


# CfIT World Review of Road Pricing

## Phase 2

### Case Studies

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## 1. London (England)

<p>Current Status of Proposals</p>	<p>The current Central London Congestion Charge run by Transport for London (TfL) has been operational since February 2003. In this time it has undergone several variations altering arrangements for payments and arrangements for operations such as fleet schemes. Perhaps most significantly the charge was increased from £5 to £8 in July 2005.</p> <p>There are variations planned for the scheme for February 2007 when it will be extended westwards and the hours of operation altered to finish earlier.</p> <p>In the longer term, in around 2010, the current contract with Capita who operate the scheme will need to be re-tendered. This will provide an opportunity for TfL to significantly change the scheme. Options for this are currently being studied and could mean the area and type of charge could be altered along with the technology and payment structure.</p> <p>TfL are also introducing a Low Emission Zone (LEZ) in London whereby all Lorries will have to conform to EU emission standards or be liable to a substantial charge.</p>
<p>Aims of Proposals</p>	<p>The original scheme was implemented with the aim to:</p> <ul style="list-style-type: none"> <li>⇒ reduce congestion;</li> <li>⇒ make radical improvements to bus services;</li> <li>⇒ improve journey time reliability for car users; and</li> <li>⇒ make the distribution of goods and services more efficient.</li> </ul> <p>The scheme has also been proven to improve air quality and reduce levels of harmful emissions and particulates contributing to poor health and climate change.</p> <p>The western extension was confirmed by the Mayor in September 2005 as being the latest stage in his endeavours to reduce congestion in Central London.</p> <p>The LEZ objectives are to move London closer to achieving national and EU air quality objectives for 2010, and to improve the health and quality of life of people who live and work in London, through improving air quality.</p>

<p>Policy/ Legislative background</p>	<p>In order to implement the London scheme the government invested powers in Local Authorities, including TfL, to introduce charging schemes.</p> <p>The Mayor of London, Ken Livingston, was elected to power with a commitment to Road Pricing (RP) in his manifesto. Similarly he was elected to second term with a commitment to extend the current scheme. The Mayor is generally seen to be pivotal in achieving implementation of the scheme.</p> <p>The Transport Innovation Fund (TIF) programme has been a key driver for TfL in developing future plans for RP in London. The range of options and technology trials is seen to be key in leading the way for other local schemes and achieving acceptability and interoperability. TIF also provides the opportunity for TfL to develop RP in other areas of London in association with Local Authorities either as part of TIF or indeed where bids for funding have been unsuccessful but there is still a willingness to develop proposals.</p> <p>London is in an advantageous position in developing RP schemes compared to other Local Authorities as it also operates the public transport network.</p> <p>Although it is not a requirement under the Transport Act 2000 the Mayor has strongly hypothecated all net revenues from the scheme to go into transport improvements in London. The allocation of these net revenues is reported in TfL's annual monitoring reports. However, how this sits within wider budget allocations is unclear and has been an item of contention.</p> <p>The Mayor laid out his transport strategy in The Mayors Transport Strategy, published July 2001, reflecting recommendations in the governments 1998 Transport White Paper. Mayors Strategy. This broadly covered the period 2001 – 2011 and proposes a Central London Congestion Charge. Variations to the strategy have been published to allow subsequent alterations.</p> <p>There is no current commitment to alter the scheme substantially beyond the western extension although variations and scheme orders need to be signed by the Mayor it is not expected that any additional legislation would be required to alter the scheme significantly.</p>
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<p>Options under consideration (types of charging)</p>	<p>There is currently no definite proposal for altering the current structure of the Charging Scheme when the scheme is re-tendered in around 2010.</p> <p>Options under consideration include:</p> <ul style="list-style-type: none"> <li>⇒ extending the scheme to other local centres in London;</li> <li>⇒ extending the current cordon to cover a larger area of London; and</li> <li>⇒ charging on strategic routes.</li> </ul> <p>The scheme currently expects the user to pay the charge within a certain time period, a system of ANPR cameras is used to check whether licences have been purchased and if not a user is sent a penalty charge notice (PCN). The system of ANPR cameras installed for the original scheme will require upgrading and replacing. The re-tendering of the scheme provides an opportunity to review what technology could be used that would support the London scheme and also advance interoperability with TIF and national schemes. To support this TfL is undertaking a substantial programme of technology trials. To date this has largely ruled out the use of GPS based technology within the timescale although Tag and Beacon is undergoing continued investigation.</p> <p>The way vehicles are charged has been a key area of focus. Options for consideration include a cordon rather than an area charge (as used in existing scheme), the level of charge could vary by time of day, direction of travel and selected roads. The charge could be focussed on different vehicles in terms of vehicle type, fuel type or emissions category.</p>
<p>General Level of Awareness</p>	<p>Awareness of the London scheme is very high in the city although surveys have illustrated that Londoners knowledge of the scheme is variable. There is a focussed marketing and media campaign regarding the scheme that aims to improve understanding and awareness of the scheme's operation and impacts. However, awareness of potential long term variations to the scheme is low.</p> <p>Public support has been tracked since before the implementation of the scheme. This has demonstrated how support improves with awareness of the scheme and when the positive impacts of the scheme are visible and reported. Surveys reported support to be around 40% in the run up to the scheme and between 50% and 60% in the year after. The western extension received greater support than in the run up to the Central Scheme although it is widely accepted that this support will vary significantly depending on who you ask. Residents in and around the extension area are generally more opposed to the scheme than those further away.</p>

	<p>As well as understanding public opinion, consultation is mandatory for variations to the scheme order. TfL undertake a range of consultation targeting the public and stakeholders such as interest groups or business sectors. The biggest public consultation in the UK was undertaken as part of the western extension with over 100,000 replies. Opinions of businesses towards RP is generally mixed although in the case of the Central London Scheme is overall considered to be more positive than negative, although there has been some decrease in support since the charge increase to £8. It is reported that businesses are generally supportive in regards to any extension of RP across the rest of London.</p> <p>One factor that is accepted to affect the support of the public for RP is the hypothecation of revenues from a scheme. In the case of London revenues must be used to improve transport in London. When opinion is canvassed over RP support levels are greater when asked about a scheme that will also invests in transport than when asked about RP generally. For example after the Central London Scheme began between 50% and 60% supported charging whereas over 80% of respondents said they would accept charging if public transport improved.</p>
Sources	<p>TfL 2<sup>nd</sup> Annual Monitoring Report  <a href="http://www.tfl.gov.uk/tfl/cclondon/cc_monitoring-2nd-report.shtml">http://www.tfl.gov.uk/tfl/cclondon/cc_monitoring-2nd-report.shtml</a></p> <p>TfL 4<sup>th</sup> Annual Monitoring Report  <a href="http://www.tfl.gov.uk/tfl/cclondon/pdfs/FourthAnnualReportFinal.pdf">http://www.tfl.gov.uk/tfl/cclondon/pdfs/FourthAnnualReportFinal.pdf</a></p> <p>Mayors Transport Strategy  <a href="http://www.london.gov.uk/mayor/strategies/transport/index.jsp">http://www.london.gov.uk/mayor/strategies/transport/index.jsp</a></p> <p>Transport Act 2000  <a href="http://www.opsi.gov.uk/ACTS/acts2000/20000038.htm">http://www.opsi.gov.uk/ACTS/acts2000/20000038.htm</a></p>



## 2. Cardiff (UK)

<p>Current Status of Proposals</p>	<p>At present there is no firm proposal to introduce Road Pricing (RP) in the city. However, Cardiff is committed to developing a travel demand management scheme and has completed a feasibility study with its private sector partner, a consortium of Capita and Mowlem. Decisions on future priorities are expected to be made by the Council's Executive this autumn.</p>
<p>Aims of Proposals</p>	<p>Cardiff is developing a scheme to manage congestion and carbon dioxide emissions within the city in order to sustain economic growth, regeneration and to promote sustainability.</p>
<p>Policy/Legislative background</p>	<p>It is considered that the general impetus for RP in Cardiff has largely been driven from a local perspective, although the policy is being reinforced by Regional and National policy.</p> <p>The need for some travel demand management has increasingly been considered over the last 15-20 years as strong economic growth has been achieved with the successful regeneration of the city. However, the City is increasingly suffering from deteriorating transportation and connectivity which could lead to growth becoming unsustainable.</p> <p>These findings were reinforced by a Cardiff Council commissioned report from Professor Michael Parkinson on the competitiveness of the City.</p> <p>The feasibility study completed under a local consortium with Capita Mowlem was presented to the Council's Scrutiny Committee in September. Later this autumn, priorities for short to medium term proposals are expected to be produced. However, the Liberal Democrat-ruled authority has already said it will not commit to a RP scheme during the current administration, which runs until May 2008.</p> <p>Additional legislation would be required if RP were to be implemented. Currently the feasibility stage has been introduced to Cardiff Council and the Welsh Assembly Government. However, the Welsh Assembly would have to pass specific legislation to allow area wide charging.</p> <p>The decriminalisation of parking enforcement and, prior to that, the introduction of Controlled Parking Zones are both planned in Cardiff. This could make traffic management around any RP scheme more effective. This will allow the Council, rather than the Police to enforce offences.</p> <p>One element that will be part of any proposed scheme is that there would have to be considerable investment on local infrastructure prior to implementation.</p>

<p>Options under consideration (types of charging)</p>	<p>Cardiff is keen to stress that any considerations at present are only at feasibility stage and are not formal or final proposals.</p> <p>The RP scheme itself is envisaged to be operational during the AM Peak period only. It would be either an area or cordon based charge although with 2 distinct cordons, one inside the other. Potentially the central cordon would have a higher charge than the outer cordon.</p> <p>Previously the level of the charge had been reported to be 'around £2'. The feasibility study reports a scenario where a scheme would operate between 7am and 10am Monday to Friday with possible charges of £4 for car drivers crossing outer corridor and £4 for inner zone which is likely to include the city centre and Cardiff Bay. Light good vehicles could pay a total of £10 and heavy goods drivers £12 for two corridors (based on 2006 prices). Such a scenario is forecast to reduce the number of cars coming into Cardiff from 63,490 by 50 per cent in first year.</p> <p>It is envisaged that Cardiff could be used as a National 'Pilot' for implementing RP elsewhere in the UK.</p> <p>Any delay is not wholly problematic as technology is at the core of developing a scheme for Cardiff and any proposal is likely to be influenced by the results of technology trials undertaken as part of the DfT's Transport Innovation Funding.</p> <p>Some advancement on the operation of a potential scheme has been made through discussions with the DVLA in terms of what enforcement options would be feasible. Exemptions and discounts for the scheme would be incorporated although have not yet been defined. The feasibility study reports that discounts are likely to be made available to city residents and groups such as disabled persons.</p> <p>Public Transport improvements and initiatives are expected to be at the heart of any proposal. There are already initiatives in and around the city centre being implemented for bus priority and Park and Ride. The impact of these will be monitored to establish what further plans should be proposed. It is expected that revenues from any scheme would be directed into local transport improvements, as is the case currently in London, for example building of Eastern Bay Link Road could be as much as £426m, funded by RP.</p> <p>Overall it is estimated that to implement a scheme with sufficient investment in alternatives would require a budget of £300million - £500million. This compares with the 2006 annual budget for transport in Cardiff of £3.5million and in all of Wales of £100million. Therefore funding considerations are key to the future development of a scheme.</p>
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<p>General Level of Awareness</p>	<p>The possibility of introducing a RP scheme in Cardiff is not considered to be 'New News'. There has been a fair amount of press coverage locally, and in the transport press. Cardiff Council has been trying to stimulate public debate on the issue.</p> <p>As part of developing proposals there was a public debate held in late September 2006, and a conference relating to RP was held in Cardiff in October 2006. The scheme is not openly supported in some quarters - Conservative councillor Dianne Rees reports at the environmental scrutiny committee: 'I am concerned with the affordability - whether the prices are Cardiff and South Wales prices - and I'm also concerned about the impact on industry.'</p> <p>A local news website recently published a comprehensive and balanced report on the result of the feasibility study.</p> <p>Another local newspaper recently completed a poll of its readers about whether they would be willing to pay to drive into Cardiff to shop. A significant 94% voted against this, which shows the strength of feeling, although this does not reflect potential opinions of any proposal (e.g., if it were to operate during AM peak only it would be unlikely to affect the majority of shoppers).</p> <p>Generally it is considered that opinion on the need for RP in the city centre is improving with increased awareness of environmental issues, particularly amongst the young.</p> <p>As yet the Council have not undertaken any formal consultation with local stakeholders. They have held dialogue with the Chamber of Commerce and some individual businesses. Responses to the developments tend to vary. For example whereas environmental groups tend to be the generally positive the Federation of Small Businesses are more negative.</p> <p>One of the next stages in developing the scheme is to understand the economic impacts on areas such as commercial yield, property prices and the impact on the Port of Cardiff.</p>
<p>Sources</p>	<p>Key Contact: Steven Phillips – Cardiff City Council</p> <p>Further Information: icWales news website; <a href="http://icwales.icnetwork.co.uk/southwalesecho/news/tm_object_id=17828475%26method=full%26siteid=50082%26headline=ancy%2ddriving%2dinto%2dcardiff%2d%2dbeware-name_page.html">http://icwales.icnetwork.co.uk/southwalesecho/news/tm_object_id=17828475%26method=full%26siteid=50082%26headline=ancy%2ddriving%2dinto%2dcardiff%2d%2dbeware-name_page.html</a> Keep Cardiff Moving <a href="http://www.keepingcardiffmoving.co.uk/content/public/content/default.asp?ID=6">http://www.keepingcardiffmoving.co.uk/content/public/content/default.asp?ID=6</a></p>

	Transport Times, 8 September 2006 <a href="http://www.transporttimes.co.uk/files/tt25_08sep06.pdf">http://www.transporttimes.co.uk/files/tt25_08sep06.pdf</a>
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### 3. Rome (Italy)

<p>Current Status of Proposals</p>	<p>Plans for expanding the current restricted zone in the centre of Rome have been approved by the Municipality for two additional areas. Similar restrictions that currently apply in the city centre Limited Access Zone (LTZ) are being extended to the S. Lorenzo and Trastevere districts both of which are expected to be fully operational before the end of 2006.</p> <p>There are proposals for other schemes incorporating travel demand management (TDM) measures, such as parking controls. These are currently being studied or are in the process of implementation, although none are directly considered to be Road Pricing (RP).</p> <p>Since October 2001 Rome has operated an LTZ which covers 4.8 square kilometres in the core of the city centre controlled by an Automated Access Control System (ACS) enforcing a flat rate Road Price restricting access to authorised vehicles only with an annual permit.</p> <p>Restrictions applied originally during 06.30 – 18.00 Mon - Sat. A series of studies and trials have been undertaken relating to extending the restrictions through the evening or overnight. Subsequently as of October 2006 restrictions in a slightly smaller area will be applied in the central zone on Fridays and Saturdays between 23.00 and 03.00 and in the two new areas there will also be extended periods of restriction.</p> <p>Travel demand management measures (TDM) are implemented in concentric circles emanating from the historic city core where the LTZ operates. At the next cordon non-catalysed cars are prohibited and parking pricing is utilised. At the outer cordon an extensive system of park-and-ride lots and public transport improvements have been implemented to increase public transport mode share.</p> <p>The LTZ has been seen as a success, decreasing traffic by 20% during the charging period. To further Rome's policy on sustainable transport a number of other studies are being undertaken in order to expand the current system. These are described below.</p>
<p>Aims of Proposals</p>	<p>The LTZ and associated Road Pricing strategies are intended to meet a number of objectives: to improve mobility; increase modal share to public transport; protect health; and preserve Rome's historical and architectural heritage. Reducing congestion is not described as a key aim, but is almost a by-product.</p>

<p>Policy/Legislative background</p>	<p>Rome is a partner in the CURACAO project (Co-ordination of Urban Road-User Charging Organisational Issues project) which is an EC funded project to promote RP as a travel demand management tool. This project commenced in May 2006. The project builds on previous EC funded projects such as the Progress project (2000-2004) which aimed to demonstrate and evaluate the effectiveness and acceptance of pricing schemes.</p> <p>ATAC is the leading partner for Rome in CURACAO. ATAC is a public body under the control of the Mobility Department of the Rome Municipality and is effectively owned by Rome City Council. It owns all the public transport services in Rome and is responsible for the co-ordination of all private and public mobility in the City.</p> <p>Rome has developed a General Traffic Master Plan which includes strategies to increase the mode share of public transport, improve the environment and protect historic heritage through prohibiting private car use in the core of the city. The Plan is a local strategy but does reflect EC policy on sustainable transport. It also receives national support as all projects are to be co-funded by Rome City Council and the Italian Environment Ministry.</p> <p>Extending the scheme into the evening period was considered in order to reduce high traffic levels after the end of the restricted period. This was not to be taken forward within the central LTZ as traffic levels have been seen to be generally decreasing in this period since 2001 and gaining acceptability for any extension of hours was considered to be difficult. However, implementation is considered to be more easier as part of any new scheme.</p> <p>Nationally there are distance-based tolls on Motorways using a Tag and Beacon system, 'Telepass'. There has been discussion about extending this to key major routes in addition to Motorways but this has not been decided. This type of expansion is problematic as currently this is only legislated for where there are health concerns through poor air quality.</p> <p>Similarly the use of alternative technology to support a GPS based scheme would require additional legislation as currently this is not compatible with Italian law.</p>
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<p>Options under consideration (types of charging)</p>	<p>A number of options are to be considered for implementation in addition to the existing LTZs.</p> <ul style="list-style-type: none"> <li>⇒ Charging coaches relative to use. There are currently issues relating to charging coaches for their actual use of the LTZs. This is mostly linked to technology and the partial service of GPS systems and associated compliance issues with Italian law. Further development of these plans is linked to upgradeable technology that will continue to be tested.</li> <li>⇒ Implement policies for powered 2-wheelers currently not subject to restrictions. There is an approved proposal to implement trials of new technology at the gateway to the central LTZ that will detect powered 2-wheelers. Consideration of a wider implementation and restrictions will take place after that.</li> <li>⇒ Reviewing parking pricing policies for flexible fares and innovative payment systems. A feasibility study has been undertaken to see how parking structures can affect traffic conditions. One proposal from this study has been implemented where parking charges in certain zones have been reduced to encourage parking there rather than in the city centre, with the aim of consequently reducing traffic levels.</li> </ul> <p>The availability of public transport as an alternative means of travel has a high importance, although there are no definite plans for significant expansion. Other complementary measures are being utilised such as Park and Ride and flexible parking prices.</p>
<p>General Level of Awareness</p>	<p>There is not a significant amount of media coverage. Most articles are in relation to the previous EC Progress project or are studies by academic and interest groups.</p> <p>Subsequently public awareness is not considered to be very high. The LTZs have a relatively small coverage area and as such are mainly used by residents and businesses, and the restrictions do not affect the majority of drivers' journeys and therefore limits awareness and opposition.</p> <p>Limited consultation was undertaken in relation to the extended LTZs with the local authority and pressure groups being the main stakeholders. Approval of the Municipal Police was the only other requirement. However, ATAC are separately responsible for completing employer travel plans for all work sites with more than 300 employees and will therefore come into contact with this sector.</p>

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Sources	Key Contact: Fabio Nussio – ATAC, Rome  Other information; CURACAO report
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## 4. Genoa (Italy)

<p>Current Status of Proposals</p>	<p>A Road Pricing (RP) scheme is being developed as a part of the CIVITAS project called CARAVEL but, at this moment, no formal decision has been taken for its implementation.</p> <p>Preliminary design for a RP scheme has been developed and is due to be considered by the City Council as one of a number of options in January 2007. Any further development will depend on the outcome of that assessment.</p>
<p>Aims of Proposals</p>	<p>The primary objective of a RP scheme would be to reduce congestion in the city centre.</p> <p>Revenues from a scheme are expected to be reinvested in public transport, although there has been no formal commitment to date.</p>
<p>Policy/Legislative background</p>	<p>Genoa has been involved in developing RP policy for some time. A trial has been completed as part of the European Commission (EC) supported Progress Project which involved partners across Europe researching different aspects of transport pricing schemes. The trial charged volunteers for access to a small zone in the city centre using Automatic Number Plate Recognition (ANPR) cameras.</p> <p>Proposals for a RP scheme in Genoa have been developed through local strategy rather than national. The RP scheme will be introduced in the Genoa Urban Mobility Plan (UMP) report, which will define the overall strategy in mobility and transports for the next 10 years. The adoption of the UMP by the City Council is expected by March 2007.</p> <p>The development of RP schemes has been driven in addition by partnership to the CARAVEL project where Genoa is one of four cities who have committed to developing a sustainable transport network. This is part of the wider CIVITAS Initiative which is partly funded by the EC to improve transportation systems across Europe.</p> <p>The need for additional legislation in order to implement RP is not clear. Although it is considered that the existing legislation allows many aspects of a possible scheme including restricting access to zones and use of technologies, specifically;</p> <ul style="list-style-type: none"> <li>• Law 193/99 delegating the Government to discipline distance traffic control systems.</li> <li>• Presidential Decree 250/99 approving the regulation allowing municipalities to ask authorisation from the Ministry of Public Works concerning the installation and operation of distance traffic control systems in historical centres and areas restricted to traffic.</li> </ul>

	<ul style="list-style-type: none"> <li>• Authorisation issued by the Ministry of Public Works to proceed against violations of traffic rules via means of automated control systems sending information to an operational centre managed by the urban police.</li> </ul>
<p>Options under consideration (types of charging)</p>	<p>A formal proposal for a RP scheme will be part of the UMP put forward for approval.</p> <p>The scenario of RP being proposed to the City Council is not to a detailed level. On approval of the UMP, the plans will be developed in more detail.</p> <p>It is expected that the scheme will comprise a cordon charge around the city centre. Charges may vary by time and vehicle, ranging between 1 and 5 euros for vehicles entering the zone. Hours of operation would cover the whole day, between 7AM and 8PM. Technology used is considered to be either ANPR or Tag and Beacon dependant on costs.</p> <p>The current proposals differ slightly from the trial which used only ANPR technology. The area charged in the trail was only 2.5 square kilometres. This will be expanded considerably largely to maximise benefits and to address some issues that arose around social and economic equity.</p> <p>It is expected that other measures (such as public transport improvements and arrangements for freight distribution) will be proposed as part of a wider package presented within the Urban Mobility Plan.</p>
<p>General Level of Awareness</p>	<p>There is little media coverage at present although there was some concerning the trial and involvement with the Progress Project. During that period surveys of public opinion were undertaken. It is felt that over time public opinion has become more positive. Two years ago around a third did not support charging, around a third did and a third did not know. It is now considered that support would be around 50%.</p> <p>There has been no formal stakeholder engagement, although this is planned to take place after the plan has been approved. During that period the economic community is expected to be the main focus of engagement and their support will most likely depend on the structure of the scheme.</p> <p>There are generally considered to be 3 stages to developing RP. The first is underway where the plan is being developed and proposed. The second stage involves political debate, which will commence after the plan has been approved. The final stage will involve considerable debate with stakeholders including the public.</p>

Sources	<p>Key Contacts; Antonio Rossa – Comune di Genova (City Council)</p> <p>Other information; Progress Website; <a href="http://www.progress-project.org/">http://www.progress-project.org/</a> Civitas – Caravel website <a href="http://www.civitas-initiative.org/project_sheet?lan=en&amp;id=3">http://www.civitas-initiative.org/project_sheet?lan=en&amp;id=3</a></p>
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## 5. Barcelona (Spain)

<p>Current Status of Proposals</p>	<p>There are no current plans to develop a Road Pricing (RP) scheme in Barcelona.</p> <p>However, there is a central area parking regulation called the 'Green Area ' which was implemented in 2005 as a travel demand management (TDM) measure. There results are currently being analysed.</p> <p>There are also some motorway tolls when accessing the city, but they are outside of the city's administration.</p>
<p>Aims of Proposals</p>	<p>The aims of the Green Area are to reduce traffic congestion, improve citizens' quality of life and promote a more sustainable mobility framework.</p> <p>According to the Urban Mobility Masterplan currently under development a main goal is to reduce the level of congestion by encouraging modal split towards more sustainable means of transport (public transport, cycling, walking, etc).</p>
<p>Policy/Legislative background</p>	<p>There is no local policy on RP schemes and there is no commitment expected in the near future. As a result there is no legislation in place to allow for RP.</p> <p>There is not considered to be any political support for RP schemes.</p> <p>Barcelona has been involved in the EC funded Prima (Pricing Measures Acceptance) Research Project, 1999-2000, whose aim was to produce policy and guidance for road pricing. Conclusions from this project were:</p> <ul style="list-style-type: none"> <li>- That there was originally a strong justification for financing road infrastructure by means of tolls;</li> <li>- That there was growing political uneasiness with regard to tolls in terms of transfer to other 'non-tolled' urban regions and the share of suburban inhabitants that had to pay;</li> <li>- That there were problems with the principle of providing alternatives to tolls as 'non-tolled' sections rather than a quality alternative in the form of public transport; and</li> <li>- That the attribution of concessions was a key political issue.</li> </ul> <p>All these reasons have contributed to the lack of progress with RP in Barcelona.</p>

<p>Options under consideration (types of charging)</p>	<p>The Green Area is a parking scheme where parking in the city centre is limited to residents only (or company-owned vehicles for companies within the area) between 8:00 to 20:00 hrs. This is intended to dissuade others from entering the zone by car.</p> <p>It is reported that 6,000,000 daily trips in the city, of which around 1,150,000 travel through the city centre. Of these 93% would wish to find a parking space.</p> <p>This policy relies on an effective enforcement of the parking restrictions, largely by removing illegally parked vehicles. This can result in additional revenue for the City.</p> <p>In parallel with the Green Area there have been other TDM measures implemented in the City including:</p> <ul style="list-style-type: none"> <li>- measures to improve and promote transfers to more sustainable modes such as increasing the number of cycle routes and bus lanes, increasing the number of on-street motorcycle parking spaces to reclaim and safeguard pavements for pedestrians, and increasing the number of un/loading spaces, etc.</li> <li>- measures to promote transfer to other modes and reduce cars parking on public roads, by introducing Park and Ride and improving the network of off-street car parks.</li> </ul> <p>If a RP scheme were to be implemented it would be expected that revenues would be reinvested into promoting alternative modes of transport (walking, cycling) and public transport.</p> <p>The Green Area covers the City centre area. It would be expected that any RP scheme would cover a similar area.</p>
<p>General Level of Awareness</p>	<p>It is considered that RP in the City has not received any media coverage. Also no public surveys on the subject since Prima interviewed 500 residents of city, key public figures and some media analysis was conducted which indicated that there was more support for charging as a congestion relief and environmental oriented scheme rather than a financial scheme.</p> <p>It is considered that there would be some resistance to the implementation of a RP scheme from some areas. Although no stakeholder engagement or consultation has been undertaken.</p>

Sources	<p>Key Contact: Cristina Pou, City of Barcelona. Tel: 93 402 34 07</p> <p>Other Information:</p> <p>Report on Green Area (only Spanish or Catalan); <a href="http://www.bcn.es/areaverda/castella/welcome.htm">http://www.bcn.es/areaverda/castella/welcome.htm</a></p> <p>Report on Prima research; <a href="http://vplno1.vkw.tu-dresden.de/psycho/download/mcicam_conference/peter_gueller.pdf">http://vplno1.vkw.tu-dresden.de/psycho/download/mcicam_conference/peter_gueller.pdf</a></p>
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## 6. Madrid (Spain)

<p>Current Status of Proposals</p>	<p>Currently, Madrid’s City Council is not currently considering the implementation of Road Pricing (RP). Any such commitment would normally form part of their mobility management strategy. Similarly, there is no commitment to investigating the introduction of RP.</p> <p>It is expected, however, that a number of strategies will be developed addressing mobility management as a whole to deliver an integral approach that encourages the use of public transport, bicycles, motorbikes, walking and private car sharing.</p>
<p>Aims of Proposals</p>	<p>The objective behind the implementation of the new mobility management policies is to achieve an integrated approach to transport, environmental and spatial planning. The impact on the environment is particularly important.</p> <p>There is recognition that because of the increase in travel and mobility there is a need to:</p> <ul style="list-style-type: none"> <li>⇒ promote the use of public transport;</li> <li>⇒ take actions that improve traffic flow in the city;</li> <li>⇒ promote alternative means of transport; and</li> <li>⇒ achieve an efficient distribution and delivery of goods and their effective loading and unloading.</li> </ul>
<p>Policy/Legislative background</p>	<p>Travel Demand Management (TDM) measures involving encouraging the use of public transport, bicycles, motorbikes, walking and private car sharing are being employed rather than RP. Other policies have focused on the use of the public space and parking controls.</p> <p>Over the period 2003 to 2007 efforts have been focused on promoting public transport, partly by measures that provide priority over private vehicles, including surveillance of bus lanes, new transport interchanges. Furthermore, a big investment is being made in extending the existing Metro lines to recently developed urban centres and the outer suburbs of Madrid.</p> <p>In recent years, surveillance of traffic in the City has been increased to enhance flows and enforcement. An 800 person-strong force of ‘Mobility Agents’ has been created and deployed in strategic areas of the city – a first in Spain.</p> <p>There is no existing legislation allowing RP. The current Mobility Regulations, which regulates vehicle and pedestrian traffic so they are compatible within the City’s streets, would have to be modified. This legislation also regulates other uses and activities to preserve and promote road safety and accident prevention on roads that are the responsibility of the City.</p>

	<p>There is currently no political support for RP to be implemented and for the foreseeable future other TDM measures will be the focus of the transport strategy.</p>
<p>Options under consideration (types of charging)</p>	<p>There are currently no forms of RP under consideration. Consequently there are also no studies on the impact of charging zones, cordons or charges per kilometre.</p> <p>There has also been no consideration of technology, although there are many systems in place for automated traffic control, including CCTV, which could be used in the implementation of an RP scheme or TDM measures.</p> <p>TDM measures are being employed across the City separately to any RP scheme.</p> <p>Revenues from any transport charges or RP scheme would be considered as part of the city's budget.</p>
<p>General Level of Awareness</p>	<p>It is considered that the media are usually interested in matters that affect mobility and safety of the citizens, and at the moment media coverage is not considered to be in favour of RP.</p> <p>Due to the lack of development of RP there is considered to be very little public awareness or RP, and that generally the public would be opposed to any such scheme.</p> <p>Again, due to the lack of development there has been no engagement or consultation with stakeholders or the business community.</p> <p>The City considers that it is very important to involve the public and different groups and sectors affected by mobility management policies as acceptance is important. It is believed that everybody has to realise that efficient energy consumption in urban transport has a positive impact on the environment and contributes to the improvement of the quality of life in the city.</p>
<p>Sources</p>	<p>Key Contact: Leonor Berriochoa Alberola – Madrid Department of Transport</p> <p>Other Information: Spanish Transport Plan: <a href="http://www.fomento.es/MFOM/LANG_EN/DIRECCIONES_GENERALES/CARRETERAS/PEIT/">http://www.fomento.es/MFOM/LANG_EN/DIRECCIONES_GENERALES/CARRETERAS/PEIT/</a></p>



## 7. Copenhagen (Denmark)

Current Status of Proposals	There is no firm proposal for introducing Road Pricing (RP) in Copenhagen. A study has been completed of 3 possible scenarios for RP. The results of this are being debated within the City Council and a decision will be taken on how to progress, secure legislation and what level of funding to commit.
Aims of Proposals	<p>Originally reducing congestion and improving the environment were key objectives of the scheme. Since the study has been completed it is felt that the traffic impacts would not be significant enough to warrant those objectives.</p> <p>As a result reducing congestion is considered to be the primary aim, although there would be a secondary benefit of improving the urban environment.</p> <p>Revenue is not a key concern for this scheme, although it is recognised that the use of revenues is key to gaining acceptability. Hence net revenues would be reinvested in local transport improvements.</p>
Policy/ Legislative background	<p>There is no formal commitment to introduce RP, although in the Traffic and Environment Plan 2004, there is support for reducing congestion and improving sustainable transport; mainly through improvements for cyclists and commitments to introducing Travel Demand Management (TDM) measures and improving public transport. The Plan does recognise that this alone is not enough to stop car traffic growth.</p> <p>There are a number of potential clashes considered in gaining support from national government:</p> <ul style="list-style-type: none"> <li>⇒ The City Council is largely supportive of RP (around 2/3 support) and would wish to implement a scheme as soon as possible, whilst the national Government is generally opposed to such measures (around 2/3 oppose);</li> <li>⇒ Some national politicians have been considering a national scheme to replace current tax systems, although they would not expect this to be in place for at least 10 years. There is concern this objective would restrict progress in Copenhagen and in the long term would not provide any additional funding for transport improvements.</li> <li>⇒ The Government is currently freezing taxes and considers the RP charge could be seen as an additional tax and therefore not progressed.</li> </ul> <p>It is worth noting that current road tax in Denmark includes a tax of 180% of the value of a new car when purchased. This results in fewer new cars on the streets and when cars are used they are made maximum use of to compensate for the tax.</p>

	<p>The areas considered for a scheme are all within the city centre. The City Council's responsibility covers only around 100 square kilometres. The rest of the region is the responsibility of a number of municipalities. Copenhagen City Council is liaising with these municipalities to ensure traffic in the outer regions is successfully managed and TDM measures can be introduced where necessary. Together they are progressing RP as a joint project through the Transport Plan.</p> <p>There is no legislation in Copenhagen and Denmark that would allow for a RP scheme. This would have to be introduced through the national government. Copenhagen does currently have some parking control powers to regulate traffic volumes.</p> <p>The City Council are due to decide on how to progress RP; this is likely to include a plan for achieving legislation. It is expected that local politicians would lobby Government for support and commitment to the scheme. The general time scale proposed is:</p> <ul style="list-style-type: none"> <li>⇒ in 2007 the RP scheme needs to undergo detailed design;</li> <li>⇒ in 2008 the procurement process for implementing a scheme will be undertaken; and</li> <li>⇒ by 2009 the scheme could be implemented.</li> </ul> <p>There is a local election planned for late 2009 and ideally RP would be operational for some time prior to this to allow the impacts to be understood. It is recognised that without a detailed proposal it is more difficult to gain support. The legislative process is considered to be the major factor that could affect this implementation date.</p> <p>Copenhagen has been involved in the EC funded Progress Project. This involved a trial of volunteers with a pre-paid account to the value of their normal travel. There were three pricing structures, including a cordon charge and two variable distance-based charges. The trial used GPS-based technology and tracked their travel and associated costs. It was felt that this involvement did contribute towards progress for RP on pricing structures, but generally was not instrumental in the current drive towards a RP scheme.</p>
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<p>Options under consideration (types of charging)</p>	<p>The study included three options for RP:</p> <ul style="list-style-type: none"> <li>⇒ A small City centre cordon;</li> <li>⇒ A larger City cordon; and</li> <li>⇒ A distance-based charge using GPS technology.</li> </ul> <p>Impacts, costs and revenues were estimated for each option.</p> <p>The smaller City centre cordon will produce the largest reduction in traffic within the cordon. There were, however, concerns over the impact on traffic outside of the cordon. It is felt that GPS-based technology would not be reliable enough for use in a scheme for many years. Therefore in the interest of implementing RP as soon as possible a larger city cordon would be the most likely proposition, which although having a lesser impact on traffic reduction would have a more consistent impact across the city.</p> <p>A DK25 charge (around £2.50) in the peak periods would result in a 20% - 25% reduction in traffic levels. An off peak charge of DK10 was part of the model. At present it is not ruled out that a charge is a replacement for the current tax system is a possibility for consideration.</p> <p>The study expected any scheme to have paid for itself within 1-2 years.</p> <p>Automatic Number Plate Recognition (ANPR) cameras or Tag and Beacon technology is being considered for the scheme, although it is felt that ANPR cameras will need to improve substantially in performance terms and have reduced in cost to be considered as a preferred detection option.</p> <p>Although TDM measures and public transport improvements are planned they are not necessarily linked to the introduction of the scheme. It is proposed that revenues will be hypothecated towards transport improvements but this is largely to improve acceptability rather than fund a wider package.</p>
<p>General Level of Awareness</p>	<p>Awareness of RP generally is felt to be high in Copenhagen, particularly as a result of the recent Stockholm trial and referendum. This was reflected in an increase in correspondence regarding RP to the City Council.</p> <p>Surveys of Copenhagen residents have been completed. These show that residents are largely supportive of RP: 68% of respondents were supportive whereas 23% were opposed to a scheme. This is generally felt to be reflective of the national picture shown through surveys. However, it is accepted that certain sub-sections of the populations are likely to be less supportive, such as car drivers.</p>

	<p>Limited consultation and interviews have been undertaken as part of the Progress project study. There is opposition to RP in certain areas, although this is felt to be the same as that when any traffic scheme, such as a change in parking arrangements, is consulted on. Businesses voiced concerns over loss in revenue, as there is a general perception that parking generates business.</p> <p>It is felt that transport related business and organisations are more positive and realise the benefits of journey time improvements and want to have a 'Green' image.</p> <p>There is political support for a scheme in the local City Council, although the opposite is the case in national Government. The administration is a right-wing administration, traditionally opposed to RP schemes. New elections at the national level must be held before early 2009 and extensive lobbying of the government is expected in order to raise support.</p>
Sources	<p>Key Contact:            Brian Hansen Copenhagen City Council  <a href="http://www.kk.dk/traengselsafgifter">www.kk.dk/traengselsafgifter</a> (in Danish only)</p> <p>Other Information:            Progress Website;  <a href="http://www.progress-project.org/">http://www.progress-project.org/</a></p>

## 8. Prague (Czech Republic)

<p>Current Status of Proposals</p>	<p>There is no formal plan to introduce Road Pricing (RP).</p> <p>A feasibility study was completed in May 2004 identifying possible scenarios for a scheme. At this stage it was proposed that a scheme could be introduced by 2007. This was not taken forward at that stage due to trips through the city having no alternative route.</p> <p>There is now a general political consensus that RP could be implemented in the City centre by 2010 upon completion of the Ring Road, which would provide an alternative route for through trips.</p>
<p>Aims of Proposals</p>	<p>Initially, the project had two primary aims:</p> <ul style="list-style-type: none"> <li>⇒ To reduce levels of congestion in the City's central area and at other congested areas around the city to improve traffic flow efficiency and address excessive emissions problems which frequently exceed legal limits.</li> <li>⇒ To raise additional revenue to fund the completion of the strategic road and Metro networks. These projects have to be paid off by 2017.</li> </ul> <p>This means that the road pricing scheme would have to generate the required net revenues in 10 years.</p> <p>However, preliminary political discussions resulted in a consensus that it would be inequitable to impose charges for through traffic until the alternative bypass route (the Ring Road) was completed. For this reason the congestion charging project has not yet been considered in further detail.</p>
<p>Policy/Legislative background</p>	<p>The development of the RP scheme was initiated in 2003, driven by Prague City Council who had a commitment to develop Travel Demand Management (TDM) measures in the Strategic Plan of the City (2000). This describes its goals in transport as:</p> <ul style="list-style-type: none"> <li>⇒ Attractive and reliable public transport through pricing policy and investment</li> <li>⇒ Management and reduction in car use including ring roads for transit transportation and reduction of cars in city centre.</li> </ul> <p>The City concluded that RP could not proceed until the Ring Road was completed to allow through trips to be rerouted, which is expected by 2010. The missing sections of the Ring Road will have to be constructed mainly in tunnel and are therefore expensive.</p>

	<p>The Mayor of the City of Prague has stated that a road pricing scheme will only be introduced if the majority of the population support it via a referendum. The City of Prague Council would decide on the characteristics of a scheme.</p> <p>Inhabitants of Prague are still major users of public transport (more than 50% of trips) and Prague has metros, trams and buses. The city authorities do not consider that major investment in improving public transport would be required.</p> <p>To manage travel in the city centre parking charges are used to limit the length of stay and reduced parking space availability in the centre. There are also restricted access zones to vehicles over 3.5T within certain sections of the city.</p> <p>There are currently charges that apply to foreign drivers on motorways and expressways in the Czech Republic, but not to domestic road users. Payment is made through the purchase of a motorway toll sticker. This system is to be replaced by a distance-based toll system which will also apply to domestic goods vehicles.</p> <p>Currently there is legislation allowing vehicles to be charged entering into selected areas in cities, but residents and owners of businesses in the area can enter for free. This law would need to be changed to expand the charging scheme for all vehicles.</p>
<p>Options under consideration (types of charging)</p>	<p>There is no definite plan for consideration. 'Serious' discussions of the charging options are not expected until around 2008 as it is considered by the City that the scheme is at too early a stage to carry out any preparations.</p> <p>As an initial step to implementing RP, the City had commissioned a local transport consultant (Sparta Consultants Inc.) to carry out a feasibility study into different options. This study was completed in May 2004 and identified three possible approaches:</p> <ul style="list-style-type: none"> <li>⇒ An area licence scheme within the historic centre of the city</li> <li>⇒ A single cordon option at the city cordon</li> <li>⇒ A double cordon option at the city cordon and an outer cordon</li> </ul> <p>The study assumed that all vehicles would be targeted, with reduced charges for residents of the zone - in the range of 1 to 5 euros. Revenues would most likely be reinvested in the highway transport network. Public transport is not considered to require significant investment.</p>

	<p>There has not been significant discussion of other measures that would be introduced alongside RP. Although the completion of the ring road is pivotal to the introduction of a scheme.</p> <p>The charging technology is not yet identified. Currently an electronic toll system produced by the Austrian company Kapsch is planned to be used for a national lorry tolling scheme using Tag and Beacon technology. This could be further utilised within a scheme.</p>
<p>General Level of Awareness</p>	<p>There has been some media attention regarding the potential future RP scheme.</p> <p>It is not considered that there is currently opposition to the principle of the scheme at present. Although there has not yet been a real public debate and no public consultation has yet been carried out. The planned referendum regarding the scheme has not yet been undertaken.</p> <p>For the feasibility study, local market research was carried out to obtain the views of Prague's population towards the different road pricing options. There was 30% more support than opposition for a charge of only 1 Euro in the historic centre. Although if a charge across the whole city was proposed then there was 2.5% more opposition than support.</p> <p>There has been no formal stakeholder consultation. This would most likely occur when more detailed plans have been developed, although there is broad political acceptance that RP in the city centre is the only option.</p>
<p>Sources</p>	<p>Key Contact: Jaroslav Mach - Prague City Council</p> <p>Other Information: Feasibility Study, Sparta <a href="http://www.transport-training.org/3%20year%20page%20ALL%20in%20one/PRG%20Sem%202/1A%20-%20Urban%20Road%20Pricing%20-%20Alsadair%20Caine/TRUMP2004_Urban%20road%20pricing_Case%20Study_Consultants%20Report.pdf#search=%22Prague%20road%20pricing%22">http://www.transport-training.org/3%20year%20page%20ALL%20in%20one/PRG%20Sem%202/1A%20-%20Urban%20Road%20Pricing%20-%20Alsadair%20Caine/TRUMP2004_Urban%20road%20pricing_Case%20Study_Consultants%20Report.pdf#search=%22Prague%20road%20pricing%22</a> Background Information <a href="http://www.transport-training.org/3%20year%20page%20ALL%20in%20one/PRG%20Sem%202/1A%20-%20Urban%20Road%20Pricing%20-%20Alsadair%20Caine/TRUMP2004_Urban%20road%20pricing_Case%20Study_Background.pdf">http://www.transport-training.org/3%20year%20page%20ALL%20in%20one/PRG%20Sem%202/1A%20-%20Urban%20Road%20Pricing%20-%20Alsadair%20Caine/TRUMP2004_Urban%20road%20pricing_Case%20Study_Background.pdf</a></p>

## 9. Helsinki (Finland)

<p>Current Status of Proposals</p>	<p>Helsinki and Finland do not have any current plans to implement Road Pricing (RP) in the near future.</p> <p>There are studies underway into how different schemes could impact upon traffic in the region and how RP has been implemented in other areas around the world.</p> <p>This has resulted in some early consideration of how RP may develop within the Region. It is not expected that any scheme would be implemented within this decade; some time between 2010 and 2020 is more feasible.</p>
<p>Aims of Proposals</p>	<p>Reducing congestion is the main aim of any proposed scheme.</p> <p>Of secondary importance is the potential revenue that could be raised and reinvested into improving the transport network. Although there are no plans as to which transport schemes this would be primarily directed at it is expected that they would cover all sectors of the transport system (including the public transport, the road network and the cycling network).</p>
<p>Policy/Legislative background</p>	<p>For RP to be implemented in the region new legislation in Finland would have to be passed allowing such initiatives. This is expected to take some time, delaying any implementation of a scheme until after 2010. However, this is not wholly problematic as it is expected that the delay will provide the opportunity for technology to advance and increase the ability of the requirements of any proposed scheme to be met.</p> <p>Transport plans for Helsinki are developed by the Metropolitan Area Council (YTV). These cover the whole region incorporating the 4 cities in the Metropolitan area; Helsinki; Espoo; Vantaa; and Kauniainen.</p> <p>Travel demand management was mentioned as one effective future action to manage the growth of car traffic in the Helsinki Metropolitan Area Transport System Plan 2002. The plan was approved by the Board of the Metropolitan Area Council after a wide range of responses from policy makers and various players within the region and nationally by the Ministry of Transport and Communications.</p> <p>The 2002 Plan approved consideration of demand management by studying various concepts as well as their impacts and feasibility. This is now being revised for publication in early 2007. It is intended that this will raise debate and highlight how infrastructure improvements will not be able to sustain expected growth without the application of some form of RP.</p>



	<p>There is a National study funded by the Ministry of Transport and Communication, although this makes no commitment to developing or studying RP and is not considered to be an influence on the current plans.</p>
<p>Options under consideration (types of charging)</p>	<p>There is no formal structure for any RP scheme. This is to be developed through feasibility studies and through learning from the experiences of other places such as London and Stockholm.</p> <p>Traffic trends in the Region indicate that an inner city based charge such as in London and Stockholm would not be suitable for Helsinki. This is because traffic levels in the inner city, unlike many locations, have not worsened over the last 20 years. However, in the outer regions and on the ring-roads there has been a steady deterioration of traffic conditions.</p> <p>It is expected, therefore, that any scheme would cover the whole Metropolitan area. In order to target severe congestion, costs could be varied by time, location and distance travelled. It is considered that technology would need to improve before this option is feasible giving an expected implementation period of 2010-2020.</p> <p>Complementary traffic measures are expected to be implemented within the Region. The comprehensive public transport system needed to support any charging scheme is not considered to be in place, particularly in the outer regions. These plans, however, are expected to be developed separately to any RP scheme for early implementation.</p> <p>Similarly there are no plans for enforcement or exemptions and discounts within a scheme. There had been earlier proposals when a manual collection scheme was proposed in the 1990's. Proposals will now be developed from experiences in other countries.</p>
<p>General Level of Awareness</p>	<p>The majority of media coverage and public awareness has been through publicity relating to the Stockholm trial. Although there is generally a high level of awareness amongst both the public and politicians this is not considered to be particularly well informed in relation to potential benefits and impacts.</p> <p>Residents of the Metropolitan Area were surveyed in 2002 about transport issues. 70% of respondents felt that public transport should be the first priority for improvement compared to only 18% who felt that improving conditions for car users should be the priority. This reflects the response that 60% of respondents felt that RP should never be implemented in the Helsinki Area, with 69% arguing that public transport improvements should be funded through taxes.</p>

	<p>Stakeholder consultation was undertaken through a set of interviews in 2002 with local and regional authorities, leading politicians, several ministries, Chamber of Commerce and the Roads Authority. Generally RP was not given strong support, but it was accepted as a means to improve traffic and raise revenue for the transport system. It was largely felt that any charging system should be based on marginal social cost and reflect trip length and time of travel.</p> <p>It is felt that public opinion towards RP may be improving. A poll conducted by a national daily newspaper reported that “Nearly half back congestion charge for Helsinki”.</p> <p>There is very little political support for the introduction of RP, with support mainly coming from the ‘Green’ parties, who currently hold little power. Other political parties, as well as the Chamber of Commerce, tend to be less positive regarding any RP scheme.</p> <p>There has been no formal stakeholder engagement undertaken so far. Although local stakeholders tend to have strong links with policy makers. A strong opinion is that the city centre has already suffered because of development in outer suburbs. Therefore any Central based charge would further affect this. This opinion is largely reflected by politicians as well as the transport policy makers.</p>
Sources	<p>Key contact; Olli-Pekka Poutanen, Director of the Transportation and Traffic Planning Division City Planning Department</p> <p>Further Information; Helsinki Metropolitan Area Transport System Plan PLJ 2002, YTV <a href="http://www.ytv.fi/FIN/seutu_tulevaisuudessa/liikennejarjestelma/liikennejarjestelmasuunnitelma_PLJ/plj_julkaisut/2003/plj2002_en_A2003_2.htm">http://www.ytv.fi/FIN/seutu_tulevaisuudessa/liikennejarjestelma/liikennejarjestelmasuunnitelma_PLJ/plj_julkaisut/2003/plj2002_en_A2003_2.htm</a></p> <p>Progress Project: <a href="http://www.progress-project.org/">http://www.progress-project.org/</a></p> <p>Newspaper Poll; Helsingin Sanomat <a href="http://virtual.finland.fi/stt/showarticle.asp?intNWSAID=13237&amp;group=General">http://virtual.finland.fi/stt/showarticle.asp?intNWSAID=13237&amp;group=General</a></p>

## 10. Stockholm (Sweden)

<p>Current Status of Proposals</p>	<p>Stockholm has no definite plan for introducing Road Pricing (RP), although after a recent referendum the new government has committed to introducing a scheme along the lines of that trialled.</p> <p>The earliest date for possible reintroduction is considered to be early 2007.</p>
<p>Aims of Proposals</p>	<p>The primary aims of the scheme trialled were to reduce congestion, increase accessibility and improve the environment.</p> <p>The objectives of the scheme were to reduce traffic volumes on the busiest roads by 10-15%; to improve the flow of traffic on streets and roads; to reduce emissions of pollutants (including carbon dioxide) harmful to human health; to improve the urban environment as perceived by Stockholm residents; and to provide more resources for public transport.</p> <p>The Prime Minister has now committed to RP in order to raise revenue to build a new city ring road and on the basis that the RP scheme will only operated for as long as investment is required for infrastructure. This could become another primary aim of the scheme.</p> <p>Making the RP permanent is calculated to yield a significant annual net revenue stream of about SEK760 million (£53million) (after deducting operating costs), money that could be spent on improving both public transportation and the road network.</p> <p>The system is shown to yield a significant socio-economic surplus; well enough to cover both investment and operational costs, providing that the scheme is kept operational for a reasonable length of time. Investment costs are recovered (in terms of socio-economic benefit) in about 4 years.</p>

<p>Policy/ Legislative background</p>	<p>In response to growing traffic congestion in central Stockholm, Stockholm City Council asked the Swedish Government for permission to conduct a congestion tax trial. As a result, on June 16th 2004, the Swedish parliament, the Riksdag, adopted the Common Congestion Charges Law, with an annex relating to the Stockholm trial.</p> <p>The trial consisted of two parts: Extended public transport from 22nd August 2005 until December 31st 2006, and a congestion tax from January 3rd 2006 until July 31st 2006. The scheme consisted of a cordon based variable pricing scheme to enter the city centre. The purpose of the trial was to test whether the efficiency of Stockholm's traffic system could be enhanced by road user charging. Vehicular traffic declined by more than the expected 10 – 15%. During spring 2006, traffic on weekdays between 6.30 am and 6.30 pm fell by 22% compared to that during the previous year (smaller during morning rush and greater during evening rush). IBM, the prime contractor for the trial, was given a budget for the trial of SEK 3.8 billion.</p> <p>After the seven month trial was complete, a referendum was held on September 17th 2006 to ascertain whether the people of Stockholm and the surrounding municipalities were in favour of a permanent system of road user charging. In the city of Stockholm, 53% voted 'yes' to the introduction of a permanent scheme and 47% voted 'no'. Outside the city, in the commuter belt where 15 of the 26 surrounding municipalities held their own referendums, voters were against the charge with 52% against and 48% in support. This lead to some confusion as to how to interpret the results with the residents within Stockholm more in favour of the system than those in the surrounding municipalities.</p> <p>The recent change of Government has further complicated the political process, with the centre-left being voted out of power and replaced by a centre-right coalition. The incoming Government, which took over power on October 16th 2006, is known to be markedly less in favour of RP than the outgoing Government. However, in the latest development, on October 1st 2006, the Alliance for Sweden, lead by Fredrik Reinfeldt, declared it will implement the Stockholm congestion tax and that the money raised by the scheme would initially be used to build a new ring road around the city. The incoming Government had previously stated, prior to the elections, that they would respect the voice of the citizens of Stockholm City.</p> <p>According to the new government, the charges will be used to finance infrastructure projects in the Stockholm region. A date for the reintroduction of charges has not been set, but experts say that March 2007 would be the earliest possible start date. The new Swedish Prime Minister, Fredrik Reinfeldt also stated that this traffic toll would not be permanent and it will last as long as the government needs to collect enough money to pay</p>
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	<p>for constructing roads, notably in the suburbs. Reports suggest that Stockholm is looking to move in favour of a purely camera based scheme rather than a 'tag and beacon' system. The final decision on the timescale and exact technological nature of the implementation of the scheme will be made by the Swedish national parliament.</p>
<p>Options under consideration (types of charging)</p>	<p>The trial operated a cordon covering an area of 29.5 km<sup>2</sup> in central Stockholm. The area inside the cordon houses 275,000 inhabitants; equal to 36% of all the residents in Stockholm. The system will have a single zone boundary encircling the inner city of Stockholm.</p> <p>During the trial period, owners of vehicles registered in Sweden were required to pay the congestion tax if their vehicle passed a control point on the way into or out of Stockholm inner city area on weekdays between 6.30 am and 6.29 pm. There was no congestion tax on vehicles driving on the E4/E20 (Essingeleden) past Stockholm. There was also no charge for vehicles driving from Lidingo past the bridge control point if they subsequently passed another control point to exit the city zone within 30 minutes (as the only land connection from Lidingo municipality runs through the city).</p> <p>The size of the tax varied by the time of day and was 10, 15, or 20 SEK (70p, £1 or £1.40). There was no charge outside of 6.30 am – 6.29 pm on weekdays and hence there are no charges at evenings, weekends, or public holidays (or the day before a public holiday).</p> <p>There were a number of exemptions to the charge, as shown in the list below: These users paid no charge for entering the inner Stockholm area:</p> <ul style="list-style-type: none"> <li>-Emergency vehicles</li> <li>-Buses with a total weight of at least 14 tonnes</li> <li>-Diplomatic cars</li> <li>-Taxis</li> <li>-Motorcycles</li> <li>-Vehicles registered abroad</li> <li>-Military vehicles</li> <li>-Vehicles that are designed to operate completely or partially on electricity or gas other than LPG, or on a fuel blend consisting predominantly of alcohol (Approximately 30% of vehicles were exempt from the charge)</li> </ul>

	<p>A combination of camera and DSRC (dedicated short range communications) 'tag and beacon' technologies were used. Payment had to be made after having passed a control point and had to be registered in the SRA congestion tax account within 14 days of passage. During the trial, more than 60% of payments were made automatically through transponder/direct debit. The remainder were either paid at local shops or through bank transfers, either direct transfer or using a virtual shop on the website.</p> <p>A number of enhancements had been made to Stockholm's public transport system in order to manage the increase in public transport usage. The bus fleet was increased by 197 new buses and 12 new express bus routes together with an extended service on 18 bus routes. Bus punctuality was improved as a result of the reduced traffic during the trial.</p> <p>Existing underground and commuter train service frequencies were also enhanced. A number of new Park and Ride schemes in the region were implemented, along with improvements to the existing sites.</p>
<p>General Level of Awareness</p>	<p>There has been widespread press coverage of the congestion charging trial. At the time of scheme opening many reporters chose to capture pictures showing 'before' and 'after' photographs of some of Stockholm's inner city streets illustrating the large extent to which the car usage had reduced. The press appear to have noted how public opinion has changed from being very much opposed to the scheme to actually supporting it.</p> <p>The press have also well publicised how politically mixed and confusing the issue has become, especially given the recent change of government from a predominantly pro-RP party to a predominantly anti -RP party.</p> <p>At the start of the trial many Stockholm residents reacted with outrage. A majority of residents opposed the tax and even organised demonstrations to vent their disapproval. By the time the trial had ended however, public opinion had shifted dramatically. In autumn 2005, about 55% of all Stockholm county citizens believed that it was a rather/very bad decision to conduct a congestion tax trial. In May 2006, only 41% believed that it was a rather/very bad decision.</p> <p>The city's referendum was further proof that adverse public opinion can be turned around. It is clear that both the public and companies have become increasingly positive towards the congestion tax and the Stockholm trial, as they have gained their own experience and as benefits have begun to occur. As explained earlier, it is noted that opinion is more negative towards the scheme from residents in the outer suburbs.</p>

<p>Sources</p>	<p>Sources of information:</p> <p>The Stockholm Congestion Charging System- An overview of the effects after six months, by Dr Muriel Beser Hugosson and Dr Jonas Eliasson, 2006</p> <p>Cost benefit analysis of the Stockholm congestion charging system, by Dr Jonas Eliasson, 2006</p> <p>The Stockholm Congestion Charging Trial, by IBM, June 2006</p> <p>Local Transport Today Road User Charging supplement Autumn 2006</p> <p>Stockholm trial website;  <a href="http://www.stockholmsforsoket.se/">http://www.stockholmsforsoket.se/</a></p> <p>Press Article;  <a href="http://www.greencarcongress.com/2006/10/stockholms_new_.html">http://www.greencarcongress.com/2006/10/stockholms_new_.html</a></p>
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## 11. New York (USA)

<p>Current Status of Proposals</p>	<p>New York City does not have any plans to introduce Road Pricing (RP) in the future.</p> <p>Currently the bridges and tunnels leading to the centre of the city and operated by the Port Authority and the Metropolitan Transportation Authority are tolled. These are largely accepted and seen as successful examples of Electronic Toll Collection (ETC). Four additional bridges leading to the centre of the city and operated by the City of New York, known as the east river bridges, are not tolled.</p> <p>RP has been a subject of debate in New York City since at least the 1970's. Early objectives were to improve air quality and raise tolls rather than reduce congestion. There have been studies in the past to look at charging on the City's east river bridges. These have now been abandoned due to what was viewed as insurmountable political issues, including concerns about social inequalities. Largely low income outer-boroughs who have less access to public transport would be forced to pay to drive into the centre of the city.</p> <p>Currently transport research continues to be undertaken by the Regional Plan Association (RPA), an independent, not for profit organisation. They are striving to understand how RP could best benefit New York City.</p>
<p>Aims of Proposals</p>	<p>Reducing congestion would be a key aim of implementing a RP scheme, as is reducing air and noise pollution. The additional application of potential revenue is also considered to be important. Currently substantial funding has been provided to extend the local public transport network. Ongoing increased funding is considered to be necessary to maintain what is seen to be an ageing network in need of considerable improvement and reinvestment. The extent to which this is important is highlighted in Mayor Bloomberg's 2003 Executive Budget where he originally considered tolling as a means of raising revenue with a secondary aim of reducing congestion.</p> <p>The additional intention of rerouting polluting and congesting trucks away from the City Centre by tolling bridges or a City Centre area type charge has been mentioned as a supplementary benefit.</p> <p>Also mentioned is the importance of improving traffic conditions to maintain economic stability and improve the urban environment.</p>



<p>Policy/ Legislative background</p>	<p>Currently there has been legislation passed in a number of States allowing tolling for Public Private Partnership (PPP) schemes. These are considered to set precedence in terms of implementing transport schemes that raise revenue. There is national debate underway on how legislation can be introduced to further enable states to enter PPPs.</p> <p>National policies such as the National Strategy to Reduce Congestion on America's Transportation Network, published in May 2006, are not considered to be driving forward local policy despite it advocating the introduction of RP in urban areas. New York is seen as being anomalous to other US cities because it has a high dependence on public transport.</p> <p>Politics relating to who has responsibility for such a transport scheme in New York is complicated, and could be considered to affect how issues are taken forward. In New York the RPA has undertaken researching and recommending RP policy, although they are not responsible for setting or implementing transport policy. The Mayor is not responsible either for setting policy, although his views and opinions are largely respected and felt to be directed for the benefit of New Yorkers. To introduce new policy or schemes both the New York City and New York State governments need to agree. Although the State is largely responsible for Tolls and Transportation they are not largely respected as representing the City. The City is very different in nature to the rest of the State.</p> <p>Subsequently Mayoral support would be beneficial in driving schemes forward. Although currently supporting RP in New York has been viewed as 'political suicide' and was therefore not mentioned in Mayor Bloomberg's 2<sup>nd</sup> term agenda. More recently though it is reported that the Mayor will include the introduction of RP in his next strategic plan.</p> <p>In order to fund the necessary public transport network improvements in the future it is considered that a new State Governor may be more willing to promote RP as a means to raise revenue. With an election due in November 2006 the timing for raising this debate could be crucial.</p>
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<p>Options under consideration (types of charging)</p>	<p>There are no formal options currently under consideration. The RPA aim to recommend a scheme that would provide maximum benefits in reducing congestion and minimal harm in terms of social and economic equity. They intend to assess available and emerging technologies to see which could be best utilised to that eventuality. It is generally accepted that any future proposals would be network wide rather than simply tolling entry bridges in order to target key areas of congestion.</p> <p>Consideration of the public transport network is of very high importance in developing a scheme. This is particularly relevant to some outer suburbs where car dependence is high where there are areas of low income. Potential use of a charge discount or credit will be considered to minimise social exclusion.</p> <p>A previous study in 2005 considered a cordon charge at 60<sup>th</sup> street of \$7 during the peak period and \$4 if the journey started or ended within the zone. In 2003 four options were discussed in the RPA paper; flat fees on East River bridges; variable pricing on East River bridges; cordon charge at 60<sup>th</sup> St and East River bridges; variable pricing across all entrances.</p>
<p>General Level of Awareness</p>	<p>There is a high level of media coverage and public awareness of RP in New York. The degree of awareness is considered a potential problem in developing schemes as there is a tendency for schemes to be dismissed in their early stages of development for fear of courting controversy.</p> <p>There are a range of opinions regarding RP in New York. Although awareness of the issue is high it is felt that actual knowledge of schemes and impacts is not comparably high. Subsequently opinions are largely not considered to be informed. Views are considered to be more negative because of the use of and association with the word 'Pricing'. In terms of locality those residents more central to the City are likely to be more positive about such a scheme, whereas those living in Outer boroughs and Suburbs tend to be more negative.</p> <p>Some stakeholders have been active in debating the impacts of RP in New York. The New York City Partnership, the Transportation Alternatives Coalition and the Tri-State Transportation Campaign have pronounced themselves in favour of RP in mid and lower Manhattan. However, the Brooklyn and Queens City Councils are strongly opposed to it.</p> <p>The New York City Partnership, a business-oriented group, is producing a report on the potential economic benefits of a scheme which is expected to be generally positive. While many of the advocacy groups generally support RP, they are more vocal in their support of smaller initiatives.</p>

	<p>In terms of other businesses, generally larger business are positive about RP scheme as they recognise the benefit that public transport improvements and congestion reductions could have for their staff. There is a potential concern that certain government departments and hospitals will also be more negative due to current favourable work parking provisions.</p> <p>The views and opinions of a range of New Yorkers living or working in Manhattan are being sought as part of a research project commissioned by the Manhattan Institute, a think-tank research based organisation. The project aims to understand public reaction in New York to RP and parking pricing policy, and consider how to improve public acceptability of these measures. It involves desk based research and focus groups. The results of this work are due to be completed in November 2006 for presentation at a transport conference.</p>
<p>Sources</p>	<p>Key Contact:          Alexis Perrotta, Regional Plan Association          Ken Orski – Innovation Briefs</p> <p>Additional Information:          National Strategy to Reduce Congestion on America’s Transportation Network, May 2006  <a href="http://isddc.dot.gov/OLPFiles/OST/012988.pdf">http://isddc.dot.gov/OLPFiles/OST/012988.pdf</a>          An Exploration of Motor Vehicle RP in New York, RPA, November 2003  <a href="http://www.rpa.org/pdf/RPA_Congestion_Pricing_NY.pdf">http://www.rpa.org/pdf/RPA_Congestion_Pricing_NY.pdf</a></p>

## 12. San Francisco (USA)

<p>Current Status of Proposals</p>	<p>There is no formal plan to introduce Road Pricing (RP) in San Francisco. However, a feasibility study has been confirmed and should be well underway in the next few months to investigate possible schemes in the area and identify short term proposals to reduce congestion.</p> <p>A grant of \$1million has been awarded by the Federal Highway Administration to the San Francisco County Transportation Authority (SFCTA) to study congestion management. The SFCTA has the responsibility for the Congestion Management Agency (CMA).</p>
<p>Aims of Proposals</p>	<p>The primary aim of any scheme would be to reduce congestion. Supplementary objectives mentioned are to help improve productivity, environmental quality and overall quality of life. RP generally is reported as having the ability to ‘improve the economic vitality and liveability of the city’.</p> <p>The availability of additional resources through revenue was mentioned as an additional aim in order to improve the City’s transportation network.</p>
<p>Policy/Legislative background</p>	<p>San Francisco sees itself as being unique compared to other cities in the USA. It is considered to be one of the most densely populated cities on the East coast and has a very well used public transport network. Additionally it is the only city that has a ‘Prop K’ half-cent tax on all sales in the State which is dedicated to transport improvements and administered by the SFCTA. This sets a precedent for future legislation although further studies need to be completed focussing on the application of revenues from RP schemes.</p> <p>There is a formal commitment to developing schemes in the area through the 30 year 2004 Countywide Transportation Plan produced by the SFCTA which identifies RP as a potential strategy. It highlights how congestion has worsened in the area and how the sustainability of the city is at threat if the problem is not tackled.</p> <p>The SFTCA was requested to apply for the grant by the Authority’s Board of Commissioners. The feasibility study has been progressed at this stage largely due to the National policy of making funding available for studying RP. This has been supported by the National Strategy to Reduce Congestion on America’s Transportation Network, published by the Department of Transportation in May 2006 which included the need to tackle congestion in</p>

	<p>urban areas. Prior to this development RP in the area was not considered - largely thought to be due to the earlier climate of opposition.</p>
<p>Options under consideration (types of charging)</p>	<p>There are no clear plans or thoughts for future RP schemes in San Francisco. Although there is a priority to focus on the 'Downtown' area.</p> <p>The study will be completed over the next 18-24 months and cover the headline issues of assessing the level, time and area of charge, method of payment, exemptions and discounts and how funds could be reinvested.</p> <p>The feasibility study will cover a wide range of topics including: developing policy goals and an evaluation framework; engaging public involvement; analysis of transportation systems; system design and management; financial and economic analysis; legal and institutional requirements; and parking management.</p> <p>Complementary measures as part of the wider package are integral to the study, and to be considered as part of revenue allocation. Public transport and pedestrian improvements across the local and regional area are to be included.</p>
<p>General Level of Awareness</p>	<p>There has been some media attention linked to the grant award. Although this has tended to be at a high level and does not go into detail. Attached to this is a certain amount of public awareness, although knowledge levels are not considered to be comparably high. Subsequently opinion is varied and not understood at this early stage.</p> <p>Preliminary discussions regarding the feasibility study have been undertaken with the stakeholder group the Citizens Advisory Committee. There has been little consultation otherwise, although in depth consultation is planned as part of the study with transport operators, policy makers, and businesses.</p> <p>The business sector has not been formally consulted but has made their level of concern regarding future proposals known.</p>
<p>Sources</p>	<p>Key contact; Elizabeth Bent - SFCTA</p> <p>Additional Information; SFCTA website; <a href="http://www.sfcta.org/">http://www.sfcta.org/</a></p>

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	<p>Transportation 2030 plan <a href="http://www.mtc.ca.gov/planning/2030_plan/index.htm">http://www.mtc.ca.gov/planning/2030_plan/index.htm</a> National Strategy to Reduce Congestion on America's Transportation Network, May 2006 <a href="http://isddc.dot.gov/OLPFiles/OST/012988.pdf">http://isddc.dot.gov/OLPFiles/OST/012988.pdf</a></p>
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### 13. Seattle (USA)

<p>Current Status of Proposals</p>	<p>Washington State and Puget Sound, the region containing Seattle, have no formal commitment to introduce Road Pricing (RP). Transport policy and strategy does, however, utilise language that supports the investigation and consideration of measures to influence travel behaviour.</p> <p>Consequently the Puget Sound Regional Council has undertaken a study, <i>Traffic Choices</i>, to understand in detail driver behaviour when faced with variable RP.</p> <p>The Puget Sound Regional Council was charged with investigating responses to RP by the Board of the Washington State Metropolitan Planning Agency. This is largely an elected body of members comprising State Legislators and individuals from Regional and Local Authorities.</p> <p>In the wider Washington State area there are more definite plans to introduce 'Variable' or 'Value' Pricing, a charge for use of High Occupancy Vehicle (HOV) lanes on selected highways.</p>
<p>Aims of Proposals</p>	<p>RP in Seattle is being considered in order to reduce traffic growth and congestion and to raise funds to support investment in transport infrastructure.</p> <p>In the region there has been an increasing gap in available investment for highways and transport infrastructure development which would be required to manage traffic growth. Effectively a need has been identified to manage growth in traffic alongside slower growth in road development. It is considered that RP will improve traffic flow and help pay for other roads and transit.</p> <p>The State claims that Variable Pricing on HOV lanes is primarily to reduce congestion. However, there is considerable debate, particularly in the local transport community, as to how successful this would be and what would be funded by any hypothecated revenues.</p>
<p>Policy/Legislative background</p>	<p>There is no formal commitment to implement a scheme, although transport plans and strategies do tend to include language that supports the investigation and further study of RP schemes.</p> <p>There is current legislation in place to allow sections of highway to be tolled. This can also allow tolls to be varied by time of day to reflect varying traffic levels. Although if RP of some form were to be introduced at a network level then additional State Legislation would have to be passed. This would also have to consider whether a scheme were to be fiscally based, incorporating changes and reallocations of taxes paid by residents.</p>

	<p>Washington State Department of Transportation has a background of funding programmes to encourage travel behaviour reduction and has allocated \$1.3million across 17 projects as part of a Trip Reduction Performance Programme.</p> <p>The study was driven as a result of growing interest in RP both nationally and regionally. The Puget Sound <i>Traffic Choices</i> Study has been funded by the national Federal Highway Administration who are supporting a number of studies and projects across the States. The policy to investigate RP supports the Department of Transportation's plan, <i>The National Strategy to Reduce Congestion on America's Transportation Network</i>, published in May 2006. This document is intended to "...provide a blueprint for federal, state and local officials to ... tackle this growing problem.... (the Department) will focus resources, funding, staff and technology to cut traffic jams, relieve freight bottlenecks...We must not be afraid to embrace new solutions if we are going to make any meaningful progress in reducing congestion."</p> <p>It is considered that nationally the direction of RP will focus on Variable Pricing utilising existing HOV lanes, or even building additional lanes alongside Highways. Those who choose to use these, generally congestion free, lanes will be subject to a variable charge depending on congestion levels. Fees would be collected electronically. Currently the country has 12,000 miles of tolled road. The Seattle area will not be the first to operate such a scheme but will be joining the likes of California, Denver, Minneapolis and Houston amongst others who already do.</p> <p>A mileage-based charge is seen as a distant possibility, replacing the fuel tax, although not for another 15 years or more.</p>
<p>Options under consideration (types of charging)</p>	<p>The results of the <i>Traffic Choices</i> Study are intended to inform any future proposal and development of RP in the area. Final reporting of the study is expected at the end of 2007, although a preliminary report will be published at the end of 2006. It is expected that any scheme would aim to give people a choice in their travel.</p> <p>The Study involved a pilot trial of RP with a number of volunteers. Over 275 households agreed to participate consisting of over 400 vehicles. Each household was provided with an 'Endowment' account reflecting the cost of their current travel behaviour. On-Board Units (OBU) tracked vehicles movements and the value of the Tolls were debited from the household's account. Participants were informed of the Toll levels which varied by road type, time of day and weekday or weekend. Tolls varied between 0 and 50 cents a mile. Not all roads were tolled and the Global Positioning System (GPS) was not operational in the 'Downtown' area. At the end of the tolling period participants were allowed to keep any remaining</p>



	<p>value of their Endowment account. The trial operated over 18 months.</p> <p>The trial was intended to provide results that could support a broad range of potential types of schemes. Preliminary results show that vehicle use reduced by 4% on average. This is backed up by stated responses from participants. There was a general improvement in the attitude towards charging by participants.</p> <p>There are a number of issues that arose out of the trial which will be addressed in future proposals. Privacy and public acceptance are key concerns which will have to be considered in the conceptual stage of a scheme's design. Technology is a limiting factor that could affect the design and timing of future schemes. The Regional Council are taking the same approach to these issues as other leading bodies in the field such as Transport for London (TfL) and Stockholm City Council.</p> <p>A proposed scheme would be expected to be funded primarily through the Federal Highways Authority. Part of this could include a package of wider measures, although it is not something largely considered at this stage. The results of the trial are expected to give some indication of the scale and type of complementary measures such as increased public transport that might need to be incorporated into any future scheme. However, it is worth noting that a large programme of public transport improvements is not expected to be feasible due to the largely low density urban environment that dominates the region.</p> <p>It is considered that the area most in need of a RP scheme is largely within the Puget Sound Region, consisting of Seattle and its surrounds. There are complications with restricting a scheme to this area if it were to be fiscally based. This would most likely require the inclusion of varying rates such as a Base Rate for those outside the Puget Sound Region and a Premium Rate for those within the Region.</p> <p>Implementation of any proposed scheme is not expected for another 10-15 years. This is largely due to the requirements of advanced technology but is equally dependant on legislation, being introduced, particularly that pertaining to tax changes. This is expected to be a lengthy process requiring a persuasive business model.</p>
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<p>General Level of Awareness</p>	<p>There has not been a significant amount of public and media attention to the trial or the potential implementation of a RP scheme.</p> <p>The <i>Traffic Choices</i> Study has generated modest local attention and very little nationally. This has largely been as a result of the scheme being marketed as a fact finding mission and not as a trial of an imminent proposal. It is accepted that extensive education and communication would be required as part of any future proposal.</p> <p>There is considered to be a wider awareness and acceptance of tolling on highways, particularly related to new infrastructure. It is considered that generally there is a poor elasticity in travel behaviour as a result of changes in the existing tax structure, and that increasing tax on fuel prices is perceived as unfair. Therefore it is considered that for any scheme to be deemed acceptable by the public it would have to replace existing taxes and possibly be fiscally neutral.</p> <p>The Regional Council has undertaken limited stakeholder consultation regarding RP to date. Although the elected Board members and the Washington State Department of Transportation were consulted regarding the trial and results will continue to be communicated to them over the next year.</p> <p>As far as the business community is concerned there are mixed feelings to RP schemes. Generally it is considered that larger businesses recognise the potential benefits and are positive about investigating options. Smaller businesses tend to be more negative about the impacts.</p>
<p>Sources</p>	<p>Primary Source of Information:          Matthey Kitchen – Director of Puget Sound Traffic Choices Study          Website -  <a href="http://www.psrc.org/projects/trafficchoices/background.htm">http://www.psrc.org/projects/trafficchoices/background.htm</a>          Ken Orski – Innovation Briefs</p> <p>Additional Information:          National Strategy to Reduce Congestion on America’s Transportation Network;  <a href="http://www.ioc.com/Whitepapers/DOT_Congestion_Plan051606.pdf">http://www.ioc.com/Whitepapers/DOT_Congestion_Plan051606.pdf</a>          Example of local press attention – Seattle Times:  <a href="http://seattletimes.nwsource.com/html/localnews/2002705881_tollstudy27m.html">http://seattletimes.nwsource.com/html/localnews/2002705881_tollstudy27m.html</a></p>

## 14. Auckland (New Zealand)

<p>Current Status of Proposals</p>	<p>There is no formal proposal for implementing Road Pricing (RP) in Auckland or New Zealand.</p> <p>A feasibility study, <i>Auckland Road Pricing Evaluation Study</i> (ARPES), has been undertaken looking at road pricing, parking levies and strategic network tolling. Various scenarios were reported in March 2006 by the Ministry of Transport, although contained no direct recommendations. This was put out to consultation and a response from Ministers is expected before the end of 2006.</p> <p>There are recommendations for RP to be implemented as soon as possible, although this may not be feasible for the next 10-15 years.</p>
<p>Aims of Proposals</p>	<p>There is no formal statement of objectives for introducing a RP scheme, although the need to reduce congestion is a primary target. The need to plug the funding gap for transport initiatives is most likely to form an additional requirement.</p>
<p>Policy/ Legislative background</p>	<p>Consideration of RP is largely through local and regional policies where the substantial growth in population and vehicle numbers in the area is recognised and the subsequent need to invest in local transport. The national government recognise the problem that congestion is causing in Auckland and other cities in New Zealand. It claims to be investing record amounts in new roads and public transport. There is currently no formal commitment to RP in a local, regional or national plan.</p> <p>The Independent Auckland City Mayor, Dick Hubbard, has been pivotal in driving the idea of RP forward and is largely influenced by the experience of London. Yet the Mayor does not have the authority to implement RP which is the responsibility of the Government. However, the influence of the Mayor and regional council did lead to the feasibility study being undertaken.</p> <p>Legislation already exists to enable TRANSIT NZ to toll new sections of state highway, to cover costs of construction. TRANSIT NZ are currently constructing the Northern motorway extension as a toll road, and are shortly to consult on proposals for tolling SH20 &amp; SH16 the western motorway around Auckland.</p> <p>There are two key strands of work that could affect RP, ARPES and the Auckland Transport Strategic Alignment Project (ATSAP).</p> <p>The Auckland Road Pricing Evaluation Study (ARPES) considered the potential of 5 RP options and the impact but did not make any recommendations. It is to be used as a basis for</p>

	<p>Ministers to make a decision as to whether proceed, and whether more studies are required or to forge ahead and provide enabling legislation.</p> <p>The Auckland Transport Strategic Alignment Project (ATSAP) has a wider focus. It is currently developing a view of transport over the next 30 years, and to consider how the funding gap in the region of billions of dollars can be bridged. This project has the involvement of local and regional authorities as well as national government (Treasury, Transport and Economic Development) and is due to report in early 2007. This will result in an agreed Auckland transport strategy which will feed into the Auckland Transport Plan.</p> <p>Transit is also introducing ramp metering (controlling levels of traffic through dedicated signalling on on-ramps) in certain areas as a travel demand management measure to ensure the smooth operation of the state highway network.</p> <p>In 2003 preliminary work on RP was initiated by the Joint Official's Group (JOG) comprising central government and Auckland local authorities. They reported the <i>Auckland Transport Strategy and Finding Gap</i>. This recommended that a decision to proceed with RP should be reached as soon as possible. ATSAP was commissioned as a result of this report.</p> <p>As mentioned the Mayor is important in supporting and driving transport issues. Currently the Mayor is independent. The City Council is reflective of the national picture where the Labour party holds the majority and the remainder is largely made of smaller parties or independents. At the last election in Auckland the council shifted in opposition to new road proposals. The next election is in 2007 and may again result in a shift of how transport policy is viewed. This could be important over a period of potentially key development of RP schemes.</p>
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<p>Options under consideration (types of charging)</p>	<p>5 options were reviewed as part of the ARPES feasibility study:</p> <ul style="list-style-type: none"> <li>⇒ Single cordon comprising one cordon ring around the Auckland City isthmus with a single charge of \$3 (\$6 at the Harbour Bridge) for inbound travel.</li> <li>⇒ Double Cordon comprising an outer ring around the Auckland City isthmus with a single charge for inward travel of \$3 (\$6 at the Harbour bridge) and travel on key boundary highways and an inner ring around the Central Business District and inner suburbs with a single charge for inward travel of \$3</li> <li>⇒ Area Charge around the Central Business District and inner suburbs of \$5 a day</li> <li>⇒ Strategic Network of key routes, motorways and most congestion roads of between \$0.15 and \$0.25 per kilometre, with a maximum charge of \$6</li> <li>⇒ Parking Levy of \$5 for car-based commuting trips beginning or ending within areas of high employment.</li> </ul> <p>The charges apply to morning peak travel only, between 6am and 10am.</p> <p>The report considers that an Area or Double cordon scheme results in the most beneficial impacts.</p> <p>Further work is expected to concentrate on coverage of any scheme, charging period, application to vehicle types, exemptions and discounts and application of different technologies. At present Tag and Beacon technology is being considered.</p> <p>Application of RP as part of a wider package has not been considered in depth but there is recognition that a comprehensive public transport network and appropriate mitigating traffic measures will be essential.</p> <p>Other studies have indicated that the cost of a RP scheme could range from between \$730million and \$900million, based on 2005 prices.</p>
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<p>General Level of Awareness</p>	<p>There is not considered to have been significant media coverage regarding RP. The peak was in early 2006 when the ARPES study was put out for consultation. At this stage the New Zealand Herald published a few articles with a fairly balanced view. This is reflective of most media which is not taking a particular standpoint.</p> <p>Subsequently public awareness if considered to be very low.</p> <p>As part of ARPES Auckland residents and businesses responded to an opinion survey. This showed that although congestion is considered to be an important issue respondents were broadly divided as to whether RP is a good or a bad proposal for Auckland. This level of support tends to depend on the level of charge. Generally levels of support are considered to be broadly in line with London prior to the scheme starting.</p> <p>Largely it is considered that most political authorities are supportive of either RP schemes or at least of conducting more research. The New Zealand Herald reports leading opposition to RP to come from a Council Chairman and Strategic Policy Committee Chairman, in the Regional Council.</p> <p>Consultation was undertaken on the ARPES study report. This was primarily interested in: reactions and comments on the study and its findings; whether road pricing is a good idea; areas in the report that could be improved or problems to be overcome; and other feasible alternatives. Around 1,000 submissions were received. Results have not yet been published.</p> <p>There has been no significant response from the business or retail sectors to date, although it is considered that Aucklanders are 'wedded' to their cars, and ease of parking is important. In the past there has been debate with retailers about removing on-street parking on the key shopping street as part of a streetscape upgrade.</p>
<p>Sources</p>	<p>Key Contact; Melanie Alexander, Auckland City</p> <p>Other source of information; Ministry of Transport – ARPES webpage; <a href="http://www.transport.govt.nz/arpes/">http://www.transport.govt.nz/arpes/</a> <a href="http://www.transport.govt.nz/auckland-road-pricing-evaluation-study">http://www.transport.govt.nz/auckland-road-pricing-evaluation-study</a> Business Evaluation of Report <a href="http://www.nzbr.org.nz/documents/submissions/submissions-2006/060428aklcongestion.pdf">http://www.nzbr.org.nz/documents/submissions/submissions-2006/060428aklcongestion.pdf</a> New Zealand Herald report; <a href="http://www.nzherald.co.nz/topic/story.cfm?c_id=309&amp;objectid=10379291">http://www.nzherald.co.nz/topic/story.cfm?c_id=309&amp;objectid=10379291</a></p>

## 15. Shanghai (China)

<p>Current Status of Proposals</p>	<p>There is no definite plan to introduce RP in Shanghai.</p> <p>However a first round feasibility study has been completed and a second round study is underway, which started in 2004. The team working on this includes a group of administrative and political stakeholders as well as experts from Tongji University. The study is due to be completed in late 2006. Subject to technical conclusions, an implementation plan and the political decision to proceed, the official position is that a scheme could be operational by 2007-2008.</p>
<p>Aims of Proposals</p>	<p>The primary aims of introducing RP in Shanghai are to reduce congestion and improve air quality. Whilst lower than many other cities in China, vehicle ownership in Shanghai is still forecast to increase massively over the next fifteen years, and the City Government has long accepted the need to control both vehicle ownership and use. RP is viewed as a key policy for intensifying the current restrictions on motorised private vehicles.</p> <p>To put this into context, the 2002 White Paper forecasts that the number of motor vehicles in Shanghai is predicted to increase from 850,000 (in 2000) to a figure of 2 - 2.5 million by 2020. On the basis of this prediction, the person trip volumes will rise from the present 35 million trips per day in 2000 to 48 million trips per day in 2020, while daily motor vehicle trips will increase from 3. 1 million in 2000 to 7 million in 2020.</p> <p>Revenues from the charge would be reinvested in transport in the city, mainly the public transport network.</p>

<p>Policy/Legislative background</p>	<p>Many aspects of transport policy in China are set at provincial and city level, with limited national prescription. Although Central Government officials and ministers have increasingly commented on Road Pricing as a potential mechanism for controlling urban traffic, the political and legislative therefore rests with the Shanghai Government.</p> <p>The policy context for a RP scheme is provided by the 2002 Shanghai Transport White Paper which set out a number of objectives and actions for transport delivery and management to the year 2020. The commitment to RP has recently been re-affirmed by the review of the White Paper.</p> <p>The Second Round Shanghai RP Feasibility Study started in 2004 with a team of stakeholders including Shanghai Construction Committee (Lead), Shanghai Development &amp; Reform Committee, Shanghai Science &amp; Technology Bureau, Shanghai Communication Committee, Shanghai Urban Planning Bureau, Shanghai Urban Traffic Management Bureau, Shanghai Municipal office, Shanghai Highway Management Bureau, and Tongji University.</p> <p>Most stakeholders are effectively part of the Shanghai Government. The Government is therefore, in theory, committed to introducing a scheme once the required technical work has been completed.</p> <p>However, there is no confirmation from the Mayor or the Shanghai Government that RP will definitely be introduced and a final decision is still required following the technical studies. Given the political and technical issues involved, the current timescale for implementation of 2007-2008 seems overly optimistic, and a timescale of 2010 may be more realistic.</p> <p>The current RP proposals build on a recent history of demand management policies and measures to control traffic levels in Shanghai. Vehicle purchase and ownership is already subject to a quota system. In addition, since 15 February 2006, high emission vehicles have been banned on all elevated roads within, (and including) the Inner Ring Road, the Yan An Elevated Road and the Hu Min Elevated Road. From 1 October 2006, the banned area will be expanded to include the entire surface roads network within, (and including), the Inner Ring Road from 07:00 to 20:00.</p> <p>There is currently no specific legislation regarding the implementation of a RP scheme. Local legislation would be required for RP to be introduced in Shanghai. There is in principal political support from the key decision makers at city level.</p>
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	<p>It is expected that a dedicated organisation would be created that would be responsible for developing, implementing and operating any scheme. This organisation may be part of the Construction Commission, but no further details are currently available.</p> <p>Shanghai has examined RP schemes and proposals in Singapore, London, Norway, Hong Kong and California to inform the development of locally relevant proposals.</p>
<p>Options under consideration (types of charging)</p>	<p>The feasibility study has so far proposed a scheme that is likely to operate during weekday AM and PM peak periods only (08:00 – 11:00 and 16:00 – 17:30).</p> <p>The charge would essentially be a cordon charge of around 5-7 RMB (around 30-50 pence), chargeable every time a vehicle enters the zone. The considerations for setting the toll are mainly traffic impact on the tolling zone and other non-tolling area within the central city in terms of traffic volumes, average vehicle speed, saved time value, decreased NOx and CO<sub>2</sub> emissions.</p> <p>The zone is likely to cover two areas.</p> <ul style="list-style-type: none"> <li>• the Puxi area to the west of Hangpu River, (the historic core of Shanghai), covering around 17.5 square kilometres;</li> <li>• the Pudong area, (the new development zone of Shanghai), to the east of the Hangpu River, around 4.2 square kilometres.</li> </ul> <p>These areas cover the core of the commercial heart of the city, where traffic concentration and congestion delay are greatest and where there is limited scope for new highway construction to resolve the problems.</p> <p>The technology to be used is likely to be a Tag and Beacon style approach, not dissimilar to the current schemes in Singapore or recently trialled in Stockholm.</p> <p>In total it is expected that implementation costs will be around 130 million RMB (approximately £9million) and annual revenues may be over 300 million RMB (approximately £20million).</p> <p>It is expected that any scheme would be implemented as part of a package including public transport improvements, metro construction, bus priority scheme, traffic management improvements, and road network improvement. Further details are provided in the Shanghai White Paper. A range of improvements one currently under construction.</p>

	<p>Enforcement is expected to be managed through a vehicle registration system in place for private cars in Shanghai. Potential discounts have not been detailed but it is expected that all vehicles except buses and specially used vehicles (such as ambulance, fire engine, military vehicles, etc.) will be charged. There has been discussion about exempting Government cars, but this is not expected to happen.</p> <p>Plans may be changed as a result of further technical work on the impact on traffic volumes, speed, congestion and emissions inside and outside of the charging zone.</p> <p>It is considered that in order for a scheme to be successfully implemented; the potential options for RP needs to be developed further; stakeholder opinions need to improve; public transport, although it has improved needs to expand further; future transport infrastructure projects need to be completed; discounts and exemptions should be equitable and ITS should continue to be developed in Shanghai.</p>
<p>General Level of Awareness</p>	<p>There has been debate about the proposals for RP mainly around:</p> <ul style="list-style-type: none"> <li>• RP as an idea imported from western countries. There is considerable debate over whether it can be consistent with the current local situation of China, given Chinese cities' less developed transport facilities, local transport plans, traffic enforcement and management techniques.</li> <li>• whether RP can provide a definitive solution to the problem of congestion;</li> <li>• how issues of equity can be resolved between private motorists and official cars, as well as between income groups; and</li> <li>• whether RP is reasonable and practical in the Chinese context.</li> </ul> <p>Car drivers in Shanghai are generally not in favour of a RP scheme, although levels of consultation and public debate typically fall below those expected in Western societies. A recent internet survey indicated that 91.4% of respondents did not agree with the scheme, compared to only 6.6% who agreed. This is currently seen as a potential barrier to the scheme although it is not clear whether the Government needs majority public support to press ahead with the proposals.</p>
<p>Sources</p>	<p>Shanghai Congestion Charge Project Feasibility Study Report – November 2002          Interim report of second feasibility study – July 2005          Shanghai Transport White Paper - 2002</p>

## 16. Hong Kong (China)

<p>Current Status of Proposals</p>	<p>Hong Kong has no plans to implement area-based Road Pricing (RP) in the short-term. Any scheme is largely seen to be subject to public acceptance.</p> <p>Whilst Hong Kong was ahead of Singapore in investigating electronic means of RP, no active scheme has been implemented as a result of the study work carried out and, although further technical work continues to the present, it seems highly unlikely that the position will change in the foreseeable future.</p>
<p>Aims of Proposals</p>	<p>Studies of RP in Hong Kong have had the primary objective of restraining private car use and traffic congestion in Central Hong Kong and the Kowloon Peninsula.</p> <p>In line with economic growth in the 1970's the number of registered vehicles in Hong Kong doubled, in comparison with only a 17% increase in road capacity. Over ¾ of average daily traffic flow in the Central Area comprises private cars and taxis, and therefore control of these vehicles was seen as crucial if network speeds were to be maintained at acceptable levels.</p> <p>Air quality was not part of the motivation for the 1980s trials, although has become more of a consideration recently. Raising revenues were also not a significant objective. The construction of transport infrastructure has largely been funded either by direct tolls, or increase in land values and development potential resulting from public transport improvements.</p>

<p>Policy/ Legislative background</p>	<p>Hong Kong has undertaken two major trials or study programmes into RP:</p> <ul style="list-style-type: none"> <li>• The 1983-85 Pilot Scheme included live technology trials based on Automatic Vehicle Identification (AVI) and evaluation of a range of charging areas in and around the Central Area of Hong Kong Island and Kowloon Peninsula; and</li> <li>• The 1997-2001 Feasibility Study considered different technology, Tag and Beacon and Global Positioning Systems (GPS) based. The studies considered a more simplified charging cordon than the 1980s work and covered Hong Kong Island only.</li> </ul> <p>The position regarding the need to control traffic was set out in the first Hong Kong Comprehensive Transport Study (CTS1) of 1976 and Internal Transport White Paper of 1979. This subsequently led to a number of measures to significantly control car ownership across the territory; from 1982; the tax for purchase of new cars was doubled and the annual licence tax trebled. This reduced new registrations by 25% in the first year. However, the impact on car use was much more varied, with a 19% reduction in the New Territories, where incomes were lower and congestion less serious. However, there was little or no reduction in those areas (such as Central) where congestion was worst. It was therefore argued that charges on ownership were unlikely to impact directly on congestion and a new approach was needed.</p> <p>The Government stated after the 2001 study that RP was only to be considered further if vehicle growth exceeded 3% per annum and peak hour traffic speeds in Central Hong Kong fell below an accepted benchmark, widely quoted as around 20 kph. The Government also stated that it would be unlikely that RP would be considered without the construction of a suitable alternative route for east-west through-traffic within Hong Kong's CBD, currently planned for completion in 2012.</p> <p>Currently, despite the availability of technology and a belief amongst transport professionals that Hong Kong is a "natural candidate" for RP (Hong Kong has the highest ratio of vehicle ownership to length of road network anywhere in the world (Hau, 1990), there is no current policy on the part of the Hong Kong Government to develop proposals in detail or implement a live scheme.</p> <p>The lack of support became personalised and focused on the then Secretary of Transport, Alan Scott, who was strongly criticised in the media. The result has been that despite good technical arguments few Government Officials now seem willing to argue for RP. Even though congestion has worsened in the Central considerably since the 1980s, the official position remains that whilst RP is not ruled out, it will not be required for several more years, not before the completion of the Central-Wanchai Bypass in 2012.</p>
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	<p>Most recently, the Secretary for the Environment, Transport and Works, Sarah Lau, announced that the 2001 transport model used to assess RP was being updated to allow different charging scenarios to be tested. She also told the Legislative Council in May 2006: <i>“When examining the scheme, we will consider the effectiveness of the scheme and other traffic improvement measures as well as the pros and cons of implementing the scheme and otherwise. We will consult the public before making any decision.”</i></p> <p>The developing Hong Kong Transport Strategy, “Moving Ahead,” updated for 2006, places great emphasis on further improvements to public transport, especially rail-based, and traffic management, particularly Intelligent Transport Systems, in improving network efficiency with very little emphasis on road pricing for managing demand.</p> <p>New legislation would be required to give the Hong Kong Government powers to create and operate any ERP scheme.</p>
<p>Options under consideration (types of charging)</p>	<p>A number of tunnels, bridges and key strategic routes in Hong Kong are tolled to traffic using Autotoll (essentially Tag and Beacon) technology which, in principle, would be transferable to an area-based RP scheme.</p> <p>In the 1980s trials:</p> <ul style="list-style-type: none"> <li>• There was intensive testing of RP using a fleet of 2,500 equipped vehicles and 20 detector locations in Hong Kong Central.</li> <li>• Each vehicle was fitted with an electronic number plate the size of a video-cassette;</li> <li>• The charging points were formed by loops embedded in the road, and enforced with closed circuit TV cameras.</li> <li>• Participants were not actually charged, although drivers were sent an itemised invoice at the end of each charging period as would occur in any live scheme.</li> <li>• Charging was only in the peak periods.</li> <li>• The 1980s trials were estimated to cost HK\$350 million with annual operating costs of HK\$20 million per annum;</li> <li>• The cost to the “average” driver was estimated as HK\$120 per month, partly offset by an assumed HK\$100 per month reduction in the Annual License Fee. However, drivers entering more congested areas and travelling at peak times would pay considerably more.</li> </ul> <p>The 1997-2001 Feasibility Study:</p> <ul style="list-style-type: none"> <li>• Recommended GPS based technology because it would give longer term technical and commercial benefits and be interoperable.</li> <li>• Supported the case for RP, but only as a long term option, 2006 at the earliest for Hong Kong Island and 2011 for Kowloon.</li> <li>• Noted that RP was only one of the available measures for</li> </ul>

	<p>controlling congestion. The study also gave some support to the proposal that a “bypass” to the CBD should be constructed before a scheme is implemented.</p> <ul style="list-style-type: none"> <li>• Estimated costs of HK\$1 billion for implementation and HK\$200 million per year for operation. Estimated annual revenue was calculated at HK\$400 million to HK\$1.3 billion.</li> <li>• Recommended a single zone cordon-based charging scheme covering Central, Wanchai and Causeway Bay, with recognised congestion problems and with good access by public transport.</li> <li>• Recommended directional charging in line with the peak direction of travel.</li> <li>• Recommended charging between 08:00-19:00, with higher charges for peak periods.</li> <li>• Modelled charges of between HK\$8 and HK\$31 depending on the time of day and traffic demand growth.</li> <li>• Recommended that emergency vehicles should be exempt but that all exemptions should be evaluated against the principles of “equity, efficiency and public acceptability.”</li> <li>• Recognised there would be air quality improvements in the charging zone.</li> <li>• Recommended complementary measures (e.g. Park and Ride, improved public transport) and potential use of revenues.</li> </ul>
<p>General Level of Awareness</p>	<p>The debate about the need for RP continued during the 1990s, with academics and professionals stressing its benefits and generally supporting its implementation.</p> <p>More recently a key focus has been congestion at the entrances to the Cross Harbour Tunnel (CHT) between Hong Kong Island and Kowloon. It is generally accepted that this is caused by the imbalance of tolls charged between the three tunnels, with the private operators charging considerably higher tolls than the Government-managed CHT. There is ongoing debate on this issue, with academics in particular arguing for a more rational pricing system linked to demand management objectives for Hong Kong as a whole.</p> <p>RP proposals were extensively debated by the public, business stakeholders and local politicians, and largely rejected, in the mid-1980s. As a result of this experience, it is highly unlikely that any Hong Kong official or politician will stake their reputation by supporting RP. It also remains unlikely that any survey of public opinion in the near future would identify significant support for RP. This lack of support can be ascribed to a number of reasons;</p> <ol style="list-style-type: none"> <li>1. <b>Structure of Local Politics.</b> In the early 1980s, there was a change in the internal organisation of Hong Kong local government with the forming of District Boards, each of which had a powerful Transport Sub Committee. Generally, the committees came out against RP proposals.</li> </ol>

	<ol style="list-style-type: none"> <li>2. <b>The Handover of Hong Kong.</b> The studies took place in the early days of the handover period of Hong Kong to China in 1997. There was considerable sensitivity to the specific ability of AVI technology to track individual vehicles and CCTV monitoring to enforce compliance.</li> <li>3. <b>The Absence of Effective Communications and Lobbying.</b> The Government did not lobby the relevant professional and interest groups in support of RP or develop a communications strategy for the public. The Government also only published summaries of the studies. Full publication of the 1985 Main Report may have avoided or reduced many of the misconceptions from the public and local politicians.</li> <li>4. <b>Bad Timing (and Forward Planning).</b> There appeared to be less need for RP amidst all the other measures introduced recently relating to car taxes and tolling.</li> <li>5. <b>Lack of Business and Stakeholder Support.</b> A number of influential stakeholders argued that the congestion problem in Hong Kong was exaggerated, with RP being little more than a new tax. Such concerns were highlighted by a sceptical media.</li> <li>6. <b>General Economic Conditions.</b> The stock market downturn in the mid-1980s made it more difficult for the Government to introduce any measure which can be presented as a new “tax,” even if it was expected to be neutral.</li> <li>7. <b>The Focus on Private Cars.</b> In Hong Kong, taxis formed about the same proportion of the traffic stream as private cars. Yet because of their organised strength, fears from the Government of driver strikes and their role as a form of public transport, taxis were exempted from proposals. As a result, private car drivers felt unfairly discriminated against.</li> <li>8. <b>Scheme Specification and Use of Revenues.</b> It has been argued that the proposal of multiple zones and periods caused confusion reducing confidence and acceptability during the debate. Furthermore, the Government was not clear on what net revenues from the scheme might be used for and whether they would be re-invested into the transport system.</li> </ol> <p>Concerns about privacy are not as relevant anymore with about 50% of the journeys through Hong Kong’s tolled tunnels and bridges now using Autotoll electronic ticketing.</p>
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<p>Sources</p>	<p>Key Contacts: Geoff Rogers and Jonathan Spear, Technical Advisors to Atkins China Limited.</p> <p>Other Information: Hau, Timothy (1990): Electronic Road Pricing: Developments in Hong Kong 1983-89, Journal of Transport Economics and Policy, Vol. 24, No. 2, May 1990</p> <p>Hong Kong Government, Environment, Transport and Works Bureau (2001) No Need for ERP to be Implemented. Press Release. April 24, 2001</p> <p>Hong Kong Government Environment, Transport and Works Bureau (2004): ERP is Not An Alternative to a Central-Wanchai Bypass. Press Release. March 26, 2004.</p> <p>Hong Kong Government, Environment, Transport and Works Bureau (2006): Studies on Electronic Road Pricing Scheme. Press Release. May 24, 2006.</p> <p>Hong Kong Government, Environment, Transport and Works Bureau (2006): The Transport Strategy: Hong Kong Moving Ahead (May 2006)</p> <p>Ison, S. and Rye T. (2004): Implementing Road User Charging: The Lessons Learnt from Hong Kong, Cambridge and Central London, Transport Reviews, Vol. 25, No.4, , July 2005,</p> <p>Transpotech (1985) Electronic Road Pricing Pilot Scheme: Main Report</p> <p>Wilbur Smith and Hyder (2001): Feasibility Study on Electronic Road Pricing: Final Report</p>
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## 17. Netherlands

<p>Current Status of Proposals</p>	<p>There is currently no finalised plan for introducing Road Pricing (RP).</p> <p>There is to be discussion of a Policy Document on Mobility in the Lower House and if accepted by the Upper House, distance-based RP could be implemented for the year 2012.</p> <p>Currently this is envisaged to be completed in a two stage process. The first stage is to accelerate local schemes and introduce tolling to target the most congested areas and the second stage is to extend these to a national RP scheme.</p> <p>A call for Expressions of Interest in developing the scheme further closed in April 2006.</p>
<p>Aims of Proposals</p>	<p>The primary aim of a national RP scheme “Anders Betalen voor Mobiliteit” is to develop a more equitable method of paying for travel.</p> <p>In the Mobility Policy Document, the cabinet also indicated that the introduction of RP was necessary to reduce travel times, improve reliability and strengthen the spatial-economic structure, subject to the budgetary limitations set out in the Mobility Policy Document.</p> <p>RP “Anders Betalen voor Mobiliteit” will have to maintain the environmental effects of the current fixed taxes.</p> <p>The aim of accelerating schemes and introducing tolling prior to a national scheme is to provide revenue to fund the highway infrastructure developments required.</p>
<p>Policy/Legislative background</p>	<p>The Ministry of Transport, Public Works and Water Management has the responsibility for planning transport in the Netherlands.</p> <p>Broad-based support is considered crucial in order to implement RP, which is why the cabinet set up a platform: the New Ways to Pay for Mobility Platform (Platform Anders Betalen voor Mobiliteit). This political platform issued recommendations in 2005 on its RP policy which were debated and now receive broad support. This has been incorporated into Part 3 of the Mobility Policy Document.</p> <p>National RP is not expected to be implemented until 2012. The funding of highway improvements is required prior to RP and there is a proposal to accelerate schemes and toll new highways and associated networks which is outlined separately in the Infrastructure Plan. These are expected to start from 2010.</p>

	<p>The political background is largely supportive of RP measures. There is an election planned for November 2006 and all parties' manifestos support the current plan for introducing RP. This is because of a growing acceptance that congestion is a problem and support for a new road tax system that is more equitable. Progress on RP is to be reported to the government every 6 months.</p> <p>New legislation is required to allow RP. To proceed with the tolling stage existing legislation has been revised to allow revenues to be reinvested in the highways. Additional legislation will still be required to proceed with national RP which will be debated in November 2006.</p> <p>There has been considerable debate in the past about how to introduce RP. The previous policy in 1994 known as 'Rekening Rijden' involved an AM peak cordon charge around 4 key cities (Amsterdam, Rotterdam, The Hague and Utrecht). In 2001 these cities dropped out largely due to a lack of political and public acceptance. This was replaced by a plan to introduce a kilometre charge (kilometerheffing). In 2001 this project was also abandoned for the same reasons.</p> <p>There is considerable scrutiny of costs associated with this project. This is to ensure that revenues are substantial enough to warrant implementation. It is currently envisaged that all costs should be no more than 5% of the revenues. Initial estimates are for a set-up cost of - 4 billion euros and an annual operating cost of 800 million euros.</p> <p>In September 2006 a cost monitor (kostenmonitor) of market parties has shown that the investment and operation costs are expected to be lower than they were in 2005. This could provide an impetus to accelerate work on the introduction of a distance-based scheme in 2012. In 2008 the results of a new cost monitor will form the basis for a decision as to whether the costs will have reduced enough to trigger an invitation to tender.</p>
<p>Options under consideration (types of charging)</p>	<p>There is no agreed structure for a RP scheme. This is to be agreed within a 'Joint Fact Finding' group comprising a large group of local authorities and stakeholders. The current expectations are that RP will be implemented in two stages.</p> <p>The aim of the 'Joint Fact Finding' is to generate enough information to make clear political choices by spring 2007 including; setting the rates for RP; how to move from fixed taxation system to the new system; the operation of the RP scheme, including the body responsible for collection; and the strategy for implementation.</p>

	<p>National RP, not expected until around 2012, would replace the current fixed road taxation with a charge for each kilometre driven. The charge would vary by time and location as well as by environmental conditions. It is expected that having a higher charge in the peak periods and in the cities will help to reduce congestion to required levels. It is expected that RP, building new roads and more efficient use of the current roads will reduce the congestion to 1992 levels.</p> <p>Technology requirements are yet to be decided. In the market consultation, several companies have been commissioned to review feasible technology. Although it is expected that GPS technology with Automatic Number Plate Recognition (ANPR) cameras will enforce the scheme.</p> <p>Revenues from the first stage will be used to fund highway infrastructure projects required for the second stage. Revenues from national RP will be used to replace the existing taxes - the motor vehicle tax (MRB) and the personal car and motorcycle tax (BPM) - that currently fund transport infrastructure across the country.</p> <p>The national RP scheme intends to shift the financial burden from owning a car to using a car. Also, cleaner vehicles will be cheaper to run than vehicles that cause pollution. Where doing so is considered effective, a higher kilometre fee will be charged on busy road sections.</p> <p>The 'Joint Fact Finding' group will evaluate expected impacts to assess what additional measures may be required as part of the RP scheme.</p>
<p>General Level of Awareness</p>	<p>There has been balanced media coverage by the Dutch Telegraph which is largely seen to influence public opinion. Public acceptability has been researched and over 50% support the scheme if it is considered equitable.</p> <p>In the past there has been significant debate, and it is considered that a campaign against previous plans for RP 'Rekening Rijden' by the Dutch Telegraph resulted in its eventual rejection.</p> <p>Key stakeholders are involved in the Committee. This includes the ANWB who are a road-user group with around 4 million members. They are supportive of a RP scheme which can be seen as a gauge of popular opinion.</p> <p>Further consultation will be undertaken as the scheme is developed.</p>

Sources	<p>Key Contact; Marian Jongman – Ministry of Transport, Public Works and Water Management</p> <p>Barry Ubbels – Researcher at Department of Spatial Economics, Free Amsterdam University.</p> <p>Other information; Advice from the Platform for “Anders betalen voor mobiliteit” (Alternative ways of paying for mobility)</p> <p>Acceptability of road pricing and revenue use in the Netherlands – Barry Ubbels and Erik Verhoef, 2005 <a href="http://www.ersa.org/ersaconfs/ersa05/papers/120.pdf">http://www.ersa.org/ersaconfs/ersa05/papers/120.pdf</a></p> <p>Description of Scheme history; <a href="http://scenariothinking.org/wiki/index.php/Pay-as-you-drive">http://scenariothinking.org/wiki/index.php/Pay-as-you-drive</a></p> <p>Call for Expression of Interest in developing scheme <a href="http://www.ertico.com/en/news_and_events/ertico_newsroom/dutch_transport_ministry_launches_call_for_expression_of_interest_on_kilometre_charging_system.htm">http://www.ertico.com/en/news_and_events/ertico_newsroom/dutch_transport_ministry_launches_call_for_expression_of_interest_on_kilometre_charging_system.htm</a></p> <p>Scheme Cost Monitor website <a href="http://www.vananaarbeter.nl/abvm/index_UK.php">http://www.vananaarbeter.nl/abvm/index_UK.php</a></p>
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