



The European Interoperable Fare Management Project (EU-IFM)

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Emerging Standards for Transport Smartcards

Transport Smartcards are currently governed by the following International (ISO) and European (CEN) Standards:

- Media: ISO/IEC 14443
- File Structure: ISO/IEC 7816-4
- Security: ISO 15408 (Common Criteria)
- Architecture: EN ISO 24014-1 (IFM)
- Applications: EN 15320 (IOPTA)
- Data Elements: EN 1545



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European Interoperability

The main drivers for Public Transport are:

- Social inclusion
- Mobility
- Harmonisation
- Procurement
- Scale economics

... and support for the Green Agenda by removing barriers to modal switching



EU-IFM Vision

The main National IFM organisations have a shared vision:

- Create an EU-IFM network to provide direction, co-ordination, networking of Best Practice,
- Implementation planning of a pan-European IFM initiative
- Promote further links to ISO and European Standards including NFC and the Security and Certification of devices
- Payment mechanism no longer a barrier to travel

Initial funding from DGINFSO



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IFM Interoperability

EU-IFM needs to support Public Transport interoperability at three levels:

- Local Schemes
- National Schemes
- International Schemes



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EU-IFM Project Aims

- Aim is to ensure cross-border interoperability of Transport Smartcards is enabled across Europe
- Develop a Road Map towards a EU-wide concept where:
 - Customers use their local Transport Smartcards outside their home network
 - Transport authorities have the tool-set to build new systems using standardised Specifications
 - Deliver the associated Security Environment
 - Charter a way through Privacy Issues



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European IFM Deliverables

- Common Model for IFM across EU
- Open architecture
- Commercial framework between members
- Security Environment with a Trust Model and set of IFM Rules
- Privacy Charter



Routes to European IFM

Track 1 (Priority Lane)

Interoperability through common multi-application processes and a Common Portal

Track 2 (Long Haul)

Common EU-IFM Application and Templates



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EU-IFM Priority Lane

Deliverables

- Greater Awareness of benefits of smartcard solutions for mobility to both Customers and Network Operators
- Widest possible range of Media leading to cost benefits
- Access over-the-internet and over-the-air
- Transportability and Interoperability of Media between schemes
- Respect of Privacy across schemes
- Enhancement of Security and minimisation of Fraud
- Consensus on value of cooperation
- Dissemination of knowledge of how to set up a scheme
- Promotion of Best Practice to spread excellence
- Facilitation of Back Office communication
 - ... demonstrating material benefits to Customer,
the Green Agenda, Mobility and Social Inclusion



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EU-IFM Long Haul Vision

- Seamless accessibility to different Public Transport Networks using the same Portable Media
- Smartcards will have migrated to a Secure Element on a Portable Object (Mobile Phone, PDA, USB device etc)
- Individual IFM Applications can co-reside in a multi-application environment
- An EU-IFM Application usable across many Networks
- Payment processes are no longer a barrier to the use of Public Transport across EU



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IFM2: Issues raised

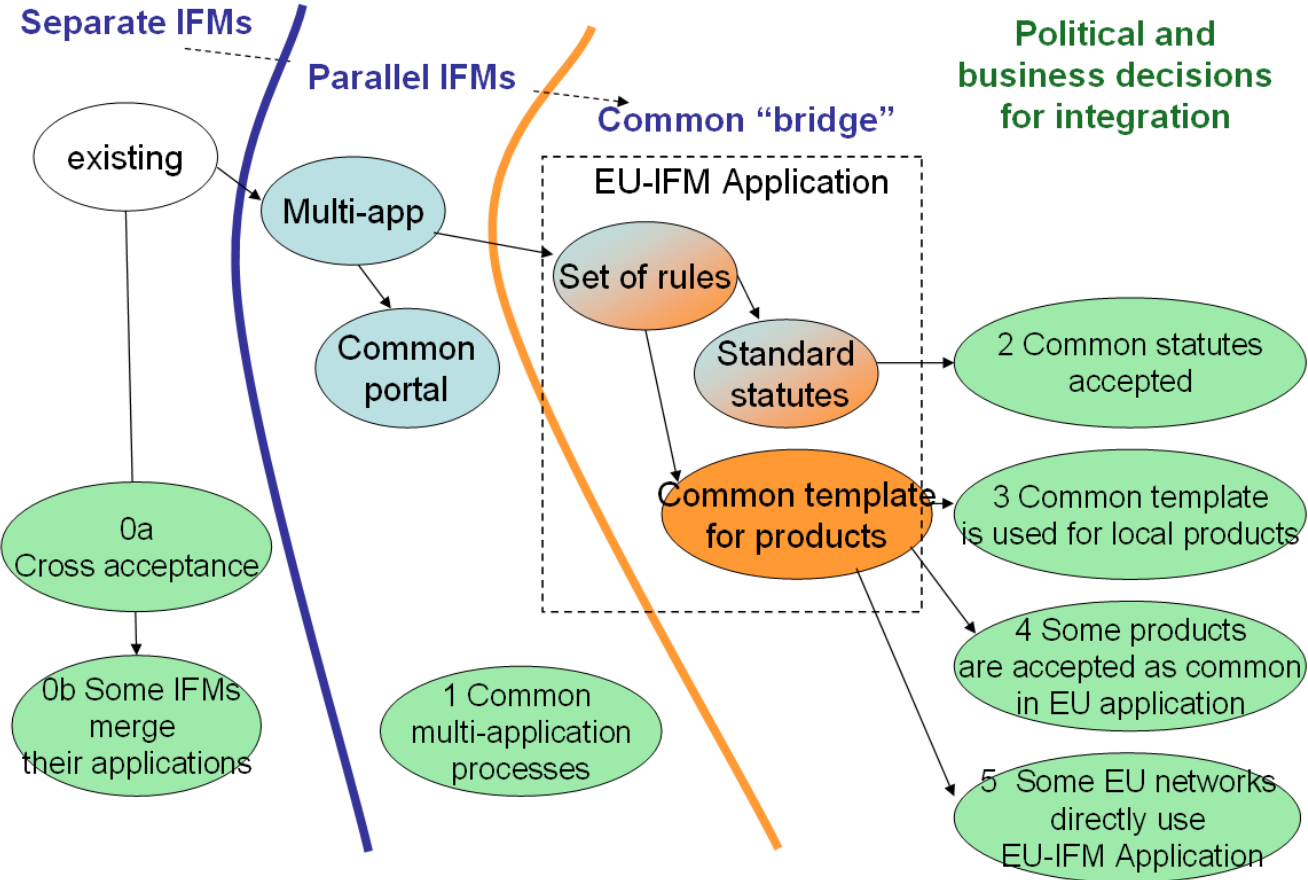
- Early Adoption to avoid wasteful expenditure
- Migration of Legacy Schemes
- Ensuring sufficient space available on media
- Convergence with Road Tolling / ERA
- Convergence with Payment developments in NFC / Mobile and EMV / SEPA
- Payment Currency and Settlement



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Steps to European Interoperability



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