Contactless Solutions with MIFARE & Beyond

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TRANSPORT TICKETING LANDSCAPE

TRENDING TECHNOLOGIES & SOLUTIONS

KEY DRIVERS FOR ADOPTION

GLOBAL MARKET PRESENCE
TRENDING TECHNOLOGIES & SOLUTIONS

- EMV (open-loop) & white label EMV
- Account Base Ticketing
- Optical solutions (QR-code)
- NFC
- Mobile & wearables/BYOD (iOS & Android)

KEY DRIVERS FOR ADOPTION

- Infrastructure and operational model optimization
- Superior User/customer Experience & convenience
- Compete with alternative transport solutions
- Complement existing ticketing technology

GLOBAL MARKET PRESENCE

- High: closed-loop (MIFARE, FeliCa, CIPURSE, Calypso)
- Limited*: EMV (PNOs: Visa & MasterCard)
- Limited: Mobile**
- Limited: ABT

Note: *Support of multiple front-end technologies & excluding China.
**At the gate/reader transit system accepting EMV.
2030 & BEYOND: TRANSPORT TICKETING TECHNOLOGY ADOPTION

Quick-wins
- Add security, improve current close-loop set-up
- NFC Mobile top-up (smart cards)
- NFC mobile (ISO7816)
- Customer centric with low investment
- Speed-up operations & remove cash
- Deploy single app payment scheme

Front and back-end replacement
- Open-loop with EMV enablement (address tourists, add convenience for occasional travelers, alternative)
- Moderate/high investment
- ABT & white label EMV operations & Artificial Intelligence
- High investment with and long-term planning

AFC Systems Initial Adoption
- Wave 1: up to 18 months
- Complementary solutions

System Overhaul
- Wave 2: up to 5 years
- Complementary solutions
- Convenience, Transparency, Experience
WHY NFC FOR SMART CARDS & MOBILE?

The NFC Forum brings the convenience of NFC technology to life. We empower organizations to deliver secure, tap-based interaction with an intuitive, simplified, reliable experience to users around the globe.

“45% of the global population use NFC contactless cards or NFC-enabled smart phones nearly everyday, according to an ABI Research survey.”

Source: NFC Forum (nfc-forum.org)
LEVERAGE THE MARKET PRESENCE OF NFC

The Role of NFC in Urban Travel Transformation

Is fueled by population density, needs of climate change and convergence of payment, identification, authentication, access and travel information all enabled by NFC.

Leverages NFC Forum-compliant devices of all kinds – cards, readers, mobile phones, and wearables – to deliver an improved, consistent and safe user experience across all use cases.

Is available to many; 3 billion smartphones in use worldwide.

Source: NFC Forum (nfc-forum.org)
The NTA in Ireland introduced NFC mobile reload app for their Leap card

- Android: January, 2016
- iOS: April, 2021

Pre-COVID: active users 480,000 (Android)
May, 2021: over 200,000 active users (Android, iOS)

Pre-COVID share of total top/month: 27.00% (Android)
May, 2021 share of total top/month: 43.60% (Android, iOS)

Surpassing retail top-up for the first time, making NFC apps the most popular top-up/sales channel.

Improvement of operational model
Savings from sales channel shift & cash handling
Customer convenience and transparency

Source: NTA Ireland
MIFARE® LEADER IN CONTACTLESS ICS

Running in over 750 cities

People use MIFARE every day for smart mobility, access, micropayment, loyalty

#1 in automatic fare collection, with 77% market share in transport ticketing
MIFARE 2GO CLOUD SERVICE ECOSYSTEM

End-to-End cloud solution
Secure platform for digital credential issuance and management
Designed to work with existing MIFARE product-based infrastructures

**APPLICATION / SERVICE PROVIDERS**

**TRANSIT**
Transit agencies, car- or bike sharing providers, taxi provider, parking operators, system integrators

**ENTERPRISE**
Corporate access, government access, logical access

**HOSPITALITY**
Hotel room access, enhanced mobile guest experiences, loyalty cards, membership cards

**HIGHER EDUCATION**
Campus access, micropayments at canteens or printers
MIFARE is the leading contactless transportation solution used in 750+ cities worldwide.

5/7 Continents adopted MIFARE 2GO for public transport.

7+ countries
50+ transit agencies
20+ universities
2B Android devices enabled on MIFARE 2GO
SECURE CONNECTIONS FOR A SMARTER WORLD