

Mobile NFC Services

OECD Meeting, Paris

26th October 2011

Nav Bains

Business Lead, NFC Services

GSMA



The GSMA

- Represents the interests of the Mobile Communications Industry Worldwide
 - Over 787 Operators Members across 219 countries/territories
 - Over 221 Associate Members (Manufacturers & Suppliers)
 - Founded 1987
 - See www.gsmworld.com

- GSMA is helping to create new business opportunities for its members

- GSMA is working to ensure that mobile services work globally
interoperability is the key

- Activities:
 - Working groups on : Roaming, Billing, Fraud, Security
 - Large number of projects (including Pay-Buy-Mobile, M-Ticketing)
 - Industry Liaisons (e.g. ETSI, OMA, NFC Forum, EPC, 3GPP etc)



Mobile NFC

Trends in the Mobile Phone evolution

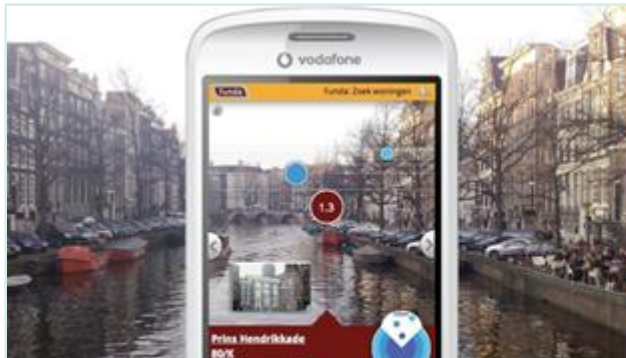
- Processing power and sophistication of the mobile phone is growing
 - Analogue voice only
 - Digital voice and data
 - High speed data
 - Internet enabled
 - Cameras
 - Music
 - Touch screen
 - Application stores
 - Mobile Wallets (P2P, P2B)
 - Spectrum of new services (NFC proximity payments, loyalty, access, transportation ticketing etc)
 - Location based services (personalised advertising)
 - What next ?



The next wave of innovation?



- GPS: has resulted in a number of new location based apps (e.g. Google Maps, SatNav, Restaurant finders etc.). Galileo services will be more accurate.
- Accelerometers: led to development of a plethora of new apps (e.g. games), new ways to interact with environment
- So what's next?



Augmented reality



3-D Screens



NFC

“The best way to predict the future is to invent it.” – Alan Curtis Kay

Mobile NFC, changing habits

- A – Carry personal values and individual rights (credentials) required to execute a transaction (e.g. to pay) or to truly perform an action (e.g. to board a bus)
- B - Launch mobile/web applications from real objects or places – not from a screen, a pad or a remote control
- Mobile contactless is all about interacting with the ‘physical environment’, should it be in your house, in a shop, in an airport or in the street



NFC: A world of contactless opportunities?



Card Emulation (SECURE)



Mobile Payment Transactions.

Peer-to-Peer Data Transfer



Swedish schools are piloting tapping phones to register class attendance and access school timetables, assignments and newsletters etc.



Sync pictures, movies, music, apps



Mobile Ticketing transactions



Exchange business cards, Fast pairing with blue-tooth devices



Tap phone on TV or TV remote control unit to get coupon



M-Health: Wave your NFC phone on the BP monitor to send the results to your Doctor



Information Access/Reader Mode



Find out about places of interest.



Read smart-posters to get latest bus timetables

Consumer-centric: interactive, convenient easy to use



- Customer uses NFC blood pressure monitor linked to health app on phone
- Opens car door with NFC phone
- Drives to the airport
- Enters Airport Car park using phone
- Check-in at terminal with phone
- Uses Passport within NFC-phone (used to get through Passport control)
- Duty-free shopping in Airport, pay with credit-card in the phone
- Airline boarding pass in NFC-phone (used to get past departure gate)
- On arrival at destination uses phone to hire car



Consumer-centric: interactive, convenient easy to use



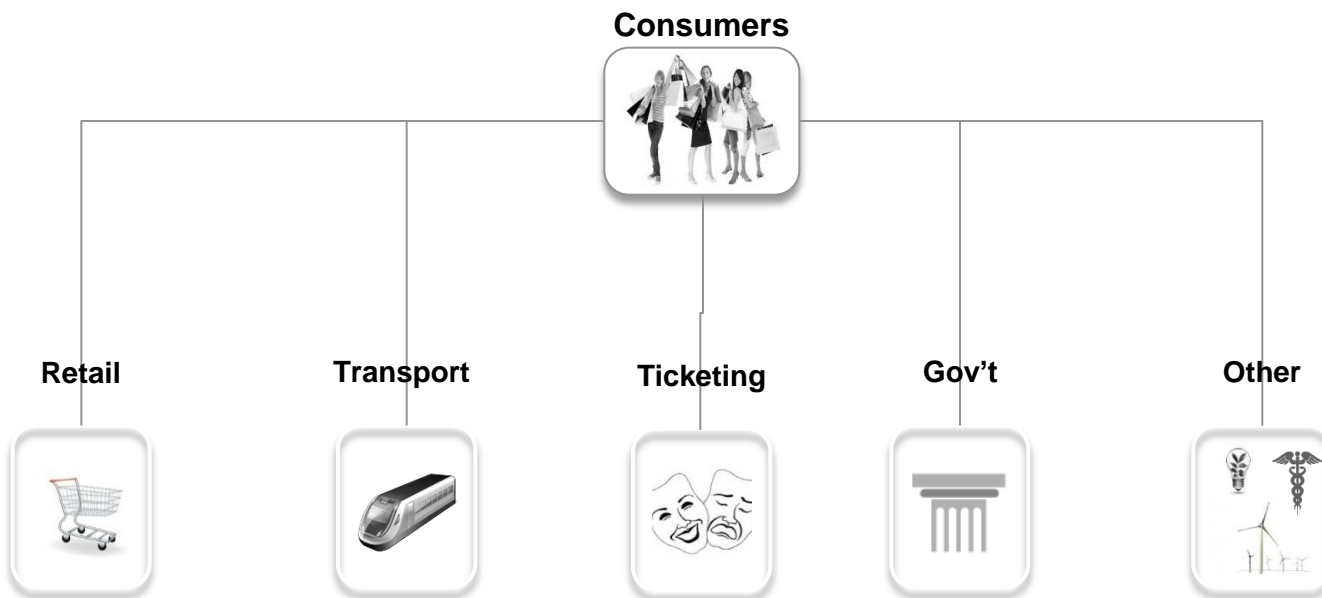
- Hotel check-in/registration by phone
- Uses NFC phone as hotel room key
- Go to meeting to exchange business cards with NFC phone
- Book tickets to concert by touching the NFC phone on a smart poster
- Uses phone to enter concert venue
- Uses phone to receive concert related advertising and ability to download concert merchandise material
- Uses phone to pay for taxi back to hotel
- ...just some of the possible uses



- Will allow the customer to have easy access to a range of services
 - Proximity Payment (credit/debit cards for NFC enabled m-payment)
 - Remote Payment (e.g. via internet)
 - Transportation services
 - Remittance (P2P)
 - Event ticketing (e.g. concerts, sports events etc.)
 - Other customer selected applications



Mobile NFC brings new services to the consumer



Other NFC use cases being developed

- Healthcare improvements

- Healthcare visitors can make their home visits more efficient via NFC

- Help for the elderly

- NFC RFID tags on photos



McDonald's E-Coupon Service in Japan



A complex ecosystem involving many players

Mobile Network Operators



Trusted Service Managers



Banks



Electronic Payments Networks



Transport Operators



Event Ticket Providers



Standards Body



Application Developers



Merchants



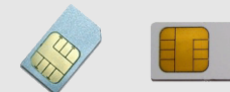
Subscribers



Handset Suppliers



UICC Suppliers



Building the NFC Ecosystem



Differing approaches to NFC will fragment the market
NFC can only succeed with collaboration across the value chain

- GSMA has been working with a number of key players in the ecosystem for several years, including:
 - EMVCo
 - European Payment Council
 - ETSI
 - GlobalPlatform
 - IATA
 - NFC Forum
 - NRF
 - EuroCommerce



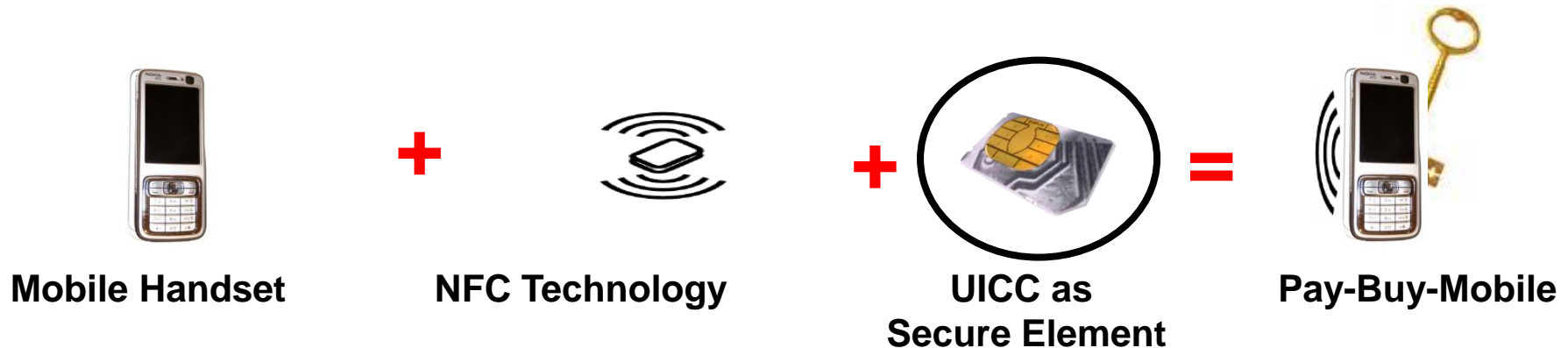
GSMA Pay-Buy-Mobile Initiative

The GSMA Pay-Buy-Mobile Initiative



- Launched in February 2007 at Mobile World Congress
 - Objectives
 - Create a **common global approach** for mobile NFC payments
 - Achieve **global interoperability**
 - **Catalyse** the market by having as many trials/launches as possible
- What is Pay-Buy-Mobile?

UICC-based, NFC-enabled Mobile services



- The UICC/SIM offers:
 - Presence in more than 85% of phones, globally
 - Portability
 - Security
 - Standardised interface to NFC chip
 - Over-The-Air management capability

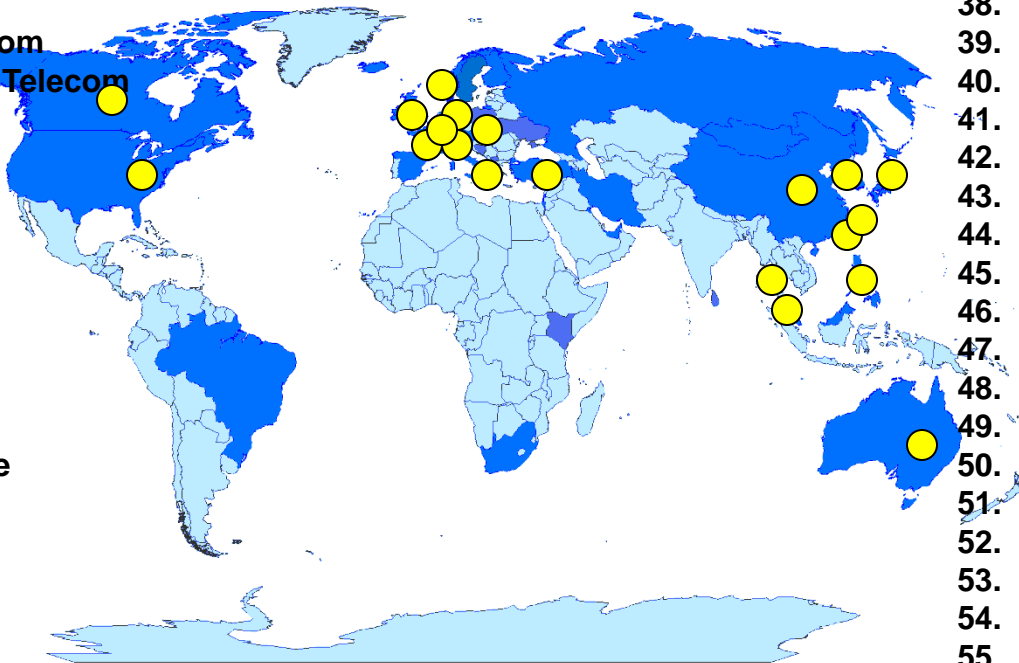


62 MNOs Participating/supporting Pay-Buy-Mobile

Over 20 NFC Pilots around the world ●



- | | |
|---|-------------------------|
| 1. AT&T (Phase 2 co-lead, Phase 3 Lead) | 32. MTS |
| 2. KT (Phase 1 Lead, Phase 2 co-lead) | 33. NTT DOCOMO |
| 3. Astelit | 34. Orange |
| 4. Azerfon | 35. Partner |
| 5. Belgacom | 36. Pelephone |
| 6. Brazil Telecom | 37. Rogers |
| 7. Celcom | 38. SFR |
| 8. China Unicom | 39. SINGTEL |
| 9. Chunghwa Telecom | 40. SINGTEL OPTUS |
| 10. CMCC | 41. SK Telecom |
| 11. CSL | 42. SMART |
| 12. Dialog | 43. Softbank Mobile |
| 13. Digi | 44. Starhub |
| 14. DST | 45. Swisscom |
| 15. Econet | 46. Taiwan Mobile |
| 16. EITC | 47. TDC |
| 17. Elisa | 48. Telecom New Zealand |
| 18. Etisalat | 49. Telefonica-O2 |
| 19. FarEasTone | 50. Telenor |
| 20. GlobeTel | 51. TeliaSonera |
| 21. IMC Island | 52. Telecom Italia |
| 22. Kall | 53. Telstra |
| 23. KDDI | 54. Telus |
| 24. KPN | 55. Turkcell |
| 25. Maxis | 56. T-Mobile |
| 26. MCI | 57. Verizon |
| 27. Meteor | 58. Vimpelcom |
| 28. MobiCom | 59. Vodafone |
| 29. Mobilkom Austria | 60. Wataniya |
| 30. Mobitel d.d. | 61. Wind |
| 31. MTN | 62. Zain |



Pay-Buy-Mobile NFC Pilots

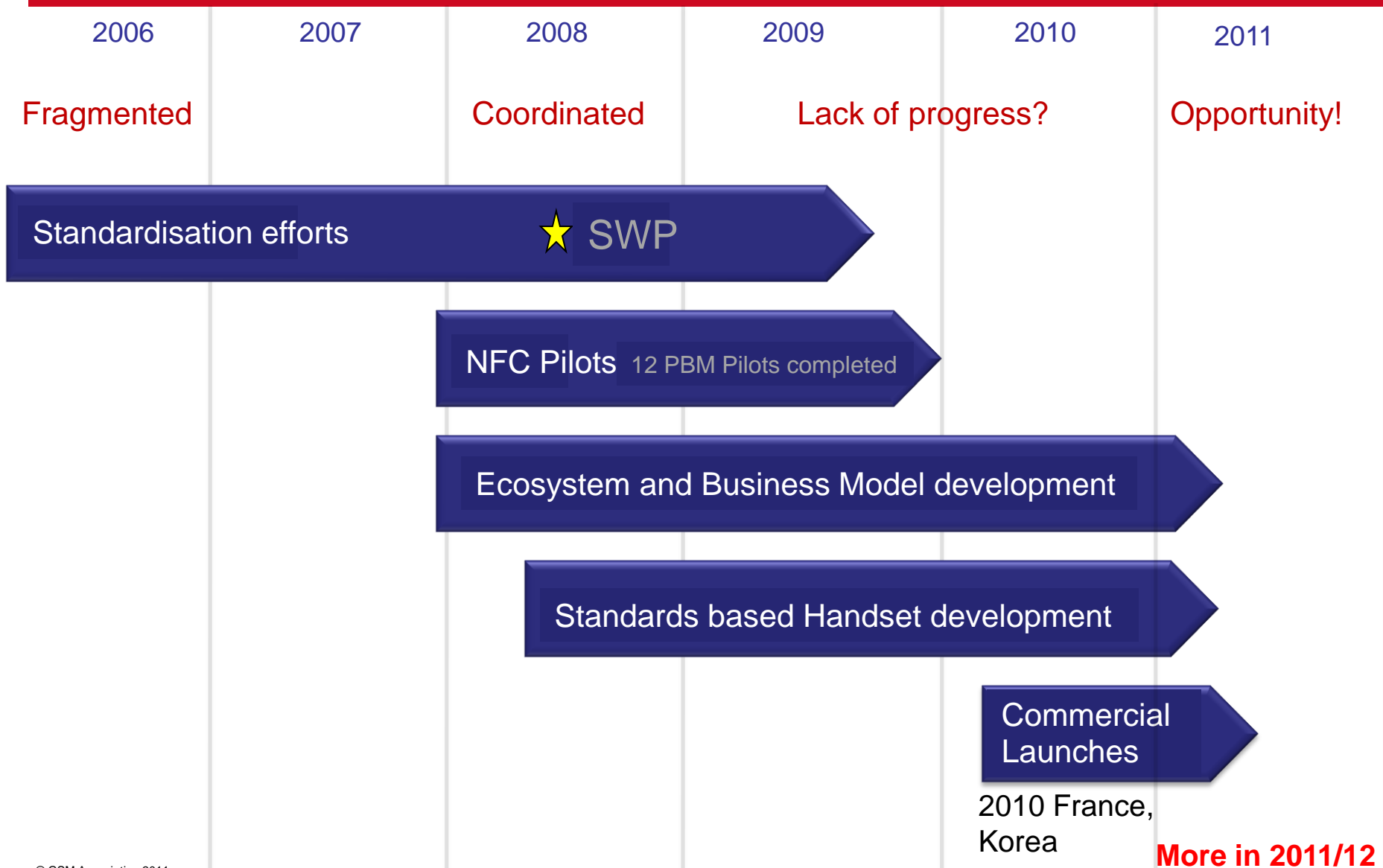


- Trials completed in 12 countries:
 1. Australia
 2. Canada
 3. France
 4. Japan
 5. Korea
 6. Malaysia
 7. Norway
 8. Philippines
 9. Spain
 10. Taiwan
 11. Turkey
 12. USA

- Lessons learnt for service commercialization
- Positive customer feedback across all trials

NFC Trends

Mobile NFC progress to date



NFC Momentum is growing



Commercial NFC service launches



■ France

- Multi-MNO, Multi-Bank, Multi-TSM service launched in Nice, 22 May 2010
- Further rollout planned in 9 more French cities in 2011 (Paris 2012?).

■ Netherlands

- Multi-MNO, Multi-Bank JV announced 09th September 2010, rollout 2012

■ Korea

- KT announced commercial launch in October 2010

■ USA

- AT&T/Verizon/T-Mobile announced ISIS JV (to launch 2012)

■ Further announcements expected throughout 2011 and 2012

- UK, Spain, Poland, Czech Republic, Belgium, Hungary

Key Messages



- A lot of good work has been done
 - Standards
 - Pilots
 - Business Model Development

- Collaboration is required on develop business models and infrastructure rollout plans

- First UICC based Mobile NFC commercial launch occurred in 2010 and we expect more to come in 2011 and 2012

- Momentum for commercial mobile NFC service launch is growing

- Open Standards will drive interoperability and bring NFC services, ease and convenience to all!



Thank You!

Backup Slides

Pay-Buy-Mobile Publications



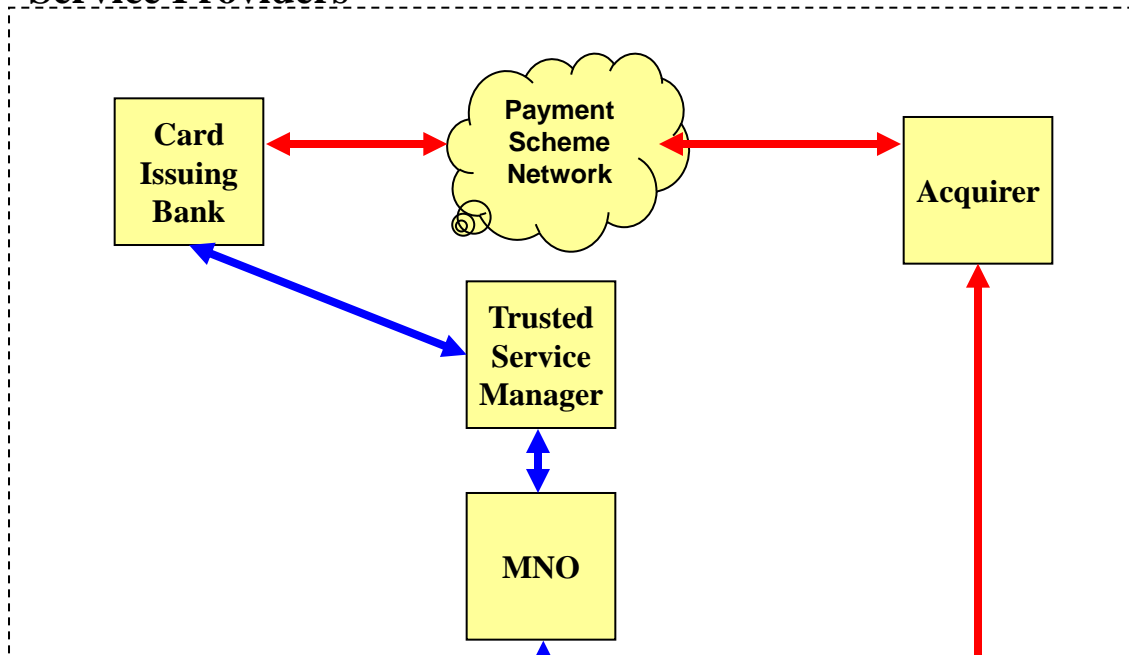
www.gsmworld.com/mobilemoney

- [Pay-Buy-Mobile Website](#)
- [Pay-Buy-Mobile Business Opportunity Analysis Public White Paper](#)
- [NFC Technical Guidelines V2 White Paper](#)
- [GSMA Requirements for SWP NFC Handsets V4](#)
- [EPC/GSMA TSM document V2](#)
- [M-Ticketing White Paper](#)
- [GSMA-IATA White Paper](#)
- [Requirements for Single-Wire Protocol NFC Handsets](#)
- [M-Payment Service Operation Guidelines for Mobile Network Operators](#)

Pay-Buy-Mobile Architecture



Service Providers



LEVERAGING
EXISTING
BANKING
INFRASTRUCTURE

Provisioning
Transaction,
Clearing &
Settlement

*Not Shown:
UICC/NFC Chipset/Handset/POS
Manufacturers and Suppliers

