

The Goldfinch Report

NFC - A New Beginning

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Written By Peter Goldfinch

About the Author:



Peter is a one of the founders of Paycre8 and has been writing the Goldfinch Report for approximately 3 years.

He has been working in the payments industry for over 20 years and as a consultant has completed assignments for clients in 20 or more developed and emerging markets.

Many would consider Peter to be a technology oriented professional but he also has a strong business background.

The energy and commitment continues to build behind the deployment of mobile handset based NFC with new pilots almost being announced weekly. As we have seen in the past with new payment capability the effort has gone into developing the technology but not into the business model and revenue sharing processes. NFC delivers a powerful capability but can the payment industry really develop its business models to ensure its success?

Success will come if all the parties involved in delivering NFC are suitably rewarded. Are there strong business propositions for the banks, mobile network operators and payment schemes to collectively drive success? Plus we should not forget the subscribers/cardholders and the merchants.

It is difficult not to reflect back on the smart card developments of the late eighties and nineties and ask, is NFC a rerun. NFC offers a lot more than smart cards.

Smart card promoters set high expectations but the industry failed to deliver. Excluding the transit sector, smart cards have only, but importantly supported a security function for the payments industry, EMV. No other serious universal payments functionality has been rolled out. Chips in cards have of course been deployed considerably wider than just payments.

The mobile handset and network add significant capability to a NFC and smart card hybrid platform. Perhaps with this platform the industry can deliver on those smart card expectations. Failure will not be because the platform does not have the capability.

NFC has been piloted with excellent user feedback indicating a strong cardholder demand. The technology has been proven if only in terms of supporting one financial institution and one mobile operator.

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This report is an opinion piece and is not intended to do more than reflect Peter's views at the time of writing. The subject matter often relates to current experiences resulting from his consulting experience. The purpose is to generate debate through examination of current industry developments and directions. The author hopes you enjoy reading these reports.

The industry is ready to roll out the technology, but:

- There is no robust commercial model.
- A new organizational entity called a TSM, (Trusted Service Manager) needs to be established in each market, apparently.
- There is question over whether this is a low value payment service or not.
- No thorough trials of one handset supporting multiple payment instruments from multiple institutions have been completed.

Although, we are seeing the scope broaden with the French announcing a multi institutional trial. As with smart cards perhaps we will see the French taking the lead with NFC.

What is significantly different between NFC and any other payment channel is the delivery platform, another party, a new participant the mobile operator, owns the handset or more precisely the UICC. The mobile operators own the real estate from which NFC is to be delivered.

A sustainable commercial deal has to be struck with the operators for this technology to be delivered and developed. For many operators SIM space is considered a scarce resource and therefore is maximized to deliver services to facilitate their respective business models.

There are also no readily available handsets and there will not be until the mobile operators start to place orders. These handsets will be more expensive, at least initially and new SIMs will need to be rolled out.

Previous experience in promoting SIM based payment services, requiring SIM real estate, with no strong operator proposition has meant failure. This is why today there is a thriving industry delivering non-SIM based and mobile operator agnostic mobile payment and banking solutions.

The commercial incentives for the operators to give up real estate on their SIMs is going to need to be strong, otherwise operators will not facilitate the service.

About *Paycre8*:

The three founders of *Paycre8* have been working in the payments industry for collectively over four decades. Most of this time they have worked as consultants, designers, integrators, developers and project managers on various projects internationally. They have experience in a wide range of payment channels, instruments and networks, normally working at the leading edge.

The demand and referrals from old clients plus a passion for the creative aspects of the industry motivated the three founders to build what they believe is a unique and niche consultancy practice.

Traditional Card Processing Model

What is unavoidably compounding the problem in the development and delivery of NFC is the influence by the card schemes. NFC is not going to succeed without their commitment but their position still needs to be challenged. They are seemingly and not necessarily intentionally using their position to minimize the impact of this new technology on their processing revenue. In fact to enable NFC to be taken to market quickly, (which would not be the case if the schemes were required to re-engineer their processes) the schemes are simply promoting NFC deployment to fit into their existing infrastructure.

This sounds like a reasonable and legitimate stance. A negative is that the mobile networks will not be used to deliver new efficiencies into the payment process and transactional revenue will not be created or shared with the mobile operators.

There are examples of how this could be done:

- If low value transactions not requiring authorization exceed a predetermined number without the card having gone online, the system is to force the next transaction regardless of value to be authorized. Why doesn't the issuer, after his limit has been reached request the cardholder, via their handset, to perform a pre authorization? In fact the handset velocity checks can be managed by an application on the SIM that triggers the pre-authorization. An approval response refreshes the counters.
- For transactions requiring authorization because of their higher value the authorization request can be routed through the mobile network directly to subscribers/cardholders issuer. Not as it is today through the acquirer and the schemes network. A digitally signed authorization can then be delivered back to the handset and passed to the merchant, (via NFC) if the request has been approved. A two-stage process replacing 3D secure services and clearly shifting the payment risk to the issuers.

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Creators of Payment Solutions

Purpose – to provide payment system advisory services to an international client base. Clients who currently operate payment systems or who are investigating starting up electronic payment services.

Vision - By providing fast responsive, informed expertise, and consistently high quality service,

Paycre8 aims to build an international reputation for excellence.

Mission – To be recognized as the foremost group of experts in payments.

- This approach can be taken a step further with the introduction of the pay away method of processing a transaction where the request and financial transaction, (potential as a single message) is routed via the mobile network directly to the card issuer. The issuer settling with the acquirer. The acquirer reconciles and settles the merchant.

This later approach would deliver significant processing benefits but is not going to deliver NFC quickly to the market. The first two approaches of handling the authorizations via the mobile network will deliver revenue to the operator, giving them a stronger business case to support NFC.

The cost will be charged to the cardholder/subscriber. In this environment, the number of authorizations will increase but the schemes will not have the load on their networks. They can continue to do what they do best, settlement.

Another hurdle that impacted Smart Cards is the need to upgrade merchant terminals. In many markets the POS devices are owned not by the banks but third parties or the merchants. At a minimum the merchants are going to need a peripheral NFC reader assuming their current device provides such support. For large merchant chains this will be a cost that needs to be supported by a strong business case.

The business case supporting an investment in devices will depend on the number of low value transactions handled and the associated savings in cash handling costs, staff fraud etc. There is also the proposition of higher throughput per cashier because of a speedier payment process, delivering increased sales at a lower cost.

Never Leave Home Without Your Handset

The NFC concept is sold on the fact that an individual never leaves home without their handset but may leave home without their wallet. We are told this is especially the case for the youth.

If NFC is going to deliver on replacing the need to carry a wallet, it must:

- Be accepted by all electronic delivery channels regardless of transaction value.

Paycre8 - delivers a range of payment advisory services:

- Market Surveys and Analysis
- Requirements Definitions
- Solution Development
- Business Planning
- Business Modeling
- Process Planning
- System Design
- Solution Evaluation and Selection
- Project Directorship
- Project Management
- Specialist Project Resourcing
- Business Training
- On-Going Business Reviews and Audits

- Hold all your payment cards issued by the various financial institutions. Otherwise you still need to take both your NFC enabled handset and your wallet containing your other cards.

Where Will NFC Really Work

For all new payment methods there is a requirement to gain acceptance and then critical mass. Payments are generally about processing large transaction volumes very efficiently to drive down cost and therefore further drive up usage. The challenge with a new payment method is finding that 'Killer Application' that will deliver immediate acceptance in sufficient volume to cost justify the investment.

Smart Cards found success with the transit operators and NFC on the mobile will similarly find success with transit. Why?

- Mass transit is a closed loop payment application. Transit controls issuance and acceptance. It is easier for transit to re-engineer their processes to deliver performance and cost savings that go to their bottom-line.
- The user proposition is strong, accept the new payment method or walk or swim or in the case of some cities drive and pay excessive congestion tax and parking fees.
- Mobile NFC has the potential of addressing a significant mass transit challenge currently inhibiting the acceptance of their cards beyond transit, reload
- The cost of plastic to the transit industry is high so using another lower cost form factor is attractive.

The handset has the obvious benefit of enabling a reload to take place anywhere at anytime. It will also allow potentially one subscriber to reload another's mass transit stored value account. Mobile operators support this functionality today for their airtime-prepaid service.

Contact *Paycre8*:
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This facility will mean that non-transit merchants, especially for the low value purchases, could accept the mass transit card. As nearly everyone in the community will have a mass transit card. Even if they are only a casual user of the service the merchant proposition for acceptance is strong.

The mobile operator proposition is also stronger than that being offered by the card schemes. The reload will in itself provide transaction activity across their network. This may not be as exciting as if mobile operators were handling all transactions.

There is no obvious reason why mass transit services could not deploy mobile networks to route transactions to their back offices and some may be doing this already. There is also the potential for the traveler's handset to submit the transaction directly to the back office. This will reduce the cost of transaction delivery where the cardholder/subscriber bears the communication cost.

Hurdles For Mass Market Acceptance of Mobile NFC

Firstly technology is not a hurdle. The hurdles are:

- A strong commercial model for all parties.
- The TSM adds a level of complexity. The mobile operators are equally able to perform this management function.
- There is a need to replace the card with the mobile for all payments.

The subscriber/cardholder proposition is also not excessively strong. If both a wallet and cash still needs to be carried for some transactions why bother with NFC other than for transit?

If NFC is seen as a replacement payment instrument building up the acceptance network is critical. Acceptance needs to reach a critical penetration level where surviving without cash becomes a viable proposition.

NFC must deliver a strong mobile operator proposition, if not the technology will still be taken to market but fail to meet the expectations.