

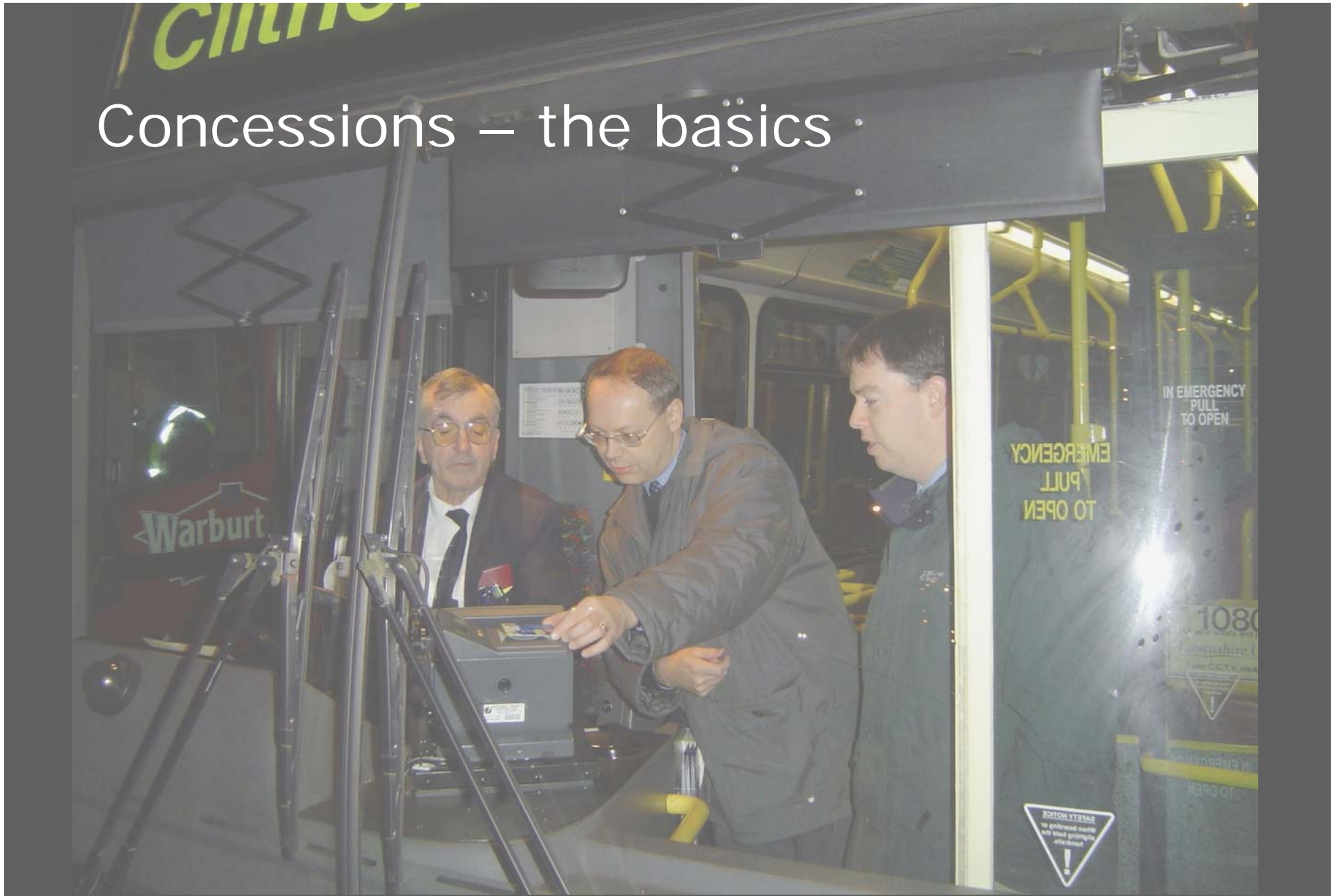
Ticketing and Technology

Concessionary Fares Conference

Jeremy Meal | 8 February 2007



Concessions – the basics



Ticketing and Technology - Topics

Concessions – what are we trying to record?

- Volume of travel
- Value of travel
- Proxy data – eg adult equivalent fare
- Aggregate and User-specific eg anonymous data

What are the technology options

- Tokens
- Surveys
- Button-presses
- Smart cards

Trying to record what? – the fundamentals

Volume of travel – headcount - aggregate or by user [personalised/anonymous]

Generation Factor

Value of travel

- The proxy fare
 - Adult fare in the faretable between actual boarding and alighting points [fare stages]
 - Average actual adult fare [for the service, depot etc] applied to the sum of boardings
- Fare diluted to allow for discounted ticketing?

Technology Options 1

Tokens

- Obsolescent technology
- Not relevant to free travel [present focus]

Surveys

- Valid methodology for large scale high volume services eg metropolitan areas
- Scope for reduction in scale with smart card volume data

Technology Options 2

Button presses

- Simple
- Not subject to an 'auditable' transaction
- Under/Over recording – could be either way

Smart Cards

- Re-introduces auditable transaction [volume]
- Additional metric around alighting point [value] due to linkability of 'adjacent trips' [data-mining]
- User-specific data, even if anonymous or linked to postcode-sector only
- Usage record can be tagged to both operator for payment and authority for billing
- Auto-class setting on ticket machine

Issues

Sample size and precision of headcount

- Tokens – what you receive is what you get [cash equivalent] – 100% but tokens are negotiable!
- Surveys – 1% surveys [+/- 2% to +/- 10% precision]
- Button-presses – 96% - 110%
- Smart Card - ~ 100%

Key Issue for Free Schemes

Best method of audit

- Costs – business case for monitoring system versus budget at stake
- Judgment – balance of deterrent or incentive over claims

Concession 'claim' criteria versus funding mechanism/allocation

- By authority where concessionaire resides
- By point of boarding
- By operator of the bus service used



Technology – example practice in free concessions schemes

Northern Ireland – DRD/Translink

The scheme

- On Buses and Trains introduced October 2001
- Smart card May 2002 (100% September 2002)
- Over 4 years reimbursement based on smart transactions

Key features

- GPS fare-stage setting
- Driver keys alighting fare stage for value of travel capture for each individual journey
- Ticket issued as 'audit'

Scotland – National Concessionary Travel

The scheme

- On Buses - introduced April 2006
- Smart card pilot rolled out November 2006
- Transition arrangements for existing methodologies of concession claim

Key features

- ITSO compliant
- Multi-application cards – 4k Mifare
- Cards coded for additional concessions
- Ticket issued as 'audit' initially

ITSO



What does ITS0 offer?

An interoperable environment – can be rolled out piece by piece

Standard templates – IPEs for the requirement [eg IPE TYP 16 ID and TYP 14 entitlement]

Non repudiation – transactions are 'sealed' and verifiable as genuine and monitored for completeness of data-batch content

Maturing experience – version 2.1.1 of the specification and a membership-support infrastructure

ITSO downsides and remedies

Still expensive – who 'values' the ITSO value-add compared with proprietary systems and who pays? [still an unresolved question!]

ITSO is a straightjacket?

- No it's not! – flexibility of decision-making for scheme design within 'templates' and certification framework
- But perversely some ITSO cost-structures are driving differing outcomes so could come back to bite on interoperability

DfT need to maintain a strong guiding brief

ITSO good practice

Plan the ITSO environment 'coding' for future situations

- Add-on local concessions – eg bus at other times, rail, LRT, ferries etc
- At the most disaggregate for 'claiming' and 'billing' eg
 - Operator ID coding [OID] or POST-Grouping
 - Local authority [eg NoWcard separately represents the 6 Cumbria and 14 Lancashire Disticts on the card]
- Plan how other products and cards for future passenger-types 'overlay' initial roll-out

Questions



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