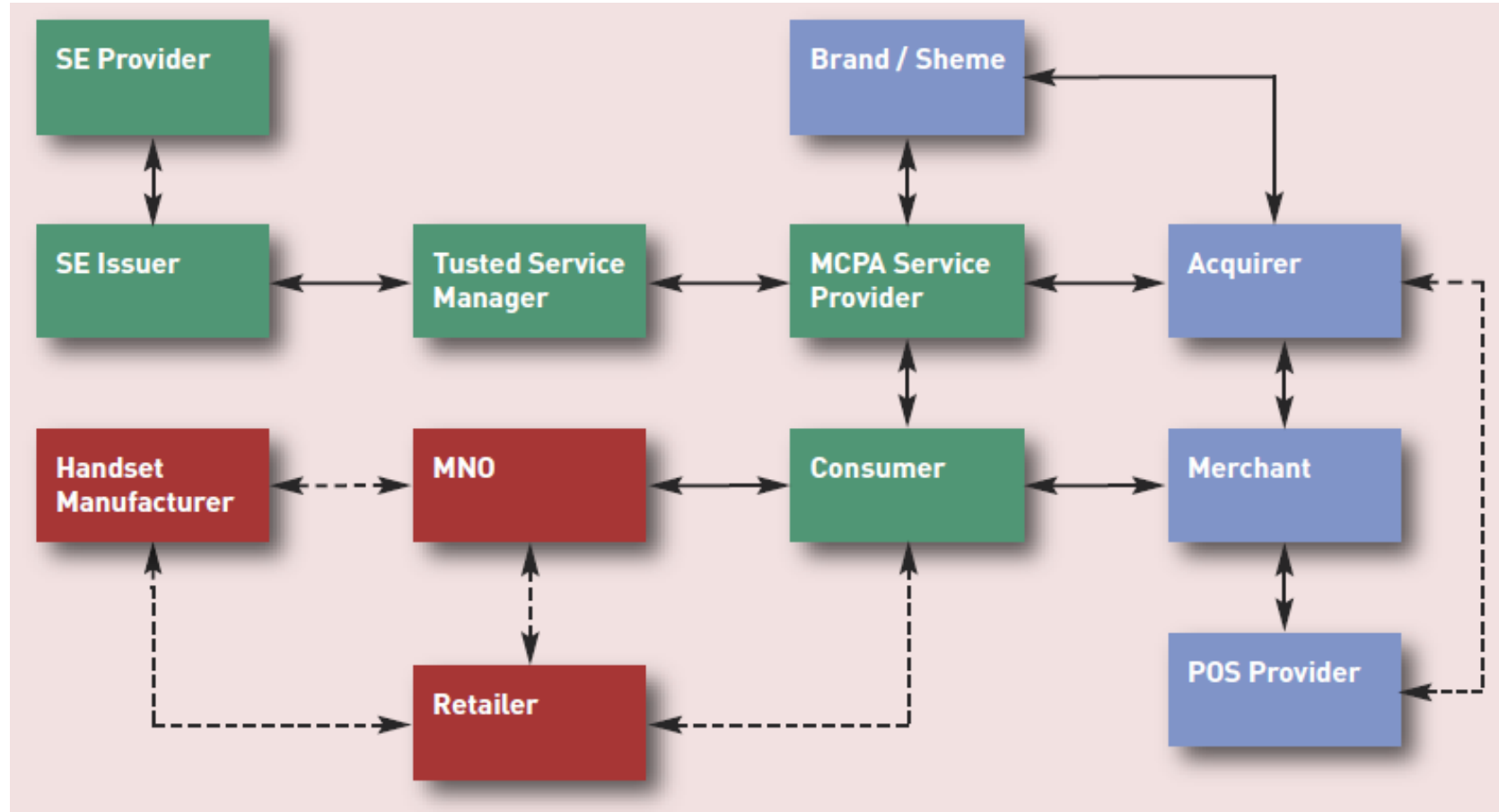
Payment ecosystem



Mobile ecosystem



NFC payment ecosystem



Cooperation business models

Key decision: how to cooperate with other stakeholders to go to market

3 cooperation models:

- *Collaborative model*
- *Bilateral model*
- *Standalone model*

Selected scenarios

For the selected types of SE, the most realistic issuers are likely to be:

- ***UICC: MNO as issuer***
- ***Embedded chip: Handset manufacturer/platform provider as issuer***
- ***microSD:***
 - ***Third party as issuer***
 - ***MCPA SP as issuer***

Implementation cases

	1. UICC/MNO	2. Embedded/HM	3. μ SD/TP	4. μ SD/MCPA SP
A. Collaborative	Implementation case 1	Implementation case 4	Implementation case 7	Implementation case 10
B. Bilateral	Implementation case 2	Implementation case 5	Implementation case 8	Implementation case 11
C. Standalone	Implementation case 3	Implementation case 6	Implementation case 9	Implementation case 12

Evaluation criteria

- ▶ **Standardisation**
- ▶ **Market reach**
- ▶ **Ecosystem sustainability**

	1. UICC/MNO	2. Embedded/HM	3. μ SD/TP	4. μ SD/MCPA SP
A. Collaborative	Very likely	Unlikely	Unlikely	
B. Bilateral	Likely	Likely	Very unlikely	
C. Standalone	Unlikely	Very unlikely	Very unlikely	Likely

Selected implementation cases

- ▶ The **MNO** issues the **UICC** in a **collaborative model (#1)**
- ▶ The **MNO** issues the **UICC** in a **bilateral model (#2)**
- ▶ The **HM** issues the **embedded** chip in a **bilateral model (#5)**
- ▶ The **MCPA SP** issues the **microSD** in a **standalone model (#12)**

For each case:

- Business rationale (direct and indirect value) and expenditures analysis.
- Technical and infrastructure considerations.
- Market considerations.

It is possible to identify revenue sources for each stakeholder if the ecosystem and the implementation are well defined

Practical examples of certain implementation cases

- ▶ **Six Pack – Netherlands: UICC - collaborative model (#1)**
- ▶ **Isis - USA: UICC - collaborative model (#1)**
- ▶ **Cityzi – France: UICC - bilateral model (#2)**
- ▶ **Mobile Shopping - Spain: UICC - bilateral model (#2)**
- ▶ **Tap2Pay - Norway: UICC - bilateral model (#2)**
- ▶ **Mobile Wallet trial – USA: microSD - standalone model (#12)**
- ▶ **Google Wallet – USA: embedded chip - bilateral model (#5) + embedded – standalone model (# 6)**

Gap analysis

Technical issues

- *Common guidelines*
- *Acceptance infrastructure*
- *NFC handsets*
- *Availability of SE*
- *Contactless terminals*
- *MCPA (applet)*
- *User interface (midlet)*
- *Infrastructures and systems*
- *Certification*

Business issues

- *Have a clear idea of how to go to the market.*
- *Define a clear business case considering:*
 - *Revenues and expenditures*
 - *Issuing process and life cycle management costs.*
 - *Other benefits such as customer retention.*

Conclusions

- *NFC contactless payments will become a reality due to consumer demand.*
- *The technology is ready but device and terminal availability and other related issues lag behind.*
- *There are many implementation models to choose from. Every MCPA SP should evaluate which model best matches their strategy and market.*
- *For each model it is possible to define a business case.*
- *Interoperability is a key factor.*

Recommendations

- *All actors within this space should be prepared even if they do not plan to roll out the service straight away.*
- *Adding other services such as couponing, loyalty cards and so on – which are innovative and offer users increased convenience and ease of use – will help to create demand.*
- *Investment needs to be made in the merchant infrastructure.*
- *In terms of card products for the new form factor, ensure customers can choose the same type as their plastic card format.*
- *Focus on a single issuing strategy at the beginning.*
- *Formulate a trusted service manager (TSM) strategy.*

Comments & Questions?