

TUBA User Group Meeting 2007

Transport Innovation Fund (TIF) - Abhi Bhasin

Introduction- Package

- An innovative package of transport measures
- The package includes
 - **Road Pricing Schemes;**
 - **Other Demand Management Schemes; and**
 - **Complementary Schemes**
- Assessment carried out using the DfT's Transport Users Benefit Appraisal Software-TUBA (v1.7a)

Introduction- Scheme

- An Area Licence charge of £4 per day
- Charge levied for all journeys
 - **Excluding PT but including Car/LGV/HGV journeys; and**
 - **For AM Peak (07.00 – 10.00) per working day**
- The analysis considered
 - **Public transport as well as highway impacts;**
 - **Inter-peak period impacts; and**
 - **Impacts in the central growth forecast years of 2016 and 2026**
- Time savings valued according to the WebTAG unit 3.5.6
- Additional income-segmented analyses undertaken for sensitivity purposes

Economics File

- Two different models used
 - **Local Highway Model (SATURN)** for highway demand, time, distance and charge matrices; and
 - **Strategic Transport Model (EMME/2)** for the public transport demand, journey time/distance and fares matrices
- 6 Sub-modes and 7 different trip purposes modelled
 - **9 user classes modelled using highway model; and**
 - **21 user classes modelled using PT model**
- The income bands have been modelled on the basis of WebTAG 3.12.2

Scheme File- TUBA User Classes

Vehicle/ Sub-Mode	Purpose	TUBA User Class
Car	Business	1
LGV	Light Goods Vehicles	2
HGV	Heavy Good Vehicles	3
Car	Commuter with income < £17,500	4
Car	Commuter with income between £17500 and £35,000	5
Car	Commuter with income > £35,000	6
Bus	Business	7
Rail	Business	8
BRT	Business	9
Bus	Commuter with income < £17,500	10
Bus	Commuter with income between £17500 and £35,000	11
Bus	Commuter with income > £35,000	12
Rail	Commuter with income < £17,500	13
Rail	Commuter with income between £17500 and £35,000	14
Rail	Commuter with income > £35,000	15
BRT	Commuter with income < £17,500	16
BRT	Commuter with income between £17500 and £35,000	17
BRT	Commuter with income > £35,000	18
Car	Other with income < £17,500	19
Car	Other with income between £17500 and £35,000	20
Car	Other with income > £35,000	21
Bus	Other with income < £17,500	22
Bus	Other with income between £17500 and £35,000	23
Bus	Other with income > £35,000	24
Rail	Other with income < £17,500	25
Rail	Other with income between £17500 and £35,000	26
Rail	Other with income > £35,000	27
BRT	Other with income < £17,500	28
BRT	Other with income between £17500 and £35,000	29
BRT	Other with income > £35,000	30

Scheme File- Format of TUBA Runs

- The matrices input to TUBA were of two different types:
 - **Format 3 output from SATURN; and**
 - **Format 2 output from EMME/2 – but using an in-house macro**
- An expansion to the standard software – large number of matrices
- PT SKIMS:
 - **Business trips un-weighted total OD travel time;**
 - **Consumer trip weightings in line with WebTAG; and**
 - **Interchange penalty included for Consumer trips**

Scheme File- Annualisation Factor

- The SATURN highway and the EMME/2 PT model output data provided for the following hours:
 - **One peak hour (0800-0900) of the morning peak (AM) period (0700-1000); and**
 - **Average of six hours of the Inter-peak (IP) period (1000-1600)**
- A factor of 2.5 used to convert AM peak hourly benefits in line with an assumption used in the demand modelling, where a flat profile was assumed for the AM peak in 2016.
- A factor of 6 was used to convert IP peak hourly benefits

Assumptions

- Scheme Opening Year 2012, Horizon year 2071
- All costs/prices adjusted to 2002 prices
- Distance matrices not input to TUBA for passenger person types
- BRT sub-mode is included within the main mode bus
- Park & Ride trips modelled as car and bus trips
- Charges applicable to P&R trips split between bus fares and parking charges
- Road user charge is in current prices – not assumed to grow over time
- Only Cars, LGV and HGV users pay charges (vehicles only not passengers), PT users pay fares

Assumptions

- Charges generate local government revenue (except P&R charges)
- Revenue from fares received by private operators.
- Road user charges not subject to VAT – see Annex C of TIF Guidance
- Business users charges/fares multiplied by Indirect Taxation factor - users perceive charges in factor cost unit of account
- Base Costs in line with WebTAG 3.5.9
- No Grant/Subsidy
- Investment costs (purchasing buses) incurred by a private operator not included at this stage
- No optimism bias applied at this stage-IT projects 200%
- No additional Quantified Risk Assessments have been included

Headline Results and Next Steps

- Benefits of the scheme stack up “positive”
- Present value costs “positive”- costs offset revenue
- Work in Progress
 - **Firming up scheme costs; and**
 - **PM model is being built**

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