

Pricing Urban Transport

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Welcome to the first issue of the European Transport Pricing Initiative Newsletter!

Road User Charging -The Solution?

Road pricing is one of the key issues to be addressed in European transport. It could prove to be an important tool in achieving a reduction in urban road traffic and associated environmental nuisance, but there may be problems of public and political acceptance. International case studies, e.g. in Singapore and Hong Kong, have shown that acceptability is greater where the revenues are seen to be clearly fed back into developing public transport and road systems.

The European Commission is supporting a number of major research projects on transport pricing in an effort to compile a body of practical information and guidance which will assist public authorities in planning, implementing and operating successful transport pricing schemes. CUPID (see page 2) is one such project.



Europe's Sounding Board on Transport Pricing

The **European Transport Pricing Initiative (ETPI)** will act as a forum for the latest research, debating and consensus-building activities in urban transport pricing. The principal focus of ETPI is currently the eight cities involved in the four-year **PRoGR€SS** project and **CUPID**, which will support the **PRoGR€SS** cities and undertake cross-city

evaluation studies. However, other projects, such as **EUROPRICE** (www.europrice-network.org), which provides a political level platform, and other initiatives and networks are encouraged to interact with and contribute to the forum. ETPI will make use of various media, of which this biannual newsletter is just one. Position papers, an

annual conference (the first to be held in April 2001), a website (www.transport-pricing.net) and other sources of information will also be used.



Making PRoGR€SS



Eight cities across Europe - Rome, Trondheim, Edinburgh, Copenhagen, Genoa, Gothenburg and Helsinki and Bristol - will spend the next four years developing and implementing a range of road pricing concepts and technologies as part of the PRoGR€SS project. The project aims "to demonstrate and evaluate the effectiveness and acceptance of integrated urban transport pricing schemes to achieve transport goals and raise revenue".

The cities will work with key groups to develop and assess the political, economic and social framework required for implementing urban transport pricing schemes. Their approach will be firmly practical as they explore issues which have tended in the past to be neglected by researchers. These include the social acceptance of road user charging schemes, as well as their effectiveness in achieving environmental and revenue raising objectives. The project also aims to develop good practice guidelines for electronic road pricing equipment and concepts.

Further information on PRoGR€SS is available from Barbara Davies at Bristol City Council, tel: +44 (0) 117 903 6709, fax: +44 (0) 117 903 6540, email: barbara_davies@bristol-city.gov.uk

The key to success in this field is to explore public opinion and to design schemes which will serve the needs of business and residents. The public needs to see the benefits in real terms - better public transport and a cleaner, safer environment. We welcome the involvement of PRoGR€SS as it is taking very positive steps to tackle these issues.

Councillor Helen Holland, Executive Member for the Environment, Transport and Leisure at Bristol City Council (UK).

CUPID



- At the Heart of the Matter



The CUPID project consortium will provide the cities with practical advice on selecting, designing, implementing and monitoring road pricing strategies. It will also have the task of preparing an in-depth assessment of all eight schemes, including:

- user response and acceptance
- enforcement
- financial feasibility
- institutional settings
- privacy and technical aspects linked to
- infrastructure and equipment
- the wider impacts on EC policy
- social and economic effects

This will be used as the basis for a set of policy recommendations for implementing transport pricing schemes in urban areas. It will be aimed at assisting local/regional authorities in the development of such strategies as well as influencing policy development at national and EU levels.

CUPID will make a major contribution to the European/international debate on urban transport pricing policy options. It will disseminate progress updates and results from the demonstration sites, as well as the conclusions of the thematic network experts.

The CUPID project team comprises research organisations and policy advisors from the UK (TTR), Italy (ISIS), Germany (TUD), Norway (SINTEF) and Portugal (TIS.pt). Further information on CUPID is available from Jo Baker at Transport & Travel Research Ltd, tel: +44 (0) 1543 416416, fax: +44 (0) 1543 416681, email: ttr@compuserve.com

Road Pricing

- Frequently Asked Questions

There are three critical issues which cities need to address early on in the development of road pricing projects:

- a) *Where will the finances come from to cover the set-up costs?*
- b) *How do we achieve public acceptability of road pricing?*
- c) *How should we assess and evaluate the impacts of road pricing projects?*



A. Where will the finances come from to cover the set-up costs?

The costs of establishing a road user charging scheme are considerable and include the expense of infrastructure and personnel as well as lead-in costs whilst the scheme is being developed, such as public consultation, media campaigns, and legal/planning costs.

Given the sensitivity of the issue, it is advisable for the local authority to be seen to control any scheme and to closely regulate private sector input. There are a number of ways, however, in which the private sector can be encouraged to contribute to the scheme and help offset set-up costs:

Option 1: Full Public Private Partnership

The local authority and private company establish a separate, joint entity which will both

implement the road pricing scheme and develop complementary measures such as public transport schemes. However it is unlikely to be acceptable socially until the concept of road pricing is well established. A further concern is that the private sector partner, as beneficiary of the tolls collected, may promote the use of the private car in order to maximise revenues.

Option 2: Partial Public Private Partnership

This is a more acceptable approach in which the local authority administers the overall scheme and the private sector invests in selected elements and benefits from the revenues raised. For example, the road pricing scheme could be privately developed and leased to the local authority at a fixed rate. The income would cover the leasing costs and subsidies for an improved private-public transport system. The disadvantage is that

the private sector will be less likely to accept risk transfer where it has less control over the revenue stream.

Option 3: Privately financed publicly operated scheme

In this more conventional approach, the local authority develops the scheme on its own initiative and raises private finance to support identified elements of the overall scheme such as the road pricing system and the public transport scheme, which may be delivered by different contractors. Once again, care needs to be taken to make sure that private sector partners are not encouraged to promote car travel by ensuring that toll revenues go directly to the local authority.

Option 4: Public sector investment

A viable road pricing scheme will incur significant start-up costs before it becomes viable. Only

Brief answers are provided right. More detailed answers to these and other questions will be included on the project website www.transport-pricing.net.

Other questions may be answered in future newsletters; please contact the CUPID co-ordinator if there are issues you would like to see addressed.

when these costs are met will any operating surplus be released to support infrastructure investment. A publicly funded approach might be acceptable in a city like Singapore, but is less appropriate in a major European city where road pricing strategies need to be underpinned by investment in transport infrastructure. Only by introducing a low level fee to raise revenues for the development of infrastructure and increasing fees to a level capable of demand management once infrastructure is in place might this become a viable option.

B. How do we achieve public acceptability of road pricing?

The challenge for the city authority of implementing an urban pricing project, which is acceptable to the transport user, is considerable. People regard public roads as 'free' goods and any attempt to charge for this commodity needs to overcome strong emotional resistance. The 6 issues below need to be addressed if resistance is to be minimised and confidence in urban pricing as a fair and effective means of achieving positive benefits is to grow.

a) Both politicians and the public must understand the urgent need to find solutions to traffic problems in cities. Transport pricing needs to be 'sold' as an effective and appropriate solution and the messages used to promote marginal cost pricing should focus on the social and environmental benefits, e.g. improved air quality, reduction in congestion and increased safety.

b) The public needs to be aware that their travel behaviour has a key role to play in achieving the benefits listed above. The city authorities therefore need to understand the values as well as the expectations of the transport users. This is true throughout the duration of the project, but particularly early on. A crucial phase is when transport users adjust their behaviour for the first time. It must be clear to them that their attempts to support commonly shared values are having an effect.

c) Revenues must be allocated in advance to funding alternative modes of transport. The concepts of traffic restraints and road charging will be much more acceptable if combined with transport and environmental improvements. The availability of

high quality alternatives to the private motor car will help achieve lasting changes in travel behaviour.

d) The charge level and the amount to be re-invested in public transport need very careful consideration. In a cost-benefit-analysis of the scheme the individual should perceive that the financial burden imposed by the pricing initiative is at least balanced by the benefits they are gaining. In addition, individuals should feel that they are being treated equally in comparison with others. Hypothecation of the revenues should result in a guaranteed level of mobility for all. Indeed it may be biased towards some disadvantaged groups thereby supporting equity amongst the population.

e) Public acceptability comes from confidence in the effective operation of the scheme, the use of the revenues and the fairness and anonymity of the system. Right from the start, it should be clear to the public who has overall responsibility for the scheme, for its design and implementation, for charging and accounting, for revenue allocation - and for defects and deficiencies. Commitment will be reinforced

through early and credible communication, as well as positive experiences of the system in operation.

f) A communications strategy comprising a series of intelligent and focused PR activities, which gets underway at the initial stages of the project is imperative if public acceptance and adoption of the scheme are to be achieved.

C. How should we assess and evaluate the impacts of road pricing?

Road pricing for transport is expected to have a substantial impact on many aspects of the urban area. Many of these impacts are complex and interlinked. Major benefits will be anticipated by some stakeholders in terms of environmental improvements, whilst others will be concerned about the impact of pricing on economic performance.

The CUPID team is developing a generic framework for the evaluation of urban pricing schemes to be published later this year. It will be applied in the 8 PRoGR€SS cities, and will be refined during the life of PRoGR€SS, benefiting from the feedback of local experts and the experience of implementation. A final version of the framework will be re-issued towards the end of the CUPID project. Both versions will be made freely available on:

www.transport-pricing.net.

The framework will cover a comprehensive range of issues including

- acceptance
- capacity
- transport patterns
- quality of service
- resource consumption
- pollution/nuisance
- safety
- costs
- time
- regional development
- health
- employment
- legal impacts
- assessment/evaluation

The framework has been developed according to the MAESTRO GUIDELINES, which were developed with EC support, to provide a multi-sector generic set of guidelines for the assessment of transport pilot /demonstration projects. The guidelines can be downloaded from:



www.europjects.ie/maestro



One project eight cities

The eight PRoGR€SS cities are each at various stages of development, but by co-operating and using the project network to transfer information and experiences, are looking forward to making rapid progress. The stage of development of each of the cities is shown in Figure 1 below. A short description of each city follows.

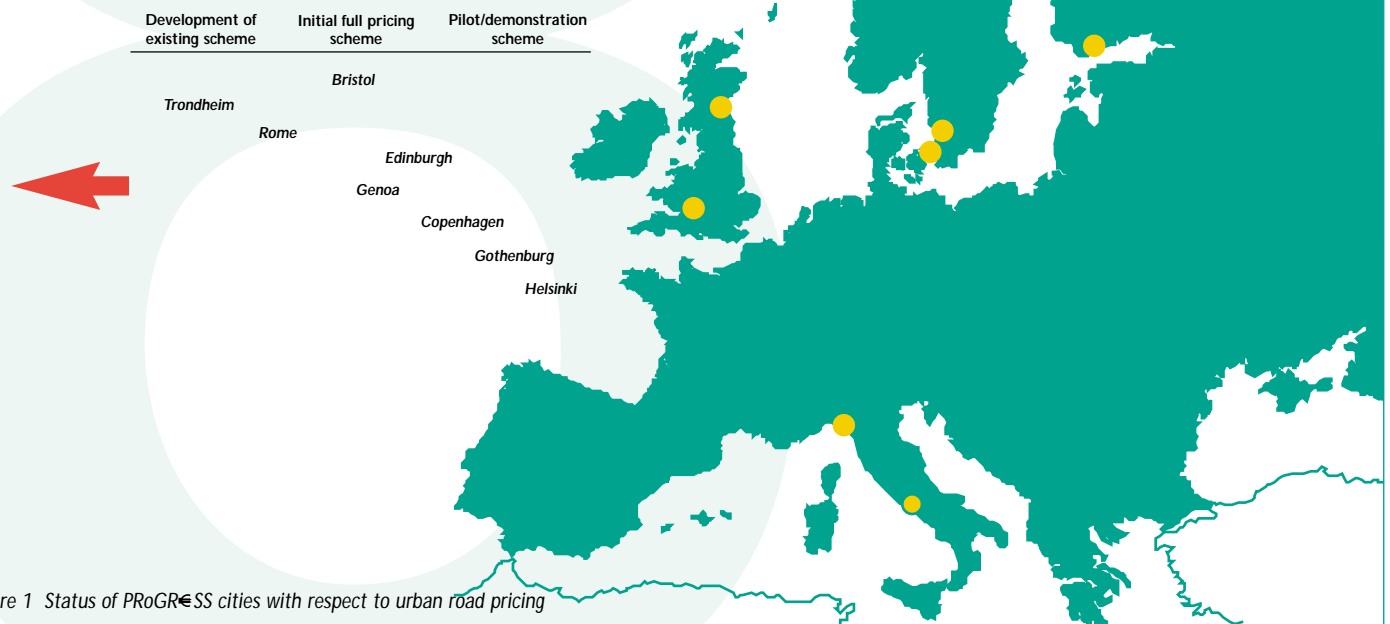


Figure 1 Status of PRoGR€SS cities with respect to urban road pricing

Bristol (UK)

Bristol is at the leading edge of assessment of road pricing and financing strategies in the UK. A number of pilot studies have already taken place, along with extensive consultation. Building on this political foundation the city will be seeking to implement a full pricing system for the centre of the city.

Copenhagen (Denmark)

Copenhagen is at the stage of initiating debate on the urban pricing concept and aims to use the demonstration in PRoGR€SS as the basis for developing this debate. The demonstration will use Global Navigation Satellite Systems (GNSS) based pricing technology to demonstrate a number of pricing strategies with 500-1000 users paying real fees.

Edinburgh (UK)

Edinburgh has been carrying out the hearts and minds exercise with regard to urban road pricing for sometime. They are now developing initial scheme ideas and assessing potential operational frameworks. During PRoGR€SS they aim to develop this issue further and build up public and political commitment to the concept leading to a trial of the initial concept.

Genoa (Italy)

Genoa, like Rome, has existing access control in its historic centre. The work carried out in a previous European funded project has provided a sound understanding of the pricing regimes that could be used to further control traffic in this historic core. PRoGR€SS will demonstrate some of these strategies and stimulate debate around a wider pricing concept for the city.

Gothenburg (Sweden) and Helsinki (Finland)

Gothenburg and Helsinki will be developing and modelling a number of pricing strategies that could be used in their cities. Gothenburg will complement this with a pricing scheme demonstration using pricing technologies based on GNSS.

Rome (Italy)

Rome has an existing access control area which requires payment for annual permits. A system of electronic enforcement is already in place. This electronic access control system provides the basis for a pricing system to be realised in the centre of the city.

Trondheim (Norway)

Trondheim has probably more practical experience of road pricing than any other city in Europe. The city's initial toll ring was established in 1991 and developed further in 1998. The initial focus was on the promotion of road pricing evaluation of an electronic ticketing system and the city is now building on its experience to use the system for demand management, integrating the tolling system with the public transport and parking payment systems.

Scrutinising the Options



Table 1 shows a matrix of the potential pricing concepts and technology combinations which are being considered in the cities.

Table 1 Pricing concepts and technologies across the PRoGR€SS sites

Scheme concept	Road pricing technology basis			
	Paper based	Electronic tag	Video	Global Navigation Satellite Systems (GNSS)
Cordon (per trip)		Bristol, Rome	Genoa	Copenhagen, Gothenburg
Zone (per trip)	Edinburgh	Trondheim		Copenhagen, Gothenburg
Time based		Rome		Copenhagen, Gothenburg
Distance based				Copenhagen, Gothenburg

The most basic concept is a pricing cordon where vehicles are charged per trip across the cordon boundary. This can be further developed into a zone system where each trip across a zone boundary is charged. These charges may vary according to times of day and different vehicles or user types. This kind of concept is being considered in Trondheim, Bristol, Edinburgh, Rome and Genoa.

An alternative is to charge vehicles in line with the time spent or distance travelled in the charging area. Again this charge can be differentiated according to the time of day or user. Rome is looking at this concept through its closed access control system and Copenhagen will also analyse this type of charging through its GNSS system.

The technologies that can be used range from paper based systems with manual enforcement through electronic based systems to GNSS systems. A system using radio-based tags with smart card payment is considered the current state of art however GNSS systems may provide a more flexible solution in the near future. All these systems are being trialled.

By working through a range of cities at different stages of development, PRoGR€SS will provide a strong basis for demonstrating and evaluating a range of innovative pricing concepts and technologies.



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Further information on PRoGR€SS is available from Barbara Davies at Bristol City Council, tel: +44 (0) 117 903 6709, fax: +44 (0) 117 903 6540, email: barbara_davies@bristol-city.gov.uk



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If you are interested in receiving this newsletter via e-mail in future, please contact Manolo de la Fuente at TIS.pt, tel: +351 (21) 842 1410, fax: +351 (21) 842 1411, e-mail: global@tis.pt