Trial Implementation of a Congestion Tax in Stockholm
3 January – 31 July 2006
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Stockholm is divided by water. All through traffic drives past the city over a few bridges. The present traffic volume on the two main thoroughfares, the Central Bridge and Essingeleden, often greatly exceeds the capacity for which they were originally built. Some 150 000 vehicles drive on Essingeleden alone every day.

The population of Stockholm County is growing at a rate of some 20 000 people a year, which inevitably means more traffic, and an even greater burden on city streets and roads. It also means a lower standard of access and mobility if no new roads are built. During rush hour the Stockholm traffic system comes close to reaching its maximum capacity. The traffic situation also causes environmental problems in the form of more noise and emissions.
Congestion tax – part of the full-scale trial in Stockholm

In an attempt to reduce congestion and improve the environment, the “full-scale trial in Stockholm” was conducted. This included the trial implementation of a congestion tax, expanded public transport services and more park and ride facilities near city access roads. The principal players involved were the City of Stockholm, Stockholm Transport (SL) and the Swedish Road Administration (SRA).

The full-scale trial in Stockholm began on 22 August 2005, when public transport services were expanded, and ended on 31 July 2006. The congestion tax applied for seven months, between 3 January and 31 July 2006.

The core objectives for the full-scale trial were:
- reduce traffic to and from the city by 10 - 15 percent during rush hour
- better level of service in Stockholm city traffic
- reduction in the emissions of carbon dioxide, nitric oxide and particulate matter
- city residents will experience a better city environment

The City of Stockholm was responsible for coordination with other municipalities and for providing general information about the full-scale trial, such as why it was being conducted. It was also responsible for surveys and evaluations.

Stockholm Transport was responsible for the expansion in public transport during the trial period as well as for the construction of park and ride facilities and information related to this.

The Swedish Road Administration was commissioned to build and operate the system for the congestion tax, including the collection of the tax and public information in this regard.
Traffic on Essingeleden was not affected by the congestion tax.
Trial implementation of a congestion tax – an overview

On 2 June 2003 the Stockholm City Council passed a decision to conduct a trial implementation of environmental charges in the Stockholm inner city zone. A special Environmental Charges Secretariat was set up for investigation, coordination and information purposes.

The inquiry into congestion charging, commissioned by the Government, presented its report in June the same year. It found that congestion charges had to be collected as a state tax, as Swedish law says that a charge can only be levied when the payer receives something in return. Due to the fact that the payment only provided the right to use already existing infrastructure, the congestion charge was considered to be a tax. Further, as a municipal authority is not permitted to tax anyone other than its own inhabitants, the congestion tax had to be made a state tax.

During the trial implementation of the congestion tax there were 18 control points set up in a ring around the Stockholm Inner city area.

Congestion Tax Act

On 28 April 2004, the Swedish Government submitted a bill to Parliament proposing the implementation of a congestion tax. One month later the Swedish Road Administration (SRA) was commissioned by the Government to handle the technical side of putting a congestion tax system into trial operation:

The Congestion Tax Bill was approved by Parliament in June 2004 and the Congestion Tax Act (2004:629) was issued on 17 June 2004. In an appendix to the Act it was stated that the trial implementation of a congestion tax in Stockholm would start on a date to be decided by the Government and continue until 31 July 2006. In the provisions of the Act it was stipulated that the Swedish Road Administration would carry out the collection of the congestion tax.

Legal investigation

The procurement of the technical system was subjected to legal investigation. This basically concerned two issues: if the SRA had acted correctly when it took over the procurement initiated by the City of Stockholm, and if the awarding of the contract had been handled properly. The case was tried by the Stockholm County Administrative Court, the Administrative Court of Appeal and the Supreme Administrative Court during the summer and autumn of 2004 and continued into early 2005. On 30 March 2005 the Supreme Administrative Court decided to discontinue further hearings. This meant that the verdict previously issued by the Administrative Court of Appeal, i.e., that the procurement conducted by the SRA was correct, then came into force.
The preparations for the full-scale trial resumed immediately in April 2005. At that time the work had been at a standstill for about two months as a result of the legal proceedings. In conjunction with this, the Government decided that 3 January 2005 was the date on which the trial period would begin.

**Organisation**

Many players were involved in the development and operation of the full-scale trial in Stockholm. The SRA reported continuously to the Ministry of Finance and the Ministry for Industry, Employment and Communications. The National Tax Board and the County Administrative Court were responsible for reviews and appeals, and the Enforcement Service handled the debt collection for unpaid congestion taxes.

At the SRA the project was run by a relatively small project organisation that reported directly to the Director-General. This project organisation consisted of both employees hired on a permanent basis as well as external consultants from different fields of expertise.

The contractor engaged by the SRA, IBM Svenska AB, had in turn several sub-contractors. Another key element in the organisation was the SRA Traffic Registry.

**Widespread attention**

The trial implementation of a congestion tax received widespread attention both in Sweden and abroad. Stockholm was, after London, the second European city since the turn of the millennium to test a payment system intended to reduce congestion and improve the traffic environment. Many cities throughout the world, particularly in Europe and the USA, exhibited interest in the project, and a large number of international delegations visited Stockholm to study the project first-hand.
Exemptions from the congestion tax

The congestion tax law applies only to vehicles registered in Sweden with the following exceptions:

- emergency service vehicles*
- buses with a total weight of 14 tonnes or more*
- diplomatic cars *
- taxis*
- motorcycles*
- vehicles registered abroad*
- military vehicles*
- transportation service vehicles, total weight less than 14 tonnes (owner had to apply to the National Tax Board for approval)
- vehicle used by a person with a disability parking permit (who had to apply to the National Tax Board him/herself)
  This exemption did not apply to commercial transport vehicles.
- vehicle equipped with technology for running
  a) completely or partially on electricity or gas other than LPG, or
  b) on a fuel blend consisting primarily of alcohol, and registered as such at the SRA*.

* Owners of these vehicles were not required to apply for an exemption from the congestion tax as this occurred automatically through the information contained in the vehicle registry.

Lidingö rule and Essingeleden

Vehicles that only by-passed Stockholm via Essingeleden were not subject to the congestion tax. When driving to or from Lidingö, anyone who crossed by any of the three control points at the Lidingö bridge as well as an additional control point in the city within 30 minutes was also exempted from the congestion tax. The reason for this was that the only connection from Lidingö municipality to the national road network runs through the city.

Information for vehicle owners and drivers was posted on hoarding at the entrance points to Stockholm city.
Trängselskatt i Stockholm
3 januari - 31 juli 2006
www.stockholmsforsoket.se
Congestion tax
– how it was paid

During the trial period the SRA was responsible for decisions regarding the congestion tax, service charges and surcharges as well as the collection of these. This was done on behalf of the National Tax Board and based on information contained in the vehicle registry. The collection was carried out through automatic processing.

Section 1. The congestion tax shall be paid to the State in compliance with this Act.
Section 2. The National Tax Board is the taxation authority. On behalf of this authority, the Swedish Road Administration shall, through automated processing based on information in the vehicle registry, decide the congestion tax, service charges and surcharges as well as carry out the collection of such tax and charges...


Amount and payment
The congestion tax was levied between 6.30 a.m. and 6.29 p.m. The actual amount was displayed at the control point. The tax per passage was SEK 10, 15 or 20 depending on the time of day. The highest amount charged was during rush hours between 7.30 and 8.29 a.m. and 4 and 5.29 p.m. The maximum amount per vehicle and day was SEK 60. Payment could only be made retroactively, and there was no opportunity to pay at the control points.

The payment was to be registered in the SRA congestion tax account no later than five days after the passage of a control point. From 1 June 2006, this was extended to 14 days. The tax could be paid in several different ways, and additional options were made available as time went along. Most people paid automatically via direct debit, but it was also possible
to pay over the counter at Pressbyrå kiosks or 7-Eleven shops throughout the country, via the Internet using a credit or charge card, at banks or via Internet banking.

It was the responsibility of the vehicle owner to ensure that the tax was paid in time. No invoice was sent out. Information about the amount to be paid could be obtained through Customer Services, at the ”My tax decisions” portal (via the full-scale trial website) or when paying at a Pressbyrå kiosk or 7-Eleven.

**Automatic payment through an onboard unit and direct debit**

Anyone who used the direct debit option did not have to keep track of when the different tax decisions had to be paid. Under the condition that funds were available in the bank account, the tax was automatically transferred into the SRA congestion tax account at the right time. Everyone who signed a direct debit contract received an electronic onboard unit to affix to the windscreen. This was borrowed free of charge.

Information about the congestion tax and contracts for direct debit and onboard units were available at Pressbyrå kiosks and 7-Elevens. The signed contract could be given directly to the cashier in exchange for an onboard unit.

The onboard unit was affixed to the inside of the windscreen, up by the rear-view mirror.
from the SRA and increased system reliability and vehicle owner security.

**Ordering the onboard unit and direct debit**

Private individuals could order the onboard unit and arrange direct debit payment via several different channels:
- www.stockholmsforsoket.se. Orders were forwarded to Customer Services, from where a direct debit contract and onboard unit were sent to the home address of the vehicle owner.
- Customer Services, on +46 (0)771-29 29 29 from where a direct debit contract and onboard unit were sent to the home address of the vehicle owner.
- Pressbyrå kiosks and 7-Eleven shops in the Stockholm area*. Direct debit contracts and onboard units were available in these shops. The signed contract was given to the cashier in direct exchange for an onboard unit.

It normally took about two weeks from the day on which the contract was signed until the direct debit was working.

Companies and organisations could order onboard units for their vehicle fleets via a special website. At this site a list of the company vehicles could be compiled and the appropriate bank account specified. In connection with this, a contract was generated, to be signed and sent to the SRA. Every day, those companies that availed themselves of onboard units received a list of the previous day’s tax decisions for their vehicles.

As an onboard unit was linked to a specific vehicle, it had to be returned when the vehicle changed owner. It was possible to do this at Pressbyrå kiosks and 7-Elevens shops in the Stockholm area. Once the change in vehicle ownership had been entered in the vehicle registry the direct debit was automatically cancelled.

* As well as in certain shops in Eskilstuna, Gnesta, Nyköping, Uppsala, Vagnhärad, Västerås and Örebro.
Payment over the counter
An easy way to pay the congestion tax was over the counter at Pressbyrå kiosks and 7-Elevens throughout the country. All the cashier needed was the licence plate number to be able to check the system to find out which tax decisions were unpaid for that particular vehicle. Customers could then choose the tax decision(s) they intended to pay at that time.

Payment via Plusgiro and Bankgiro
Payments to the SRA congestion tax account via Plusgiro or Bankgiro could be made via Internet banking, at a bank branch, Svensk Kassaservice (Swedish Cashier Service) or through envelope services provided by banks.

▼ The congestion tax could be paid at Pressbyrå kiosks and 7-Eleven shops anywhere in the country.
Anyone paying via bank or Internet bank filled in the Plusgiro or Bankgiro account number on the form along with the amount to be paid. The licence plate number and date of passage had to be specified for every payment. A separate payment was required for each tax decision.

Usually there was an extra charge when paying at a bank branch or through the envelope service. This charge varied from bank to bank. No charge was added when paying via Internet banking.
Payment via the Internet

About half way through the trial period it became possible to pay by credit or charge card via links from www.stockholmsforsoket.se and Pressbyrå and 7-Eleven websites. This service also facilitated payment via one’s own Internet bank.
Web portal

Vehicle owners could check their tax decisions on the Internet, both those paid as well as those still unpaid. “My tax decisions” could be accessed from www.stockholms-forsoket.se or at the www.trangselskatt.vv.se home page.

By 7 a.m. the morning after passage, information about the tax decision from the previous day was available along with other paid and unpaid tax decisions. Vehicle owners logged in through stating their licence plate number and the five-digit code found on the vehicle registration certificate or through their e-identification.

Tax decisions were normally shown as paid at the “My tax decisions” portal the day after the money had been registered in the SRA account. In conjunction with weekends and public holidays this could take a day or so longer. The congestion tax was considered as paid the day the money was available in the SRA account.
Reminders and surcharges
If the congestion tax was not paid in time, the vehicle owner received a reminder by mail, including a SEK 70 service charge. This service charge along with the tax was to be paid within four weeks from the day of passage. If this was not paid in time the vehicle owner was sent an additional reminder with a SEK 500 surcharge. The tax, service charge and surcharges had to be paid within a month from the date on which the surcharge had been decided. Unpaid tax decisions and charges were then remitted to the Enforcement Service, which added its own SEK 500 handling fee for debt collection.

Safety and personal integrity
Vehicles were registered when driving past a control point. In order to be able to determine the vehicle owner’s tax liability, he or she was identified via the licence plate number. The time, the vehicle licence plate number and the specific control point crossed were registered. The SRA was responsible for the personal data that was processed during the trial period. The data was kept as long as necessary to ensure the collection of the tax for the relevant vehicle. The tax decision (licence plate number and amount per day) was an official document. However, information about the control point crossed and the time this occurred was classified as secret. (Official Secrets Act (1980:100), Ch. 9 Section1).
**Reviews**
Anyone wishing to have a tax decision reviewed could submit such a request to the National Tax Board no later than three weeks after the tax should have been paid. A request for a reviewal where a service charge and/or surcharge had been imposed had to be submitted within two months of the decision to impose such charges. The National Tax Board was authorised to make decisions on payment respites, tax exemptions and tax refunds. Its decisions could be appealed to the Stockholm County Administrative Court.

**Refunds**
Any excess amount was automatically refunded, provided it was more than SEK 25. The tax was refunded via a Plusgiro notice slip or directly to the direct debit account (for those using this system). Refunds for amounts less than SEK 25 could be requested by calling Customer Services.

**Tax regulations**
If an employer reimbursed an employee for a congestion tax expenditure in connection with a business trip undertaken in his/her own car, the reimbursement was considered as salary. If a fringe benefit car had been used under the same circumstances, this was not considered a taxable benefit over and above the car benefit, as it was always the vehicle owner who was liable to pay the congestion tax, not the driver.
Trial implementation of a congestion tax – the technical system

To develop, build and operate the technical system, the SRA contracted IBM Svenska AB, which in turn had engaged a number of sub-contractors.

With only 14 months preparation time available, a system was designed, built and put into operation on the appointed day. It was a flexible and scalable system that had been developed to be able to cope with large traffic volumes and adapt to different and changing needs. The system included over 40 automated interfaces and was in operation 24 hours a day, seven days a week. When the project was at its peak level, there were some 700 people involved in such things as managerial positions, information, customer services, payment queries, maintaining roadside equipment, tax investigations and the distribution of onboard units. Almost 700 000 vehicle owners were affected through having driven past a control point at least once during the trial period, or through having ordered an onboard unit linked to a direct debit account.

Eighteen control points were set up at Stockholm city entrance and exit roads. Vehicles were registered automatically both on the way in and out of the inner city zone. The traffic flow was not affected as drivers did not have to stop or slow down when crossing a control point. There were two ways to identify vehicles:
• through photographing the number plates
• also via the onboard unit, for those vehicles that had one.
System architecture
The congestion tax system consisted of four principal components:
- roadside equipment to collect passage information
- pre-processors, to process the information from the control points and generate tax decisions
- a business process platform, to book tax decisions, handle payments, reminders and reports
- a web portal – with both a public website and an Intranet for the benefit of Customer Services and the National Tax Board.

The system was also integrated with:
- **The Swedish Traffic Registry.** The pre-processor and business process platform were updated on a daily basis using vehicle and ownership data extracted from the vehicle registry.
- **National Tax Board.** Reviewals and appeals were handled by the National Tax Board, which also decided on congestion tax exemptions, payment respites and refunds.
- **Enforcement Service.** Unpaid tax decisions, including service and surcharges were remitted to the Enforcement Service for debt collection.
- **Swedish Postal Services.** Contracts for onboard units, reminders and passage information were printed out and sent to vehicle owners. Contracts for onboard units linked to direct debit were scanned at the Postal Services, which also distributed onboard units.
- **Pressbyrå kiosks and 7-Eleven shops (Reitan Servicehandel Sverige AB).** Congestion tax payments as well as the ordering and return of onboard units were handled at these outlets. An Internet payment service was also provided by Reitan.
- **Bank and payment systems.** The Swedish Bank, Nordea, handled the SRA congestion tax account, and it was the Swedish Bank Giro Centre that handled the direct debit payments. Giro payments were processed via bank branches, Internet banks and envelope services provided by banks.
Roadside equipment
The technical equipment at a control point was installed on three gantries above the carriageway and in a control cabinet at the side of the road. Columns were used instead of gantries at some control points.

The first gantry was equipped with a "Control Point" sign as well as a digital display indicating the tax charged at that particular time. Cameras installed on this gantry were used to photograph the rear number plates. The cameras used to photograph the front plates were mounted on the third gantry.

Laser detectors and transceiver aerials for vehicle identification via the onboard unit were mounted on the middle gantry.
Laser detectors
Two laser detectors per lane sensed when a vehicle crossed the control point, including its position on the carriageway. The laser activated the cameras, at which point the number plates were photographed, first from the front and then from the back.

Cameras
The cameras registered the number plates through taking a high resolution photo with an infrared flash. The photo was then cropped in the camera so that only the number plate and closest part of the vehicle around this was shown.

The number plates were identified directly in the camera using Optical Character Recognition (OCR) software. The images were then compressed, assigned a digital code and sent to a Multi-Lane Controller where they were packaged with other passage information.

Transceiver aerials
The middle gantry was equipped with a radio transceiver consisting of a central transmitter aerial and a set of receiver aerials. The transmitter was activated when the laser detectors sensed that a vehicle had driven past the control point. If the vehicle had an onboard unit, the transmitter activated this and the onboard unit’s unique ID number was then sent to the receiver aerials.

Roadside equipment
1. Cameras for rear number plates
2. Laser detectors
3. Transceiver aerials
4. Cameras for the front number plates
5. The vehicle breaks the first laser beam
6. The aerials transmit a signal to the onboard unit
7. The onboard unit transmits information to identify the vehicle
8. The vehicle breaks the second laser beam
9. The front number plates are photographed and the photo is taken using infrared technology and showing only the number plates
10. When the vehicle has driven past the second laser beam the rear number plates are photographed
Multi-Lane Controller (MLC)

The information from cameras, laser detectors and onboard units was sent to the MLC unit in the control cabinet at the roadside. This was where passage information from the individual units was packaged in a file that was forwarded to the pre-processor. The file contained the following information:

- at least two photo images
- the licence plate number interpreted via OCR
- onboard unit ID number
- time of passage, date and control point.

Pre-processor

The pre-processor processed the files from the control points and generated a tax decision for every vehicle. All the photo images were examined here once more to ensure that the interpretation was as reliable as possible. If the pre-processor was unable to identify the number plates, the images were sent for manual identification. Where the file with the passage information contained an ID number from an onboard unit, this was converted into a vehicle licence plate number.

The pre-processor contained daily updated extracts from the vehicle registry to determine whether or not a vehicle was subject to the congestion tax. No tax decision was generated for exempted vehicles, and such passage information was deleted from the system. The vehicle registry also had information concerning vehicle ownership, in other words the person liable to pay the congestion tax.

Norrtull control point in the dark of winter.
For vehicles subject to the tax, the various amounts for crossing control points during the day were added up to generate a tax decision, but there was a ceiling charge of SEK 60 per day. No tax decision was generated where the Lidingö rule applied. Once a tax decision had been generated it was sent to the business process platform for handling. Passage information was stored in a database until the tax had been paid and the case was closed.

The number plate photo images that could not be read automatically were sent to Customer Services for manual examination. Every image was studied by two independent operators. If they did not interpret a photo image identically or if either of them was unsure, it was sent to a third person to determine if the number could be reliably ascertained. If, in the opinion of this person a photo image could not be used for identification purposes, it was discarded. This procedure on the part of the operators was only to obtain a basis for a tax decision. The tax decision itself was made by the system in the pre-processor, not by the operator.

**Business process platform**

This system generated and handled the congestion tax account for every vehicle on which a tax had been levied. It entered transactions and tax decisions as well as generated the reminders sent to vehicle owners who had not paid in time.
Different types of control point

The 18 control points could be divided into three different categories.

Bridges

Six control points were situated on bridges. At these locations the control cabinet had to be placed further away from the equipment on the gantries than otherwise. At the control point on the Johanneshov bridge, the gantries and the control cabinet were more than 60 metres apart.

Complex

Four control points were considered to be complex. At these locations there were multiple traffic lanes (six or more) and/or a fair distance between access and exit. These control points had more than one control cabinet to provide better reliability and accessibility. At the Norrtull control point with its ten traffic lanes there was one control cabinet for traffic exiting the city and another for traffic entering the city. At the Fredhäll/Drottningholmsvägen Interchange, with eight traffic lanes and a fair distance between the access and exit roads, there were three control cabinets.

Simple

Eight of the control points were designated as simple, where vehicles on between one and six lanes were registered. The Lilla Essingen control point was the simplest of them all, with only one lane where vehicles were registered when exiting the city.
Idag startar försöket med trängselskatt

Information om den trängselskatt du ska betala finns på www.stockholmsforsoket.se och 0771-29 29 29 dagen efter passage.

Snart trängselskatt 2006

Beställ transponder före 9 december så har du autogiro till 3 januari.

Vardagar kl. 06.30–18.29

Trängselskatt gäller vid passage in till och ut ur Stockholm t o m 31 juli. Inbetalad senast inom 14 dagar.

Vägverket

Enkelt sätt att betala trängselskatt

Via autogiro – beställ transponder

Kör du bil i Stockholm?

Trängselskatt prövas 3 januari – 31 juli 2006

Hur betalar jag trängselskatt?

Med autogiro och transponder, på Pressbyrån, 7-Eleven eller bank. Välj betalsätt!

Säker betalning med autogiro och transponder

Trängselskatt betalas enligt med autogiro och transponder. Den automatiska betalningsrutinen fungerar så smart autogirott blivit invändig.

Under de första veckorna av försöket med trängselskatt fungerar autogirott även om transpondern inte skulle sitta på plats. Men transpondern behövs i förrän att förstärka identiteten. Den ska tillförlitligas och säkerhetsgränden.

Information finns översatt till arabiska, boniska/kroatiska/bišćanska, engelska, fińska, franska, persiska, polska, ryska, somaliska, spanska, somali, turkiska och tyska. Informationen finns på webbplatsen och kan också beställas hos Kundtjänst.

Köra med kort på Internet, via bank, autogiro eller på Pressbyrån och 7-Eleven i hela landet

Trängselskatt i Stockholm

3 januari – 31 juli 2006

Betalas i efterskott

Inbetalad inom 5 dagar

Ingen räkning

Trängselskatt i Stockholm

Varje dags resande ger ett skattebeslut

Betalas med autogiro/tranponder

www.stockholmsforsoket.se • 0771-29 29 29

Vägverket

Säker betalning med autogiro och transponder

Trängselskatt betalas enligt med autogiro och transponder. Den automatiska betalningsrutinen fungerar så smart autogirott blivit invändig.

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Congestion tax – communication

The trial implementation of a congestion tax was organised as two parallel projects: one for technology and operations and another for communication. Both were equally crucial for the implementation of the full-scale trial.

A prerequisite for being able to ensure a reliable collection of the congestion tax was that relevant information had reached vehicle owners prior to putting the system into operation. The overall communication objective was formulated as follows:

Everyone who drives a Swedish registered vehicle in the Stockholm inner city area after the turn of the year 2005/2006 shall know of the existence of the congestion tax and that it must be paid without having been prompted to do so.

The idea was that vehicle owners and drivers would have received enough information before the trial period began to know if the tax concerned them, and if so, how they should pay it. Ideally they would also have procured an onboard unit for direct debit since the more drivers who chose to pay this way the more efficiently it was expected the system would run. If drivers were well-informed, the flow of traffic at the control points would not be disrupted and Customer Services would not be overwhelmed by calls.

Both large and small adverts were used by the SRA to draw public attention to the congestion tax, including where, how and when it was to be paid and who was responsible for paying.
The strategy for achieving this was to communicate intensively while at the same time keeping a low profile. In the early stages of the project, the focus was on direct communication in the form of meetings, flyers and letters. Several activities were arranged in shopping centres and malls, such as at the Stockholm Central Railway Station and at public transport nodes. Meetings were initially also arranged for those living and working close to the control points.

As the day for launching the system drew closer, the communication became more public and intensive. While information to the general public continued after the first day of operation, this gradually decreased. Contact with the media was important during the entire project period and helped spread information to individuals and decision-makers.

**Message**
The aim was to spread knowledge about how the congestion tax system worked. The tone was informative, not opinionated. Emphasis was on providing information concerning:
- that a trial implementation of a congestion tax was taking place
- where the control points were located and how vehicles were registered
- the amount of the congestion tax and the times it was charged
- vehicle owner liability to pay the tax
- how to pay the tax
- how to find information, in other words, websites and Customer Services.

**Several channels**
Several channels were used for providing public information. Larger, half page announcements were interspersed with short and to-the-point ads in the daily press, primarily in the Stockholm area but also in nearby municipalities and the country at large. Information was also given on hoardings at Stockholm city entrances, on signs on buses and...
parking meters as well as through spots on commercial radio channels. An information film was produced and shown on "Anslagstavlan", a short public service programme on Swedish Television.

Late in the autumn of 2005 a letter was sent to all vehicle owners in Sweden with information about the full-scale trial in Stockholm. This letter had a wide impact, even in the media.

Several printed pamphlets were produced, including a pocket facts that was distributed at such places as Pressbyrå kiosks and 7-Eleven shops throughout the country.

Other key information channels were the www.stockholmsforsoket.se website and Customer Services, that could be reached by calling +46 (0)771 29 29 29.

▼ Several activities were arranged in the city for Stockholmers, for example at the Central Railway Station.
Websites

The SRA managed the operation of the full-scale trial website www.stockholmsforsoket.se which provided information published by all three of the principal players.

SRA information about the congestion tax was also available at its own website, www.vv.se.

There was a link from www.stockholmsforsoket.se to the "My tax decision" page, where vehicle owners could find information about their own current tax decisions. Onboard units could be ordered from this page and e-mails sent to Customer Services via a web form. From April 2005 it was also possible to pay the congestion tax by credit/charge card and via Internet banks from this site as well as from the Pressbyrå and 7-Eleven websites.

A special website was available where companies and organisations could order onboard units.

Customer Services

Customer Services for the full-scale trial in Stockholm was opened 16 May 2005. This gave the general public an opportunity to have their questions answered well ahead of time. Prior to the date when the congestion tax system was to be put into trial operation, the focus was on answering questions and providing general information about the full-scale trial and the congestion tax. Vehicle owners could also register their interest in an onboard unit and a direct debit account.

Initially there were 75 people working at Customer Services, but this number gradually increased from October 2005. On 3 January 2006 there were some 450 people employed, all of whom had been given at least three week's prior training.

Customer Services was organised into a frontline team and a back office. The former consisted of some 300 people whose job it was to answer most questions about the full-scale trial, while the latter had about 100 people who tackled more complex queries and conducted payment investigations.
By the time the congestion tax system was put into trial operation it was obvious that a major part of the information had reached the target groups. From a peak of 10 000 calls a day, the number steadily declined during the first weeks of the trial period. Many of the questions concerned the payment of the congestion tax. New, more complex cases arose, mainly concerning payment investigations and queries from companies.

Customer Services was restructured during the spring of 2006 when the number of people employed was cut substantially. An attempt was made to, as far as possible, assign a specific attending officer to each particular case so that vehicle owners would always have the same contact person.
The principal way of contacting Customer Services was by phone or e-mail sent via a web form available at the Stockholm full-scale trial website. Normal letters and telefax messages were also received. Anyone calling Customer Services reached an interactive voice response menu with various options from which to choose. If this concerned general information or a complaint, onboard unit orders or less complicated matters, the caller was connected to the frontline team. Manual photo identification was also carried out by the frontline team.

Cases received in writing were handled by the back office. Payment cases that required an official decision were forwarded to the National Tax Board. A typical case could be when a vehicle owner considered his/her tax decision to be incorrect and wanted the decision to be re-examined and possibly reviewed.

**Information follow-up**

Surveys were conducted on a regular basis to find out the extent to which facts and information had reached the general public.
and different categories of vehicle owner. All in all, nine surveys involving over 10 000 people were conducted. Interviews were used to determine the information need and to prioritise the different sub-topics based on what the general public, specifically vehicle owners, knew about the full-scale trial in Stockholm.

The surveys studied how well people could answer a series of questions about the congestion tax as regards times, payment and how the system at control points functioned. These questions were repeated during the trial period and an obvious trend towards a greater number of correct answers was found. Key information channels and their impact were also analysed. Once the trial period was over, questions were also asked about how well the payment system had worked and the level of satisfaction.

All in all, survey results showed that the communication objective had been well achieved when the congestion tax system was put into trial operation on 3 January 2006. Most vehicle owners were aware of the congestion tax on that date and knew that they had to take their own initiative to pay it.

Information channels:

- Websites
- Customer Services
- Letters to vehicle owners
- Advertisements in the daily and trade press
- Media/press information
- Information in the traffic environment
- Information on the radio
- Public service television
- Pressbyrå kiosks and 7-Eleven shops
- Meetings
- Trade fairs/exhibitions
- Information pamphlets, fact sheets, leaflets, film
Facts

Trial period 3 January – 31 July 2006

SRA project time schedule
- planning phase 14 months
- trial period 7 months
- wind-up phase 5 months

Budget SEK 1.9 billion

Contractor IBM Svenska AB

Number of control points 18
- bridge 6
- complex 4
- simple 8

Number of cameras 164
Number of laser detectors 159
Number of MLC units 62
Number of traffic lanes 78
<table>
<thead>
<tr>
<th>Operational reliability</th>
<th>&gt; 99.9% of the number of lane hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of tax decisions</td>
<td>14.5 million</td>
</tr>
<tr>
<td>Amount of tax collected</td>
<td>SEK 399 million</td>
</tr>
<tr>
<td>Number of taxable passages</td>
<td>33.5 million</td>
</tr>
<tr>
<td>Number of non-taxable passages</td>
<td>13 million</td>
</tr>
<tr>
<td>Number of onboard units distributed</td>
<td>490 000</td>
</tr>
<tr>
<td>Division between payment methods</td>
<td>63% direct debit, 24% Pressbyrå and 7-Eleven shops, 13% bank</td>
</tr>
<tr>
<td>Payments received on time</td>
<td>96%</td>
</tr>
<tr>
<td>Number of reminders with a service charge</td>
<td>643 000</td>
</tr>
<tr>
<td>Number of reminders with a surcharge</td>
<td>169 000</td>
</tr>
<tr>
<td>Number of reviewals sent to the National Tax Board</td>
<td>13 000</td>
</tr>
<tr>
<td>Number of appeals to the Stockholm County Administrative Court</td>
<td>665</td>
</tr>
<tr>
<td>Average number of calls to Customer Services per day</td>
<td>2 400</td>
</tr>
</tbody>
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