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OPTIMISATION OF POLICIES FOR TRANSPORT INTEGRATION IN METROPOLITAN AREAS

Report on Work Package 20

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EUROPEAN COMMISSION

FOURTH RESEARCH FRAMEWORK

DGVII: TRANSPORT

PROJECT OPTIMA

Optimisation of Policies for Transport Integration
in Metropolitan Areas

Work Package 20: Identify Policy Instruments

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PROJECT OPTIMA: OPTIMISATION OF POLICIES FOR TRANSPORT INTEGRATION IN METROPOLITAN AREAS WORK PACKAGE 20: IDENTIFY POLICY INSTRUMENTS

1 INVENTORY OF TRANSPORT POLICIES IN TEST CITIES

The task of work package 20 was to inventory all transport policy measures in use, used or tested but rejected or planned in the nine test cities Edinburgh, Merseyside, Vienna, Eisenstadt, Helsinki, Turin, Salerno, Oslo and Tromso.

The inventory was done in two phases. In the first phase a three-part questionnaire was sent out to all test cities. Form 1 is a summary form for all the measures reported by the city. Form 2 is a form for detailed description of a measure or a combination of measures. Form 3 is a form for a more detailed description of the city, its demographics and transport system for to better understand the measures. The forms were accompanied by instructions for filling and a list of possible transport policy measures. The questionnaires are in appendix 1A.

The measures reported by all the cities were then summarised under common categories. In the first project meeting the measures that are possible to model in all test cities were collaboratively chosen for still more detailed consideration. In this phase a second questionnaire was sent out for more detailed description of the extent and costs of the measures chosen. The means for representing these measures in the specific model was also obtained. The questionnaires of the second round are in appendix 1B.

2 STRUCTURE OF THE REPORT

Each test city is represented in a chapter of its own giving at first a short overall description of the city and followed by summarising tables and description of the policy measures reported. Policy measures taken up for modelling are highlighted in the tables and reported in more detail than the ones that can not be modelled. Especially measures that have gained unusual publicity or have not been accepted either by public or politicians have been reported.

Chapter 4 gives a short summary of measures feasible to model reported by the test cities.

The original answers from each city can be found in Appendixes 2 and 3.

3 SUMMARY OF POLICIES INVENTED

3.1 Edinburgh MA

3.1.1 General description of the city

Edinburgh is the capital city of Scotland. The study area includes the city and its immediately surrounding commuter towns, including the southern part of Fife Region, immediately north of the Forth road and rail bridges. It is the principal centre for government, finance and legislation for Scotland, a regional shopping centre, and a base for high technology industry linked to its three universities. It is also a major centre for tourism focused on the castle and Old Town, and the Georgian New Town.

Land use

Zones: Central
Inner suburbs
Outer suburbs

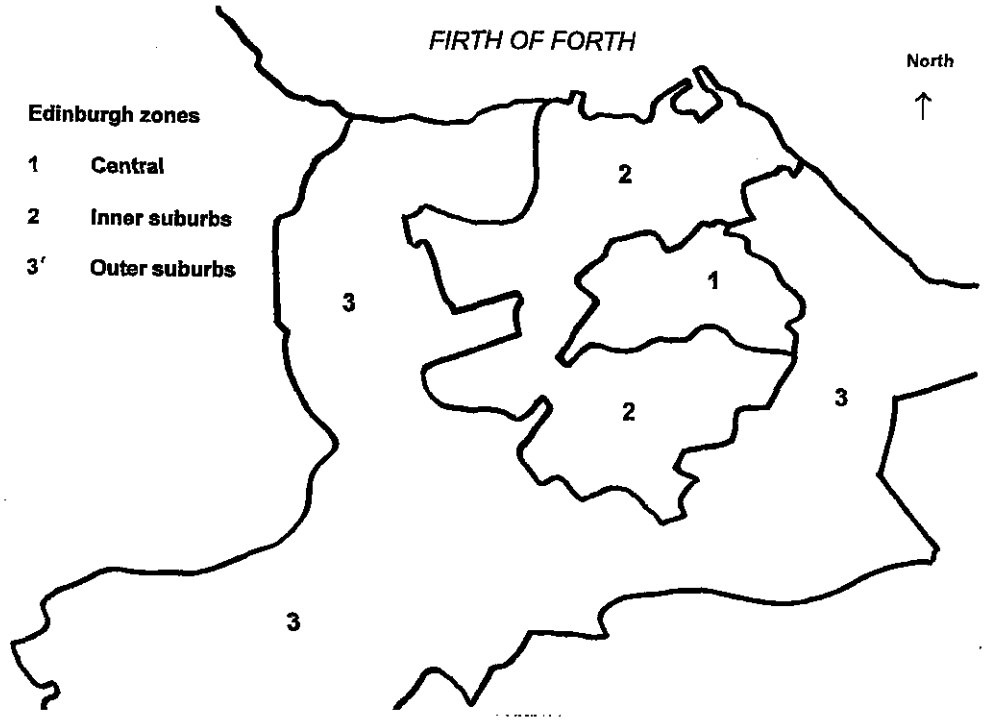

Figure 1. The zones of Edinburgh.

Central zone: Offices, commercial/shopping, administrative, cultural and tourist facilities, main transport interchanges. Includes residential land use.

Inner Suburbs: Dense residential, flats/tenements at all market levels. Leith (in this area) is a town and port in its own right.

Other Suburbs: Lower density, more modern residential at all market levels, including 'deprived' major council estates. Village centres, peripheral employment and shopping centres.

Table 1. The population of Edinburgh.

Zone	Population
1. Central	36 000
2. Inner suburbs	153 000
3. Outer suburbs	207 000
Total Edinburgh	394 000

The population of Edinburgh MA including the zones shown on the map and two additional western zones is 420 000. The total for the whole study area in the transport model is 1 008 000 including the zones of East Lothian, West Lothian, Midlothian, Dunfermline and Kircaldy, which are outside the city of Edinburgh, but within the urban region.

Transportation system

Available means of transport:
The transport network of the study area is constrained by the Forth Estuary, to the north of the city, and ranges of hills to the south. The city's road network includes a purpose-built outer ring road, and motorway connections to Glasgow and Fife, but most of the roads within the city are of variable standard. Most public transport is by bus, supplemented by urban rail services, predominantly to the west and across the Forth.

Table 2. Modal split in Edinburgh MA (1991).

Mode	Work trips		All trips	
	Modal split	Change 1981-1991	Modal split	Change 1981-1991
Car	49 %	+22 %	51 %	
Public transport	34 %	-20 %		-20 %
Cycle	2 %	+15 %		
Walk	15 %	-23 %		

Table 3. Journey distances in Edinburgh MA (1991).

Distance km	Under 5 km	5 - 10 km	10 - 20 km	over 20 km
% trips	52 %	22 %	16 %	10 %

65 % of motorised trip-km are by car with most of the rest by bus.

Demography

Car ownership: 58 % of households own cars. Car ownership per inhabitant is 0.32 (1991).

Authorities involved in the decision-making process of transport policy measures

Local government is currently two-tier, with Lothian Regional Council covering a wider area and Edinburgh District Council covering the city itself. In April 1996, the two-tier system will

end and Edinburgh will have its own authority. The local authority is by far the most important authority in the area in terms of decision-making and finance.

The local authority must act within the approval of central government represented by the Scottish Office. Central government only has direct influence through its trunk road plans which pass through or affect the city, but provides financial support through Transport Supplementary Grant.

Lothian and Edinburgh Enterprise Ltd is a development agency (under Scottish Enterprise). It will invest money in projects which are likely to boost the economy and improve the environment, including in deprived areas.

Some funds (and it is expected increasingly so) are provided by the private sector, through partnerships with the local authority.

3.1.2 Transport policy measures

In Edinburgh a combination of infrastructure, management and pricing measures is used to reduce car traffic in the city centre. The intention is to forbid long-stay trips by car but allow short-stay trips. On street parking is being reduced. There are also schemes for new highway construction and increasing capacity, but the attitude is changing towards encouraging public transport instead of building more roads. In residential areas traffic calming is being introduced.

The public transport network has recently been expanded by a new rail line and a new light rail system is being planned. Developing increasingly better public transport information systems as well as a new road network information system for drivers is under preparation. In the future public will also be informed by campaigns.

There are several ongoing measures for enhancing non-motorised-traffic and its facilities, pedestrianisation in city centre, wide pavements, cycle lanes, parking facilities for bicycles etc. Also totally car-less development areas are planned.

Table 4. Measures reported for Edinburgh MA

No.	Measure Description	* Combination Measure Numbers	** Type of Measure (A,B,C,D,E)	*** Cat. of Realization (a,b,c,d,e)	Time Span Start Year	In Use	End Year	**** Authority (L,N,C,O)
1	Western radial road		A	b / d	Undated			L
2	Other highway schemes		A	c				L
3	2nd Forth Road Bridge and ass. appr. roads		A	d	Undated			N
4	Reduce on-street parking in centre		B	a		x		L
5	& Increase short-term off-street spaces in cent.		A	a		x		L
6	& Parking charges: high for long-stay park. in c.		D	a		x		L
7	Extend PNR parking		A or B	C				L
8	Park and ride		A	a, e, d		x		L
9	New/re-opened rail lines		A	a, d		x		L + ScotRail,
10	New rail stations		A	a, d		x		Railtrack
11	LRT (N - S)		A	d	Undated			L
12	LRT (E - W)		A	d	"			L
13	Full LRT		A	d	"			L
14	Guided bus		E	e	1999			L
15	"Greenways" bus lanes		B	e	1996			L
16	Cycle routes		A	a		x		L
17	Pdestrianisation in city centre		A	a, d		x		L
18	New bus station		A	e	2000			L
19	UTC system in city centre		B	a		x		L
20	Increase inner orbital capacity		B	c				L
21	Increase capacity elsewhere		B	c				L
22	Capacity reduction on radials		B	c				L
23	Traffic calming in residental areas		B	a		x		L
24	Traffic calming on radials		B	c				L
25	Extend on-street parking control		B	d	Undat., no sooner t			L
26	Bus priorities (other than bus lanes)		B	d	Undated			L
27	Car-sharing 1		B	b	1992		1994	?
28	Car-sharing 2		B	e	2000			?
29	Increase bus service levels		B	Not seriously considered			Undat	L
30	Increase rail service levels		B	"			Undat	L
31	Cycle lanes		B	a		x		L
32	Cycle parking		B	a		x		L
33	Pavement (sidewalk) widening		A / B	a		x		L
34	Pedestrian routes		B	a		x		L
35	Reduce bus fares		D	Not seriously considered			Undat	L
36	Reduce rail fares		D	"			Undat	L
37	Concessionary fares		D	a		x		L
38	Road pricing		D	d	Undated			L
39	Car-less development(s)		E	e	2000			L
40	LU controls on developers		E	a		x		L
41	Road network information		C	e	1997			L, N
42	Public transport information		C	a, e		x		L
43	Public awareness campaigns		C	e	1996			L
44	Developer contributions		E	a		x		L
45	Commuted payments		E	d				L
46	Parking standards		E	a		x		L

* If the measure consists of a combination of two or more measures, please list each measure separately, and indicate numbers of the measures combined with this measure in this column

** Types:
A) Infrastruct
B) Managem
C) Informatio
D) Pricing
E) Land Use

*** Categories:
a) Measures presently in use
b) Measures used before but cha
c) Measures planned and tested
d) Measures under consideration
e) Measures under preparation of traffic planners

****Authorities:
L) Local
N) National
C) County
O) Other

Measures belonging to a category that was consider as possible to model are marked with grey background

3.2 Merseyside

3.2.1 General description of the city

The Merseyside conurbation, centred on the city of Liverpool, lies on the west coast of England. Liverpool itself is a regional centre for shopping and business, as well as being the main west coast port and a university centre. It is bordered by the boroughs of Sefton, including the seaside resort of Southport, and Knowsley, which has several distinct town centres within an area of suburban development. St Helens lies further to the east, while the Wirral District, including Birkenhead, is separated from Liverpool by the Mersey estuary.

Land use

Zones: Central zone
Inner zone
Outer zone
Wirral zone

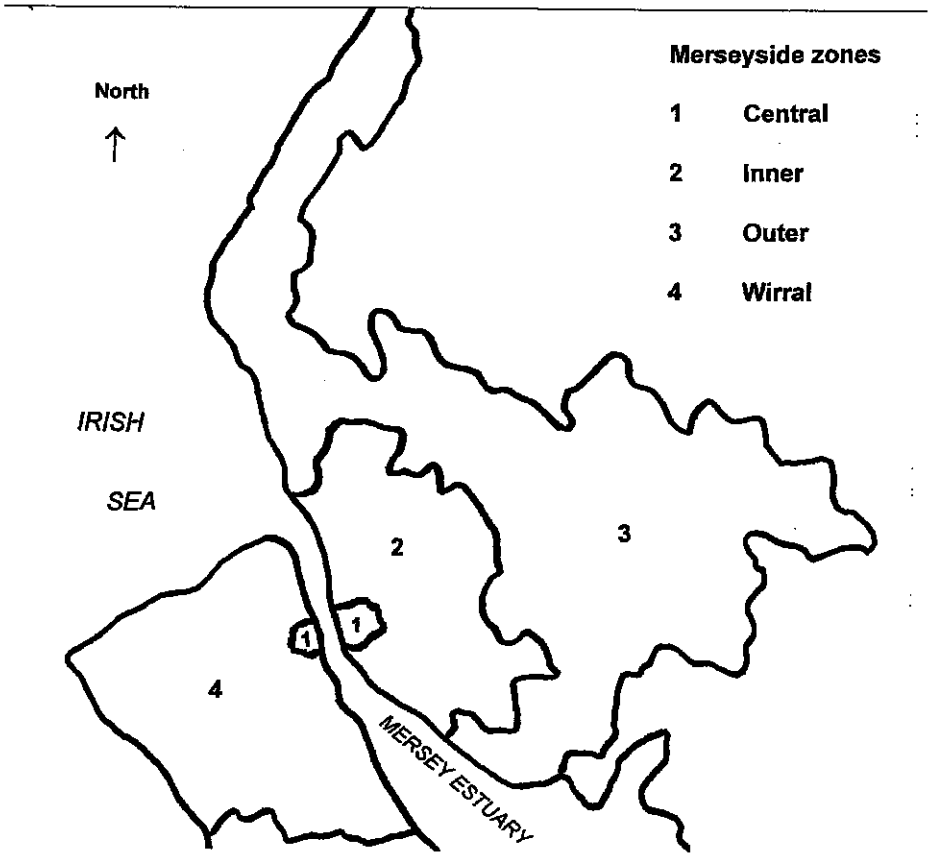

Figure 2. The zones of Merseyside.

Population for Liverpool is 700 000 and for the whole conurbation 1 440 000. The area measures 650 sq. km, which makes an average population density of 22.15 inhabitants per hectare.

Transportation system

Available means of transport:
The area has several motorways and high capacity roads including two toll tunnels linking Birkenhead and Liverpool under the Mersey. It also has an extensive suburban rail network, centred on Liverpool, with a tunnel linking Liverpool to Birkenhead and towns on the Wirral.

Trips: 78 % of motorised person-km are by car, 19 % by bus and 3 % by rail. Of total trip-km of all modes 61 % by car.

Demography

Rate of employment: In 1993, 15.5 % of the area's workforce were unemployed, nearly 50 % above the national average, and the highest level in England.

Car ownership: Car ownership is low, 0.69 cars per household in 1991 (national average 0.88).

Economic development

Merseyside has experienced endemic economic problems dating from the end of the Second World War, since when the decline of the port of Liverpool and associated industries deprived the area of one of its main generators of economic wealth and activity. Relatively little new industry has been attracted to the area, with the result that there are large areas of derelict industrial land. Partly due to the area's image problems, private sector demand for redevelopment of older sites has been low, compounding the problems of poor environment.

In 1993 the area's unemployment rate was the highest in England. Household income is some 17% below the national average, and the poor employment prospects have led to a steady decline in population. In recognition of these factors, the conurbation was granted Objective One status in 1993.

Authorities involved in the decision-making process of transport policy measures

Merseyside is made up of 5 independent local authorities, which are:

- Liverpool
- Wirral
- Sefton
- Knowsley
- St Helens

Though independent authorities, there is co-ordinated transport policy making, which is guided by the MERITS transport study covering the area of the five authorities. Public transport is managed for all five districts by Merseyside Passenger Transport Authority (Merseytravel). Merseytravel and the five districts jointly bid for government funds in the annual Merseyside Package Bid for Transport Supplementary Grant. Package Bid money is, however, granted to the authorities separately and, within overall policy guidelines, they have autonomy on the details of local transport schemes.

Funds for transport in Merseyside come from central government via the annual package bid and from the EU in the form of 'Objective One' funding under the 'Access to Industry' and 'Action for People' programmes. These, respectively, concern improving access to key

industrial and commercial developments and improving the public transport system. There may also be additional EU funding for Merseyside's ports and airport ('Gateways for Industry'). The Objective One funds emphasise comprehensive improvements to public transport and, though potentially substantial, are regarded as being 'additional' to the Core Package Bid funds. The promotion of an integrated transport policy is also seen as an aid to the lobbying for external funding sources and to provide a framework for private sector partnerships in transport schemes.

3.2.2 Transport policy measures

Merseyside aims at improving accessibility and efficiency of the transport system. For public transport the rail network and park and ride system will be extended, a light rail system is under consideration and new technology will be used to promote public transport.

Also measures improving car traffic are being implemented. Parking measures are however used to favour short-stay trips to the centre and guide commuters to choose public transport. A road pricing cordon around the centre has been planned if the ongoing measures are not enough to prevent congestion. Traffic calming measures are used in residential areas and residential centres. Improving facilities of non-motorised traffic elsewhere includes pedestrianisation and new cycle routes and other facilities.

Table 5. Measures reported for Merseyside

No.	Measure Description	* Combination Measure Numbers	** Type of Measure (A,B,C,D,E)	*** Cat. of Realization (a,b,c,d,e)	Time Span Start Year	In Use	End Year	**** Authority (L,N,C,O)
1	Highway construction		A	a, e	Various schemes in next 1			L
2	Less parking space		A & E	a, d		x		L
3	& Higher parking charges		D	a, d		x		L
4	New rail stations		A	a, e	On-going and to at least 2			L + rail operators
5	Park and ride		A	"		"		"
6	Rail electrification		A	"		"		"
7	New rail lines		A	"		"		"
8	Higher rail frequencies		B	"		"		"
9	Electronic ticketing		B	e	1998 onwards			L
10	Light rail		A	d	2001			L
11	and/or Guided bus		A	d	1999			L
12	Cycle routes		A	d	Various schemes in next 1			L
13	Pedestrianisation		A	a		x		L
14	UTC		B	a, e	ongoing and to at least 20			L
15	Traffic management		B	a, d, e	Various schemes in next 1			L
16	Traffic calming		B	a, d, e		"		L
17	Road pricing cordon		D	d	Longer term possibility			L + N
18	Car sharing		B	d	Future possibility only			O (loc.employers)
19	Bus priorities		B	a, e	Ongoing to at least 2001			L + O(operators)
20	New (SMART) buses		B	"		"		"
21	Passenger information		C	"		"		"
22	New/improved bus stations & on-street infra.		A	"		"		"
23	Cycle facilities		B	a, e	Var. schemes in next few y			L
24	Telecommuting		C	n / a	Possible long term trend			n / a
25	Influence travel patterns with campaigns		C	d	Longer-term possibility			L (and operators)
26	Development control		E	a, d	Ongoing			L
27	Development contributions/commuted sums		E	a, d	Ongoing			L

* If the measure consists of a combination of two or more measures, please list each measure separately, and indicate numbers of the measures combined with this measure in this column

** Types:
A) Infrastru
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****Authorities:
L) Local
N) National
C) County
O) Other

Measures belonging to a category that was consider as possible to model are marked with grey background

3.3 Vienna

3.3.1 General description of the city

Vienna is the capital city of Austria. It is the principal centre for government, finance and legislation of Austria, a regional shopping centre, a focus for culture and industry, and contains a concentration of universities. The traditional city centre, the many famous buildings and cultural associations have made Vienna a major centre for tourism.

Land use

Zones: City centre
Inside districts which comprise from district no. 2 - 9
Outside districts, that are district no. 10 - 20
Wide-area districts which comprise from district no. 21 - 23

Table 6. The population, area and population density for different zones in Vienna.

Zone	Population	Area (Ha)	Density (Person/Ha)
City Centre	18 002	301	59.81
Inside Districts	385 933	3 711	103.99
Outside Districts	828 038	19 248	43.02
Wide-area Districts	307 875	17 348	17.75
Total	1 539 848	40 609	37.92

Source : Statistiches Jahrbuch der Stadt Wien, 1993, Tab. 1.08., 2.02, 2.03.E.

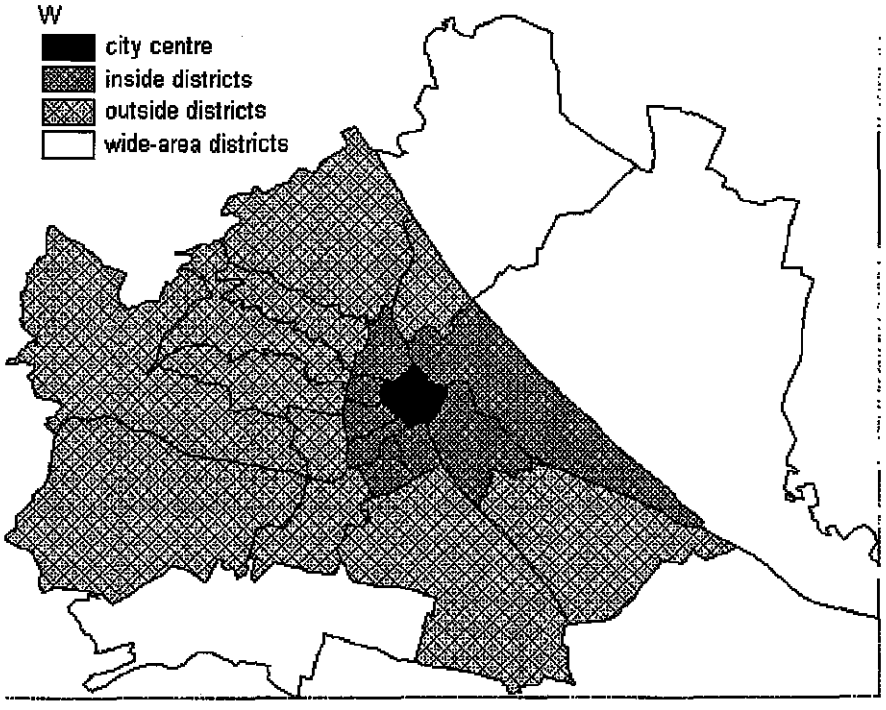

Figure 3. The zones of Vienna.

Transportation system

Available means of transport:
The city road network includes three ring roads and a north-south and east-west motorway. Reorganisation of the road network has been in planning to restructure the network based upon its function (PT main streets, private car main streets, and PT/private car main streets). Most public transport is by metro and trams supplemented by urban rail services and buses. Vienna public transport modes are: tram, bus, underground, commuter train, regional train and bus. The city centre is mostly pedestrianised.

Trips: Around 37 % of all trips are made by car, 37 % on public transport and the rest as pedestrians and cyclists.

Table 7. Trip distribution (%) by traffic mode in different zones of Vienna.

Households	All				
Zones	By Foot	Bicycle	Car	Taxi	PT
City Centre	30.0	0.0	25.6	0.0	44.4
Inside Districts	30.3	3.2	29.8	0.5	36.1
Outside Districts	22.5	2.0	40.2	0.2	35.1
Wide-area Districts	16.5	3.1	47.5	0.2	32.8
All	22.9	2.5	39.3	0.3	35.1

source : Projektgruppe1 : Mobilität in der Stadt, WIZK, 1995, Band 3, pp.24

Demography

Table 8. Age distribution (%) for the zones of Vienna.

	Age group								
	0-6	6-10	10-15	15-19	19-30	30-45	45-60	60-75	75-
City Centre	3.83	2.72	4.00	3.15	14.14	22.25	22.12	16.80	10.98
Inside Districts	5.84	3.55	4.45	3.55	17.84	25.03	17.92	13.47	8.34
Outside Districts	6.14	3.69	4.58	3.60	17.74	22.98	19.00	14.31	7.95
Wide-area Districts	6.73	4.29	5.19	3.94	17.13	22.79	21.51	12.93	5.48
All	6.16	3.77	4.66	3.65	17.60	23.44	19.27	13.86	7.59

source : Statistiches Jahrbuch der Stadt Wien, 1993, Tab.2.09.b.

Table 9. Other demographical parameters for the zones of Vienna.

Zones	HH Size	Employment	Car Ownership	
		Rate	Personal	Household
City Centre	1.92	0.33	0.92	1.76
Inside Districts	1.99	0.38	0.35	0.69
Outside Districts	2.03	0.39	0.35	1.72
Wide-area Districts	2.26	0.41	0.36	0.81
All	2.06	0.39	0.36	0.74

source : Statistiches Jahrbuch der Stadt Wien, 1993, Tab. 2.01., 2.02.E., 2.05.b., 12.09.d.
Employment rate is defined by the number of employee divided by the number of person living in the same district (zone).

Car ownership: Around 80 % of households own cars.

Economic development

Table 10. Income per capita for Vienna.

Year	Monthly per capita income in ATS (current price)	
	Gross	Net
1988	6 681	4 910
1989	8 357	6 083
1990	8 564	6 442
1991	9 683	7 219
1992	9 684	7 143

source : Statistiches Jahrbuch der Stadt Wien, 1993, Tab. 18.05

Table 11. City income for Vienna.

Year	City Income (monthly average)	
	Nominal (1000 ATS)	per Capita (ATS)
1975	7 694 877	4 883.73
1992	9 736 384	6 322.95
1993	9 813 713	6 373.17

source : Statistiches Jahrbuch der Stadt Wien, 1993, Tab. 25.01
note : Population is based on 1991 data

Table 12. Gross regional product for Vienna.

Year	Yearly gross regional product, at current prices	
	Regional (Bill. ATS)	per Capita (ATS)
1965	76.27	46 972
1975	177.75	112 813
1985	360.45	234 730
1990	493.54	320 512
1992	567.20	368 348

source : Statistisches Jahrbuch für die Republik Österreich, 1993, Tab. 2.02., 15.08
note : Population data are estimated from census

Table 13. The contribution of the various sectors for the year 1992 in Vienna.

Sector	GRP, current prices	Percentage
	Bill. ATS	%
Agriculture and Forestry	1.43	0.25
Mining	0.09	0.02
Industry and Production	96.31	16.98
Energy and Water Supply	12.06	2.13
Construction	36.73	6.48
Trading	110.24	19.44
Transport and Communication	31.53	5.56
Finance	150.05	26.45
Other market services	38.60	6.81
Public Service	84.00	14.81
Other services	6.17	1.09
Total	567.21	100.00

source :Statistisches Jahrbuch für die Republik Österreich, 1993, Tab. 15.08.

Table 14. Consumer expenditure by zones for Vienna.

Zones	Consumer Expenditure per Year	
	Zones (Mill. ATS)	per Capita
City Centre	1 992	110 654
Inside Districts	28 448	73 712
Outside Districts	49 724	60 050
Wide-area Districts	18 751	60 905
All	98 915	64 237

source : Statistiches Jahrbuch der Stadt Wien. 1993, Tab. 10.18

Authorities involved in the decision-making process of transport policy measures

In Austria there is the following governmental hierarchy: national, province (Länder), district (Bezirk), municipality (Gemeinde) and sub-municipality (Katastral Gemeinde). In addition a regional decision can be made e.g. when a certain measure is affecting the neighbouring provinces.

Vienna is a province as well as a city.

Local authorities :
The province has the responsibility in transportation policy, planning, construction, financing, and management of city transport matters.

The district has the responsibility in transport policy in the district, construction and financing of small scale transport projects.

Regional authority, reflecting cross-border activities mainly for public transport operations is Public Transport Authority (Vekehrsverbund Ost-Region = VOR) and it has the duty in management and co-ordination of the regional public transport operation.

National authorities :
Ministry of Economic Affairs has the role in transport policy, planning and management of national roads.

Ministry of Public Economy and Transport has the responsibility in transport policy of public transport.

Ministry of Finance has the responsibility in transport policy concerning taxation in the transport sector and financing large scale projects.

3.3.2 Transport policy measures

Several measures for reducing car traffic in the city centre and promoting public transport, walking and cycling have been introduced already since 1970s in Vienna. Large pedestrian areas, wide and/or raised footpaths were needed and a wide cycle path network has been introduced. Also public transport has been promoted by continuous upkeep and construction, reserving separated lanes, giving priority at intersections as well as pricing policy and information.

Also necessary car traffic has been taken care of by restructuring the car network and building parking garages and park and ride facilities but reducing on-street parking and charging for parking.

Table 15. Measures reported for Vienna

No.	Measure Description	* Combination Measure Numbers	** Type of Measure (A,B,C,D,E)	*** Cat. of Realization (a,b,c,d,e)	Time Span			**** Authority (L,N,C,O)
					Start Year	In Use	End Year	
1	Park and Ride	26	A	a	1989	x		province/regional
2	Cycle lanes	3,17	A	a	1982	x		province/district
3	Cycle path	2,17	A	a	1982	x		province/district
4	Underground construction/extensions		A	a	1978	x		province/national
5	Restricted bus lanes	6,7,16	A	a	1983	x		province
6	Physically separated tram lanes	5,7,16	A	a	1979	x		province
7	Separation with marking for tram lanes	5,6,16	A	a	1979	x		district
8	Footpath widening at PT Stops	9,10,11,12	A	a	1990	x		province/district
9	Pedestrian areas	9,10,11,12	A	a	1974	x		province/district
10	Speed humps	8,9,11,12	A	a	1987	x		province/district
11	Raised footpath at intersections	8,9,10,12	A	a	1986	x		province/district
12	Raised intersection surface	8,9,10,11	A	a	1987	x		province/district
13	Motorway bypass and network extension		A	a	1977	x		National/province
14	Speed limit zones (30 Km/h)	15	B	a	1987	x		district
15	Residential street	14	B	a		x		province/district
16	Bus and tram priority at intersections	5,6,7	B	a	1980	x		province
17	Cycle routes	2,3	C	a	1982	x		province/district
18	Public transport campaigns		C	a	1991	x		province
19	Charged short term parking at city centre, e	20	D	a	1993	x		province/district
20	Charged short term parking at inner district	19	D	a	1995	x		province/district
21	Price segmentation by period, season ticket	22,23,24	D	a	1986	x		province
22	Price segmentation by user, i.e. student, se	21,23,24	D	a	1986	x		province
23	Price segmentation by distance, e.g. zones	21,22,23	D	a	1986	x		province
24	Single tariff for all PT modes, Integrated PT	21,22,23	D	a	1984	x		province/regional
25	Fuel tax		D	a	1980	x		national
26	Bike and Ride		B	d				province/regional
27	Road network restructuring		B	d				province/regional
28	Road information and guidance system		C	d				province

* If the measure consists of a combination of two or more measures, please list each measure separately, and indicate numbers of the measures combined with this measure in this column

** Types:
A) Infrastruct
B) Managem
C) Informatio
D) Pricing
E) Land Use

*** Categories:
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d) Measures under consideratio
e) Measures under preparation of traffic planners

****Authorities:
L) Local
N) National
C) County
O) Other

Measures belonging to a category that was consider as possible to model are marked with grey background

3.4 Eisenstadt

3.4.1 General description of the city

Eisenstadt is the capital of the province of Burgenland, one of the 9 provinces in Austria. The study area includes the whole of the city. Eisenstadt is the principal centre for the local government, the education centre, and also a regional shopping centre. Tourism has increased through publicity as the City of Haydn. The city centre is a traditional shopping area and has the largest proportional pedestrian zone (2.1 m^2 / person) in Austria. The city of Eisenstadt is very exceptional in that the city makes a profit out of its transportation system.

Land use

Zones: City centre
Central city area
Residential area
Distinct town centres
Business/industrial area

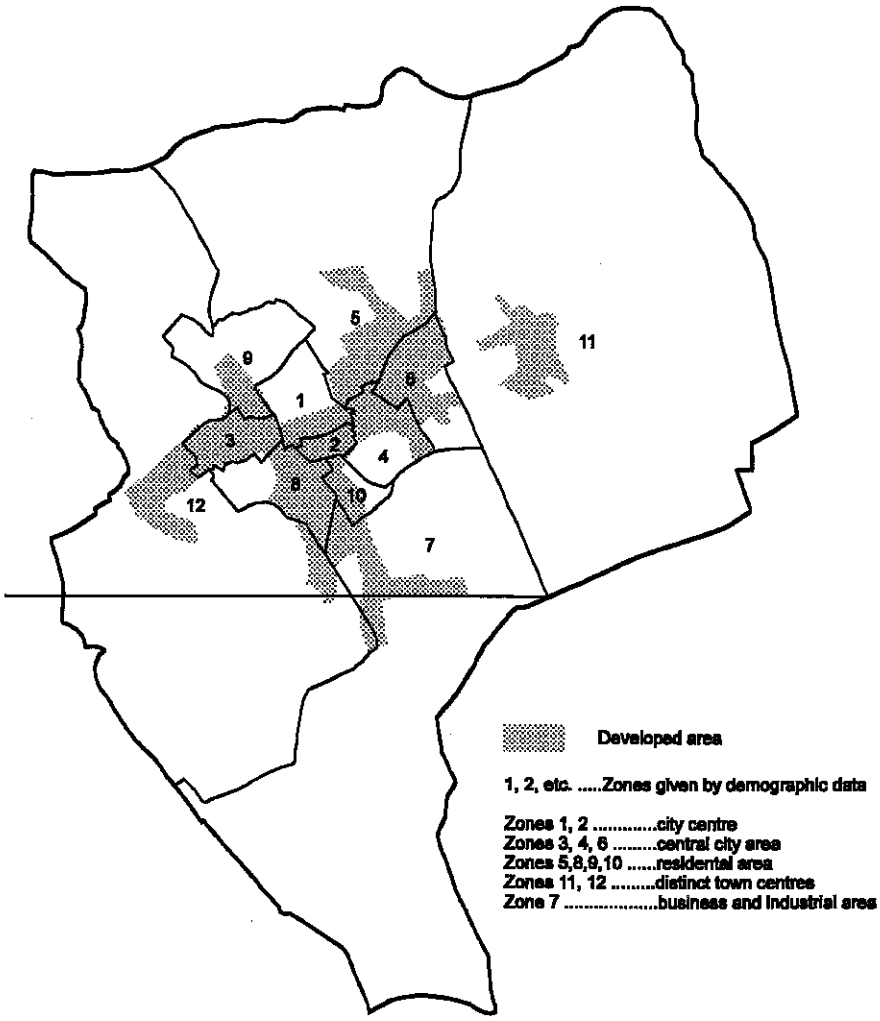

Figure 4. The zones of Eisenstadt.

Eisenstadt has a relatively small developed area and thus low population density.

Table 16. The population, area, and population density for the zones of Eisenstadt.

Zone	Population	Area (Ha)	Density (Person/Ha)
City Centre	767	66	11.63
Central city area	2 584	162	15.97
Residential area	3 521	741	4.75
Distinct town centres	3 037	2 432	1.25
Business/Industrial area	440	889	0.49
Total	10 349	4 290	2.41

Transportation system

Available means of transport:
Eisenstadt has a large pedestrian zone, a city taxi system in operation 24 hours a day as public transport, supported by regional buses and rail. The network of the study area includes the nearby motorways and the main street.

Trips:
1995 Data (only 3 modes considered)

Private car	60 %
Public transport	6 %
Pedestrian	34 %

1988 Data

Private car	54 %
Public transport	4 %
Pedestrian	34 %

Demography

Table 17. Age distribution (%) for the zones of Eisenstadt.

	Age group								
	0-5	5-10	10-15	15-25	25-35	35-45	45-55	55-65	65-
City centre	3.8	4.7	4.7	11.6	15.5	12.7	11.4	11.9	23.6
Central city area	5.6	7.0	5.1	10.9	18.1	13.4	11.3	9.9	18.9
Residential area	4.4	4.4	4.9	12.8	14.3	12.9	12.4	13.0	20.9
Distinct town centres	6.2	7.7	7.2	13.4	17.1	14.7	11.1	9.9	12.8
Business/industrial area	4.6	7.9	6.2	14.3	15.2	14.8	13.7	10.6	12.7
All	5.2	6.2	5.7	12.5	16.2	13.6	11.7	11.2	17.9

Table 18. Other demographical parameters for the zones of Eisenstadt.

Zones	HH Size	Employment	Car Ownership	
		Rate	Personal	Household
City Centre	2.21	0.46	na	na
Central city area	2.57	0.45	na	na
Residential Area	2.36	0.41	na	na
Distinct Town centres	2.79	0.46	na	na
Business/industrial area	2.51	0.45	na	na
All	2.52	0.44	0.66	1.66

na = not available

Economic development

Table 19. Gross regional product for Eisenstadt.

Year	Gross regional product, at current prices	
	Regional (Bill. ATS)	per Capita (ATS)
1965	5.06	18 626
1975	13.27	48 959
1985	27.37	101 248
1990	38.33	141 502
1992	43.43	159 246

source : Statistisches Jahrbuch für die Republik Österreich, 1993, Tab. 2.02., 15.08
note : Population data are estimated from the census

Table 20. The contribution of various sectors for the year 1992 in Eisenstadt.

Sector	GRP, current prices	Percentage
	Bill. ATS	%
Agriculture and Forestry	2.72	6.26
Mining	0.02	0.05
Industry and Production	8.42	19.39
Energy and Water Supply	0.95	2.19
Construction	4.27	9.83
Trading	5.99	13.79
Transport and Communication	2.58	5.94
Finance	9.13	21.02
Other market services	1.76	4.05
Public Service	7.25	16.69
Other services	0.34	0.78
Total	43.43	100

source :Statistisches Jahrbuch für die Republik Österreich, 1995, Tab. 15.08

Authorities involved in the decision-making process of transport policy measures

In comparison with Vienna, Eisenstadt has a lower level of authority. While Vienna is a province as well as a city, Eisenstadt is a district as well as a city. However, the structure of the decision-making process is the same.

Local authorities :
The city has the responsibility in transportation policy, planning, construction, financing, and management of city transport matters.

The municipal district has the responsibility in transport policy in the district, construction and financing of small scale transport projects.

Regional authority, reflecting cross-border activities mainly for public transport operation is Public Transport Authority (Vekehrsverbund Ost-Region = VOR) and it has the duty in management and co-ordination of regional public transport operation.

National authorities :
Ministry of Economic Affairs has the role in transport policy, planning and management of national roads.

Ministry of Public Economy and Transport has the responsibility in transport policy of public transport.

Ministry of Finance has the responsibility in transport policy concerning taxation in transport sector and financing large scale projects.

3.4.2 Transport policy measures

Car traffic in the centre of Eisenstadt has been restricted by severe parking policy and land use measures by dedicating a separate area for commerce and industry use. Public transport has been promoted by introducing a single tariff for all modes and integrating and improving PT operation. A speciality of Eisenstadt is a city taxi system which is highly subsidised.

Table 21. Measure reported for Eisenstadt

No.	Measure Description	* Combination Measure Numb	** Type of Measure (A,B,C,D,E)	*** Cat. of Realization (a,b,c,d,e)	Time Span Start Year	In Use	End Year	**** Authority (L,N,C,O)
1	Cycle path		A	a	1991	x		City
2	Pedestrian area	3, 4	A	a	1991	x		City
3	Speed humps	2, 4	A	a	1987	x		City
4	Raised intersection surface	2, 3	A	a	1988	x		City
5	Parking lots	6, 9, 12	A	a	1987	x		municipality/City
6	Parking garage	5, 9, 12	A	a	1993	x		municipality/City
7	Speed limit zones (30 Km/h)	8	B	a	1982	x		municipality/City
8	Residential street	7	B	a	1991	x		municipality/City
9	Short term parking around city centre	5, 6, 12	B	a	1993	x		City
10	City taxi	13	B	a	1992	x		City
11	Improved train schedule	17	B	a	1994	x		Province/National
12	Parking fees around city centre	5, 6, 9	D	a	1993	x		City
13	Subsidized city taxi	10	D	a	1992	x		City
14	Motorway bypass		A	a	1991	x		National
15	Area dedicated for commerce/industry use		E	a	1995	x		Province/City
16	Single tariff for all PT modes, Integrated PT Operation		B,D	a	1988	x		Province/regional
17	Additional train stop	11	A	a	1990	x		Province/regional
18	Central bus station relocation		E	d				Province/regional
19	One way streets		B	a	1988	x		city

* If the measure consists of a combination of two or more measures, please list each measure separately, and indicate numbers of the measures combined with this measure in this column

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N) National
C) County
O) Other

Measures belonging to a category that was consider as possible to model are marked with grey background

3.5 Helsinki MA

3.5.1 General description of the city

Helsinki, the capital city of Finland, lies in Southern Finland by the Gulf of Finland in the Baltic Sea. It is surrounded by three other cities, and they together form the Helsinki Metropolitan Area, which is the study area. The old city centre of Helsinki lies on a peninsula which has its influence on the traffic system.

Land use

Municipalities: Helsinki, Espoo, Kauniainen and Vantaa

Zones:
1 City centre
2 Inner city
3 Other Helsinki
4 7 main centres in suburban area (Espoo, Vantaa)
5 Other suburban area (Espoo, Vantaa, Kauniainen)

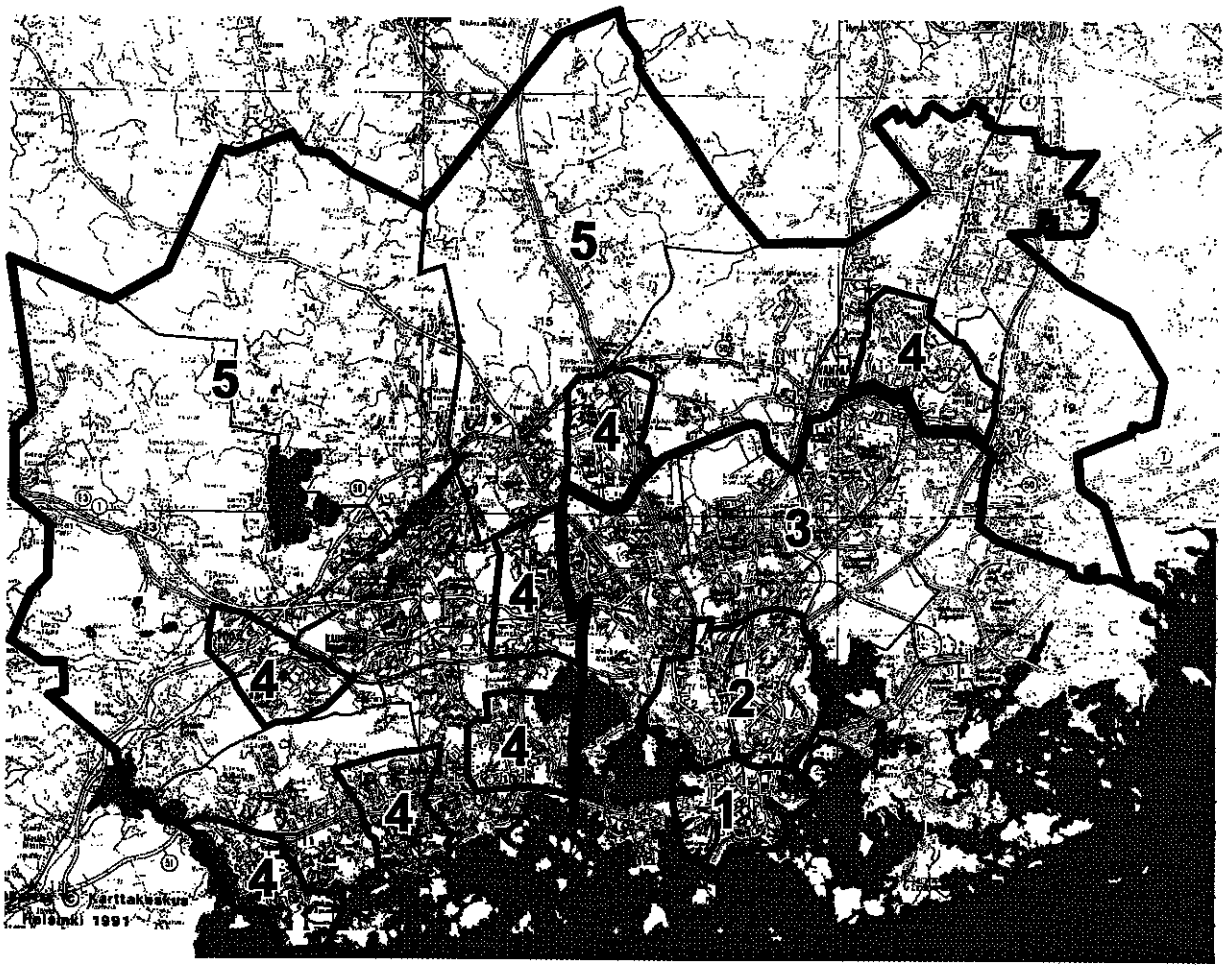

Figure 5. The zones of Helsinki.

Table 22. Population, area, and population density for the municipalities of Helsinki MA.

	Population		Area (land)	Population density
	1995	1990	ha	inh./ha
Helsinki (1,2,3)	525 031	492 400	18 450	28.53
Espoo (4,5)	191 247	172 629	31 190	6.15
Kauniainen (4,5)	8 298	7 889	590	14.07
Vantaa (4,5)	166 480	154 933	24 080	6.94
Total	891 056	827 851	74 310	11.99

Transportation system

Available means of transport:
The road network creates a system of seven radial and two orbital roads. The public transport trunk network is based on both rail traffic and buses. There are three local railway lines and one metro line radial to the City Centre. Only the western corridor relies on buses only. In the inner city there are seven tram lines as well. The public transport system operates very well.

Table 23. Trips by public transport and by cars on the border of the city centre of Helsinki.

Modal split on the border of the City Centre (1995)	whole day, both directions	rush hours, peak direction
Public transport	61 %	69 %
Cars	39 %	31 %

Table 24. Public transport percentage of vehicle trips between the zones of Helsinki MA.

Public transport percentage of motorised trips between the zones			
zone	1 & 2	3	4 + 5
1 & 2	68		
3	65	37	
4 + 5	52	25	22

Demography

Table 25. Age distribution for Helsinki MA 1995.

	Age distribution, % (31.12.1995)				
	0 - 14	15 - 24	25 - 44	45 -64	64 -
Helsinki	15.6	11.9	34.3	24.4	13.9
Espoo	21.4	12.9	33.4	24.1	8.1
Kauniainen	19.8	14.1	26.8	27.6	11.7
Vantaa	21.2	12.5	34.0	25.2	7.0

Table 26. Average household size for Helsinki MA.

	Average household size			
	1995	1990	1985	1980
Helsinki	1.9	2.0	2.0	2.1
Espoo	2.4	2.4	2.5	2.6
Kauniainen	2.7	2.7	2.7	2.8
Vantaa	2.3	2.4	2.5	2.6
All areas	2.1	2.1	2.2	2.3

Car ownership: Car ownership is one of the lowest in Finland, 320 cars/1000 inhabitants. Over 60 % of households have a car at their disposal.

Table 27. Car ownership in Helsinki MA 1995.

	Total of private cars	Cars per person
Helsinki	157 500	0.30
Espoo	68 600	0.36
Kauniainen	3 100	0.37
Vantaa	60 100	0.36
All areas	288 300	0.32

Economic development

The economic development was very fast in the late 80s in Finland, but since then it has had a very deep recession with high unemployment. Now it is slowly recovering.

Table 28. Average household income for Helsinki MA.

	Average household income, FIM		
	1994	1990	1985
Helsinki	169 363	178 726	122 006
Espoo	217 678	233 439	154 577
Kauniainen	319 300	320 067	215 541
Vantaa	181 745	200 696	135 375
All areas	181 710	193 858	131 135

Table 29. Unemployment rate for Helsinki MA.

	Rate of unemployment, %		
	1995	1994	1992
Helsinki	18.2	18.3	11.8
Espoo	13.6	14.7	9.5
Kauniainen	11.9	13.0	8.6
Vantaa	16.1	17.0	11.2
All areas	16.8	17.3	10.3

Authorities involved in the decision-making process of transport policy measures

The four municipalities of the Helsinki metropolitan area (Helsinki, Espoo, Kauniainen and Vantaa) all have their local authorities and offices for city and transport planning. Transport and land use issues of the whole area are co-ordinated by Helsinki Metropolitan Area Council (YTV).

National authorities that have influence on the transport policy of the area are:

- Ministry of Transport and Communications (LM)
- Finnish National Road Administration (TIEL)
- Finnish Railways (VR)

3.5.2 Transport policy measures

Helsinki MA has determinedly promoted public transport to keep it in a competitive position with private car. The means have been introducing new lines, improving frequency, speed and reliability, simple price system, subsidies and especially good information with timetable booklets delivered free of charge to each household in the area.

A very strict parking policy in the city centre is the main measure for restraining unwanted car traffic. Traffic calming using several measures has been implemented in residential areas both in the inner city and suburbs. Cycling and walking have been promoted by ongoing construction of separate lanes for non motorised traffic all over the area. Also good and safe parking facilities especially for park and ride are under development.

Table 30. Measures reported for Helsinki MA

No.	Measure Description	* Combination Measure Numbers	** Type of Measure (A,B,C,D,E)	*** Cat. of Realizatio (a,b,c,d,e)	Time Span Start Year	In Use	End Year	**** Authority (L,N,C,O)
1	Underground (1 line)		A	a	1982	x		L
2	Park and ride at underground stations	1	A	a	1982	x		L
3	Commuter local railway line		A, E	a	1975	x		L, N
4	New rail tracks (separate tracks for local traffic)		A	a,d,e	1996			L, N
5	Park and ride at railway stations, variable information signs		A, C	a	1995	x		L
6	Light rail		A	d,e	2010			L
7	Improving crosstown public transport services		A,B	a,d,e		x		L
8	Long-time parking limited in city centre, (residents only)	9	B	a		x		L
9	High parking charges	8	D	a		x		L
10	Personal parking metres in cars	8	B,D	a	1994	x		L
11	Variable sign parking information and guidance		C	a	1992	x		L
12	Regional public transport fare system	15	D	a	1986	x		L
13	Bus lanes		A, B	a	1973-	x		L
14	Bus and tram priorities		B	a		x		L
15	PT information & marketing; Timetable booklets and at stops	12	C	a	1988-	x		L
16	Smart card public transport tickets		B	e	1997			L
17	Real-time passenger information		C	a, e	1996	x		L
18	Public transport fare reductions (tram, bus-daytime)		D	a	1995	x		L
19	Pedestrian areas in city centre		A	a,d	1988	x		L
20	Pedestrian areas at suburb centres		A	a	1965	x		L
21	Speed limits by zones or street/road types, 40-80 km/h		B	a		x		L
22	Bicycle lanes & routes, maps & signs		A, C	a, e		x		L
23	Safe bicycle parking at terminals		A, B	a		x		L
24	Chargeable cycle parking		D	b	1995		1995	O, private
25	Calming on residential streets humps	21	A	a		x		L
26	Physical restrictions; Bollards in residential areas, portti		A	a,b		x		L
27	Development within main PT corridors (railway,metro)		E	a		x		L
28	Public transport subventions		D	a		x		L, N
29	High fuel taxes		D	a		x		N
30	Road pricing		D	c (not teste	1995			N
31	New tunnel road under city centre		A	d,e	2015			L, N
32	Main street network construction in suburban areas		A	a, d, e		x		L
33	Bus streets		A, B	c, e				L
34	Car-share legalized		B	a	1994	x		N
35	New terminals with information terminals for timetable and road infor		A, C	e		(x)		L, N

* If the measure consists of a combination of two or more measures, please list each measure separately, and indicate numbers of the measures combined with this measure in this column

** Types:
A) Infrastru
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C) Informat
D) Pricing
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e) Measures under preparation of traffic planne

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C) County
O) Other

Measures belonging to a category that was consider as possible to model are marked with grey background

3.6 Turin MA

3.6.1 General description of the city

Turin is a regional capital. It is one of the most industrialised cities of Italy.

Land use

Turin metropolitan area is composed by Turin and 22 municipalities of the conurbation.

Table 31. The population, area, and population density for Turin MA.

	Population (at '95)	Area (ha)	Density (hab/ha)
Turin	924161	13017	71.0
Belt	529667	48208	11.0
Total	1453828	61225	23.7

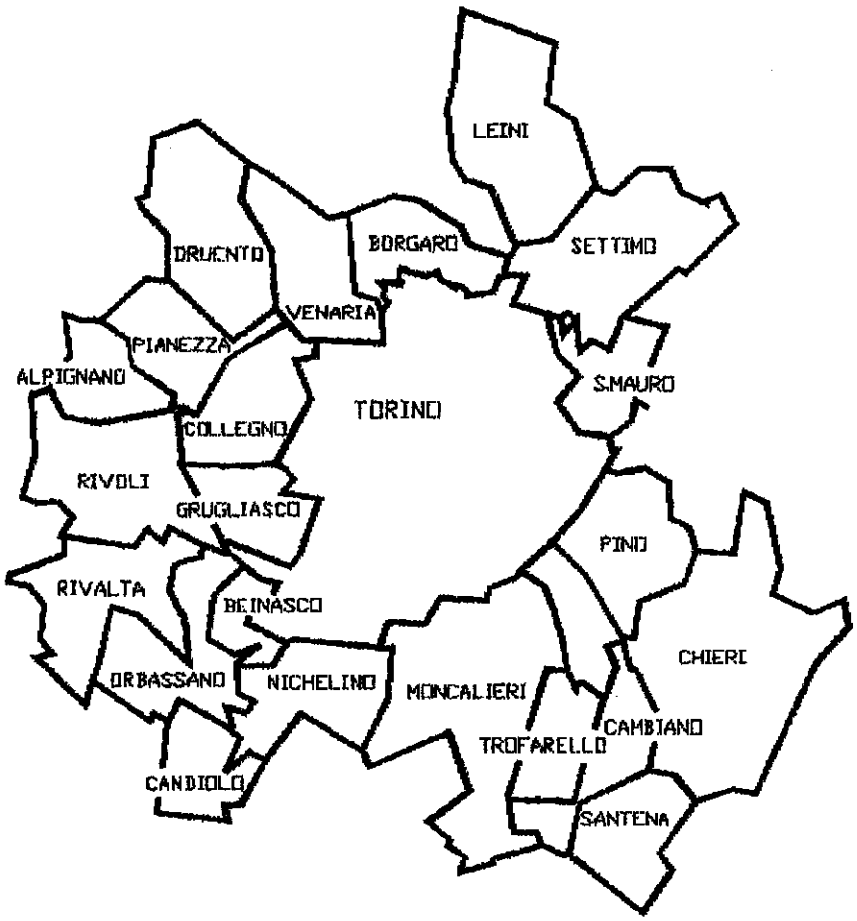

Figure 6. The zones of Turin.

Transportation system

Available means of transport:
In the area there is operating a railway system, used principally by commuters and for long distance trips. The public transport system for urban and suburban trips is supplied by ATM, with 79 lines (11 of which tramway lines and the remainder bus).

Table 32. Trips on public transport means (1994) - all day (thousand) in Turin MA.

	Turin	Belt	Other	Total
Turin	597	56	35	688
Belt	48	50	8	106
Other	29	7	72	108
Total	674	113	115	902

Table 33. Trips on private means - all day (thousand) in Turin MA.

	Turin	Belt	Other	Total
Turin	923	200	105	1228
Belt	185	439	88	712
Other	96	87	881	1064
Total	1204	726	1074	3004

Table 34. Public trips percentage (%) - all day in Turin MA.

	Turin	Belt	Other	Total
Turin	39.3	21.9	25.0	35.9
Belt	20.6	10.2	8.3	13.0
Other	23.2	7.4	7.6	9.2
Total	35.9	13.5	9.7	23.1

Table 35. Trips on public transport means - 7.30-8.30 (thousand) in Turin MA.

	Turin	Belt	Other	Total
Turin	84	3	1	88
Belt	16	11	1	28
Other	10	3	20	33
Total	110	17	22	149

Table 36. Trips on private means - 7.30-8.30 (thousand) in Turin MA.

	Turin	Belt	Other	Total
Turin	125	29	11	165
Belt	27	61	13	101
Other	20	18	115	153
Total	173	107	138	418

Table 37. Public trips percentage (%) -7.30-8.30 in Turin MA.

	Turin	Belt	Other	Total
Turin	40.0	10.5	6.8	34.8
Belt	37.8	14.9	8.4	21.9
Other	32.5	14.8	15.0	17.8
Total	38.9	13.7	13.9	26.3

Demography

Table 38. Age distribution in Turin MA (at 1995), %.

Age	Turin	Belt	Total
0-10	7.8	9.4	8.4
11-19	8.2	10.0	8.9
20-64	65.5	67.8	66.3
65 and over	18.5	12.8	16.4

Average household size: Average household size in Turin is 2.3 (Census 1991).

Rate of employment: Rates of employment 43 % for Turin, 48 % for Belt and 44 % as total were (data of the year 1994 integrated with the year 1991 data).

Table 39. Car ownership (at 1992 - from ACI data) in Turin MA.

	Cars	Population 31.12.92	Cars/inhab.
Turin	629881	972979	0.65
Belt	311907	530321	0.59
Total	941788	1503300	0.63

Table 40. Demographic data of Turin MA in more detailed zoning.

Zone		Population	Area (sqkm)	Density (inh./sqkm)	Cars per household	Age distribution % 0-10	11-19	20-49	50-64	>=65
	TURIN									
1	Centro	41535	3.81	10904	1.17	8	7	48	20	18
2	S.Salvario	37555	2.39	15746	1.12	7	7	44	20	21
3	Crocetta	37931	2.87	13235	1.00	7	7	42	21	24
4	S.Paolo	32254	2.22	14503	0.95	8	7	44	20	21
5	Cenisia	41636	2.37	17561	1.10	7	7	44	19	22
6	S.Donato	48442	3.23	15021	1.05	8	8	44	19	20
7	Aurora	40941	2.75	14877	0.83	8	8	45	20	19
8	Vanchiglia	33876	3.70	9156	0.93	8	7	43	21	21
9	Nizza mill.	31025	3.56	8720	0.94	8	7	43	21	21
10	Lingotto	51977	3.62	14346	1.37	7	8	44	23	18
11	S.Rita	60369	3.57	16901	1.22	7	7	43	22	21
12	Mirafiori nord	48497	3.79	12796	1.14	7	8	42	25	17
13	Pozzo Strada	59377	4.21	14090	1.21	8	8	44	23	18
14	Parella	50002	4.90	10207	0.94	8	7	44	21	19
15	Vallette	46680	7.67	6089	1.21	8	9	45	21	17
16	Mad.Campagna	38668	8.95	4320	1.14	9	8	46	21	16
17	B.Vittoria	40919	4.25	9628	1.07	9	8	45	21	18
18	B.Milano	47256	2.79	16968	1.35	9	9	45	20	17
19	Falchera	27232	11.09	2456	1.45	7	9	44	25	16
20	Regio Parco	31498	7.11	4432	1.31	8	9	43	21	19
21	Mad.Pilone	14842	16.13	920	1.15	8	8	42	21	21
22	Cavoretto	21374	13.97	1530	1.41	8	7	40	21	24
23	Mirafiori sud	39184	11.23	3489	1.39	8	9	44	23	16
	BEINASCO	18340	6.76	2713	1.27	9	10	47	22	12
	NICHELINO	44251	20.64	2144	1.28	9	10	48	21	11
	MONCALIERI	58565	47.63	1230	1.54	8	9	46	21	15
	S.MAURO	17667	12.55	1408	1.54	9	9	47	21	14
	SETTIMO	47761	32.37	1475	1.46	10	10	48	20	12
	VENARIA	32987	20.29	1626	1.34	10	11	48	19	12
	COLLEGNO	46885	18.12	2587	1.30	9	9	46	21	15
	GRUGLIASCO	40745	13.12	3106	1.43	9	11	49	20	11
	RIVOLI	52652	29.52	1784	1.52	10	10	47	20	13

Authorities involved in the decision-making process of transport policy measures

Region of Piemonte
Province of Turin
Municipality of Turin

3.6.2 Transport policy measures

In Turin many measures have already been implemented to improve the efficiency of the transportation system of the city, save time and decrease pollution and noise. There is a city-wide traffic control system with public transport priorities, streets and lanes reserved for PT and pricing measures used to encourage PT and reduce long-stay parking in the centre. The

most powerful measure was introduced in 1990, namely the Traffic Limited Zone where no private car traffic is allowed without permission from 7.30 am to 1.00 pm.

Public transport network extensions are planned for especially all rail modes, light rail, tram and metro. A park and ride system will be introduced.

The ongoing large 5T-project in Turin (Telematic Technologies for Transport and Traffic in Turin) is a great step forward in developing and controlling the transport system.

Table 41. Measures reported for Turin MA

No.	Measure Description	* Combination Measure Numbers	** Type of Measure (A,B,C,D,E)	*** Cat. of Realization (a,b,c,d,e)	Time Span Start Year	In Use	End Year	**** Authority (L,N,C,O)
1	Progetto Torino - Traffic Light Control		B	a	1985	x		L
2	Progetto Torino - Public transport priority	1	B	a	1985	x		L
3	SIS		B,C	a	1984	x		L
4	Line 3 LRT		A	a	1982	x		L
5	Traffic Limited Zone		B	a	1990	x		L
6	Pedestrian areas - extension	7,8,9,10,11,12,13	A	e	1996			L
7	Streets reserved to public transport	6,8,9,10,11,12,13	B	a		x		L
8	Lanes reserved to public transport	6,7,9,10,11,12,13	B	a		x		L
9	Lanes reserved to p.t. - extension	6,7,8,10,11,12,13	B	e	1996			L
10	Reserved lanes against traffic	6,7,8,9,11,12,13	B	a	1995	x		L
11	Reserved lanes against traffic - extension	6,7,8,9,10,12,13	B	e	1996			L
12	Pay parking	6,7,8,9,10,11,13	D	a	1994	x		L
13	Pay parking - extension	6,7,8,9,10,11,12	D	d	1996			L
14	Fare integration		D	d	1996			C - L
15	Subway under piazza Repubblica		A	e				L
16	Park and ride		A	e				L
17	Tramway network extension		A	e				L
18	5T Project - Control of private traffic	18,19,20,21,22,23	C	e	1996			L
19	5T Project - Control of public transport	17,19,20,21,22,23	B,C	e	1996			L
20	5T Project - Collective routing (VMS)	17,18,20,21,22,23	C	e	1996			L
21	5T Project - Environmental control	17,18,19,21,22,23	C	e	1996			L
22	5T Project - Informative Media Control (IMC)	17,18,19,20,22,23	C	e	1996			L
23	5T Project - Town Supervisor	17,18,19,20,21,23	C	e	1996			L
24	5T Project - Other subsistems	17,18,19,20,21,22	C	e	1996			L
25	Strenghtening of Torino railway junction		A	e				N - C - L
26	Torino Town Plan : "Spina Centrale"	24	A	e				L
27	To. Town Plan: Subway under p. Statuto	25	A	e				L
28	Torino Town Plan : activity new relocalization	25	E	e				L
29	Metro lines: line 1 C.Volo-P.Nuova		A	e				N-C-L
30	Metro lines: line 1 extension Rivoli-Nichelino		A	e				N-C-L
31	Metro lines: line 4 Falchera - C.Mario		A	e				N-C-L
32	Metro lines: line 2		A	e				N-C-L

* If the measure consists of a combination of two or more measures, please list each measure separately, and indicate numbers of the measures combined with this measure in this column

** Types:
A) Infrastruct
B) Managem
C) Informatio
D) Pricing
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**** Authorities:
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N) National
C) County
O) Other

Measures belonging to a category that was consider as possible to model are marked with grey background

3.7 Salerno

3.7.1 General description of the city

Salerno lies on the Tyrenian Sea, not far from Naples. Taking into account the city traffic and transport characteristics and the large amounts of data and applied models it can provide, Salerno represents a good city-laboratory for developing and testing new methodologies.

Land use

Salerno is a town of 60 square km on the Tyrrenian sea. The extension of the city has a narrow and long shape. It has 148930 inhabitants (1991 Census), whose 60130 are the workforce population (42860 employed, 5040 unemployed and 12230 looking for the first job). The number of available jobs are 48400.

It is a typical Italian medium-size city: it has a large concentration of activities and movements towards the central zones, a rather homogeneous daily distribution of mobility with three peaks at 8.00 a.m., at 1.00 p.m. and at 8.00 p.m., and finally a significant quota of movements to and from with the outlying areas that account for 50% of all movements.

Salerno can be subdivided into four zones: city centre, central area, suburban area and peripheral area.

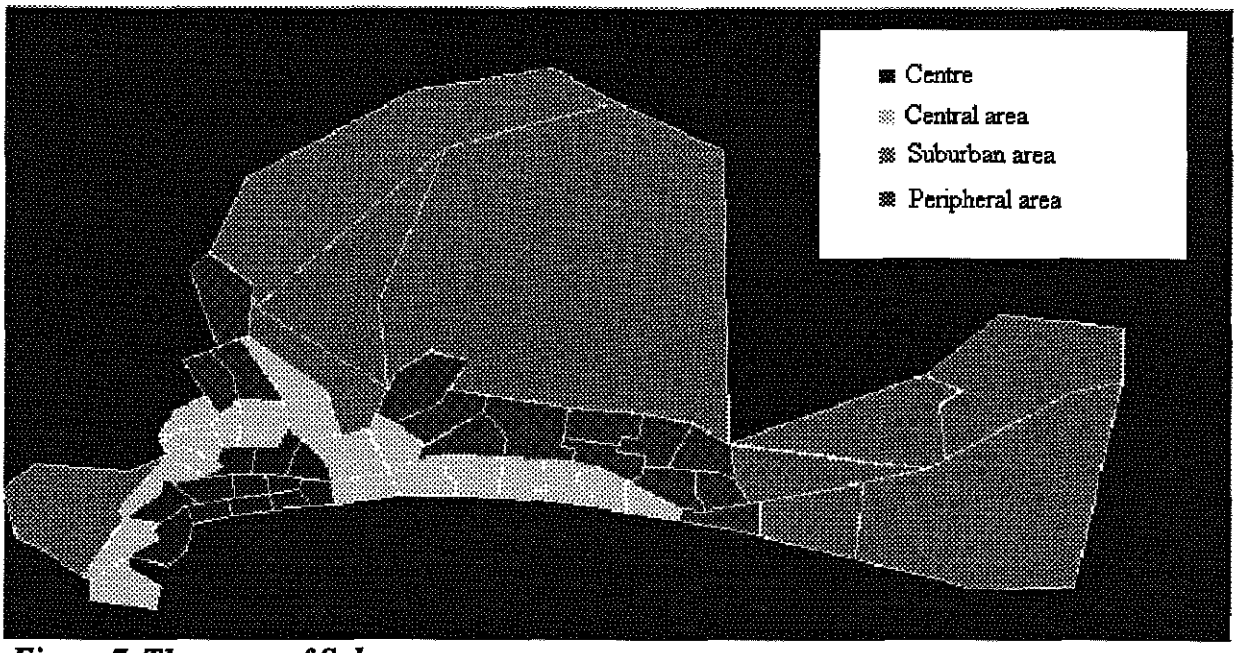

Figure 7. The zones of Salerno.

Most of the population (53%) live in the central area, and if we consider the central and the suburban area we reach the 76% of the total inhabitants. 61% of the schools are located in the central area. The city centre concentrate the 43% of places of employment. The factories are mainly in the peripheral area (35%).

Table 42. Population by zone in Salerno (1981 Census):

ZONE	POPULATION	%
centre	26915	17
central area	82746	53
suburban area	36105	23
peripheral area	11619	7
TOTAL	157385	100

Total population density	2623	inhab/sq km

Table 43. Employed by zone in Salerno (1981 Census):

ZONE	service employment	%	industrial employment	%
centre	15346	52	2821	23
central area	10723	36	2374	19
suburban area	1715	6	2917	24
peripheral area	1866	6	4293	34
TOTAL	29650	100	12405	100

Transportation system

Trips: 350 000 trips for working day
- Internally 320 000 trips per day
  - 40 % by car
  - 7 % by public transport
  - 6 % on bicycle
  - 47 % on foot
- 80 000 trips into the city per day
  - 77 % by car
  - 19 % by bus
  - 4 % by train
- 2.4 trips per inhabitant

Table 44. Origin/destination matrix of trips by car (7.00-9.00 a.m.) in Salerno (1981 Census)

	INTERNAL/INTERNAL				INTERNAL/EXTERNAL			
Origin/Destination	centre	central area	suburban area	periph. area	WEST	NORTH	EAST	TOTAL
centre	868	1466	588	600	410	182	286	4400
central area	3818	4666	2998	1754	1158	804	1268	16466
suburban area	1282	3138	1632	2152	350	416	1898	10866
peripheral area	386	1420	654	642	136	258	154	3650
	EXTERNAL/INTERNAL				EXTERNAL/INTERNAL			
WEST	854	1418	688	396	48	188	200	3792
NORTH	346	1570	494	188	94	26	148	2866
EAST	256	1596	938	162	96	32	32	3112
TOTAL	7810	15274	7992	5894	2292	1906	3986	45152

Table 45. Percent internal trip distribution by motive and destination zone in Salerno (1981).

MOTIVE/ZONE	centre	central area	suburban area	peripheral area	TOTAL
work	35	34	9	22	100
school	27	47	20	6	100
shopping	41	47	9	3	100
other, constrained	25	48	17	10	100
other, non constrained	48	34	11	7	100

Table 46. Percent internal trip distribution by motive and transport mode in Salerno (1981)

MODE/MOTIVE	work	school	shopping	other, constrained	other, non constrained
motor-cycle	5	20	2	11	6
car	62	13	27	31	40
foot	26	50	66	52	47
public transport	7	17	5	6	7
TOTAL	100	100	100	100	100

Demography

Rate of employment: Workforce 60 130, employed 42 860, unemployed 5 040 and 12 330 looking for the first job, available jobs 48 400.

Table 47. Age distribution for Salerno, in percent (1991 Census).

< 5	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65-74	75 <	TOTAL POP.
5	5	6	17	15	13	12	12	9	5	148932

Car ownership: Car ownership is around 400 per 1000 inhabitants.

Authorities involved in the decision-making process of transport policy measures

The authority responsible for traffic and transport in Salerno is the city council. In case of high cost construction of new infrastructure the city must apply to the Italian central government for subsidy and if the infrastructure relates to railway, collaboration with the Italian railway company is necessary.

3.7.2 Transport policy measures

Salerno is at the moment at the planning stage of introducing transport policy measures. It envisages improving public transport by new investments, lane separation and information, promoting walking and cycling by good facilities and making car traffic smoother by increasing capacity and off-street parking places.

Table 48. Measures reported for Salerno

No.	Measure Description	* Combination Measure Numbers	** Type of Measure (A,B,C,D,E)	*** Cat. of Realization (a,b,c,d,e)	Time Span Start Year	Time Span In Use	Time Span End Year	**** Authority (L,N,C,O)
1	NEW ROAD CONSTRUCTION		A	D				L
2	PARKING SUPPLY		A	E				L-O (PRIVATE)
3	UNDERGROUND RAILWAY		A	D				N
4	LIGHT RAIL		A	D				L
5	RAIL LINK PORT-STATION		A	D				N
6	PARK AND RIDE		A	E				L
7	TERMINAL BUS		A	E				C
8	ESCALATORS' SYSTEM		A	D				L
9	CYCLE ROUTE		A	E				L
10	PEDESTRIAN AREAS		A	E				L
11	URBAN TRAFFIC CONTROL		B	A-D				L
12	BUS LANES		B	D				L
13	BUS SERVICES IMPROVEMENT		B	D				L
14	OPERATIONS INFORMATION SYSTEMS TO		B	D				L
15	FLEXIBLE HOURS FPR SHOPS		E	D				L
16	OFFICES AND SCHOOLS RAIL LINK TO THE		A	D				N
17	DECENTRALISATION OF PUBLIC OFFICES		E	E				L - N - C
18	DIRECTION SIGNING		C	E				L
19	ACUSTIC AND ENVIRONMENTAL POLLUTION		B	E				L
20	REGULATORY RESTRICTION ON CAR USE		B	E				L

* If the measure consists of a combination of two or more measures, please list each measure separately, and indicate numbers of the measures combined with this measure in this column

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**** Authorities:
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N) National
C) County
O) Other

Measures belonging to a category that was consider as possible to model are marked with grey background

3.8 Oslo MA

3.8.1 General description of the city

Oslo is the capital city of Norway. The greenbelt areas in the north and east of Oslo combined with the Oslo Fjord result in three corridors leading to the central parts of Oslo. The study area includes the city itself and the county of Akershus, and is by far the greatest metropolitan area of Norway.

Land use

Zones:
1. Central business district
2. Inner city
3. Outer city west
4. Outer city east
5. Green belt
6. Akershus

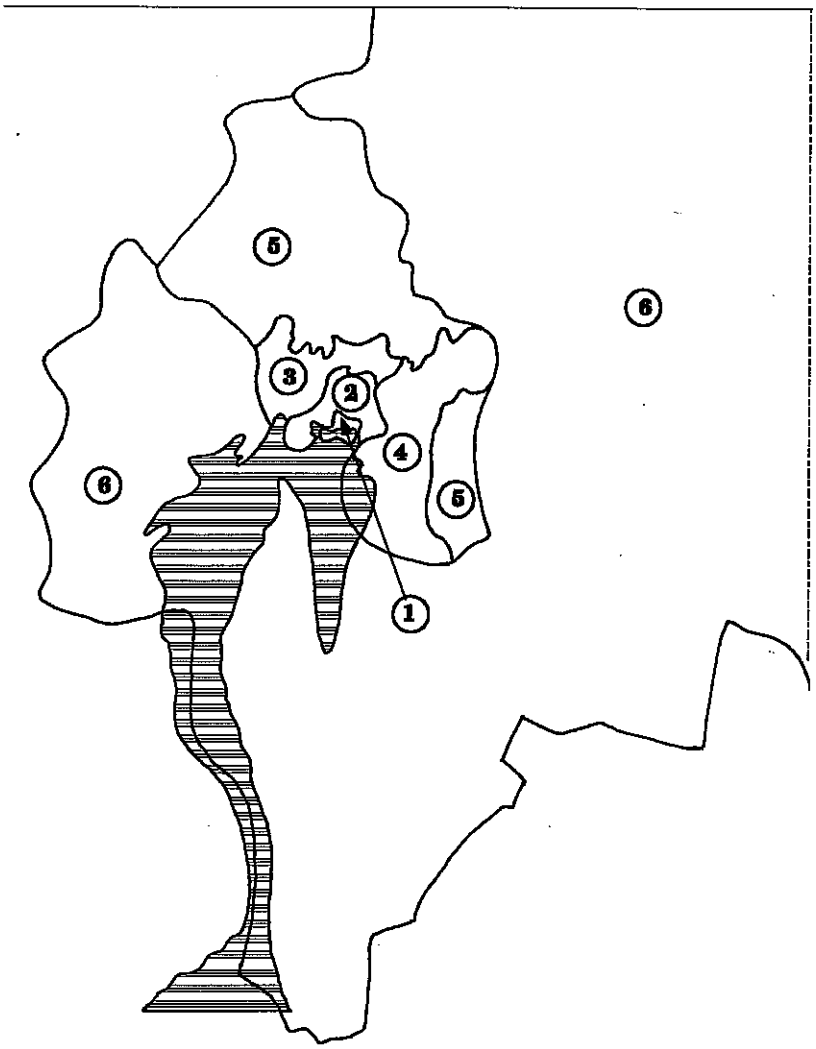

Figure 8. The zones of Oslo MA.

1. Central business district: Including government offices and the harbour. Few residents.
2. Inner city (townships 1 -6): Predominantly blocks of flats.
3. Outer city west (townships 21 - 25): Predominantly one-family houses.
4. Outer city east (townships 7 - 20): Predominantly newer suburbs with blocks of flats.
5. Green belt: No building zone.
6. Akershus: A mixture of one-family houses and municipality centres (two municipalities in the west, 20 in the east).

Table 49. The population, area and population density for the zones of Oslo MA.

Zone	Area (hectares)	Population	Inhabitants/hectare
1	259	2000	8
2	2306	143000	62
3	3789	97000	26
4	8940	240000	27
5	30104	1500	0.05
6	491600	434000	1

Transportation system

Available means of transport:
Walking, cycling and car (driver and passenger), and the following public modes: bus, tram/light rail, metro, railway, boat and taxi.

All means of transport are available in all zones, and for all travel between zones, except:

- Boat is only available between zone 1 and parts of 2 and 6.
- Tram/light rail is only available in zones 1 and 2, and for travel between 1 and 2.
- Metro is available in all zones, except that it is only available in small parts of zone 6.
- There is no railway station in zone 2.

The metro system comprises 100 km of track in an 8-armed star structure, on which 5 lines are operated. Oslo is also the hub of the Norwegian rail system, with lines to the west, north, east and south. The length of tramway lines is 128 km. The structure of the trunk road system is three orbital rings and five radials, concentrated in three corridors: west, east and south.

Trips:

The distinction inside/outside the toll ring is approximately the same as inside/outside the zone 2 of the map.

- Car 62% of the trips in the area
- Public transport 16.4%
- Slow mode (walk / cycle) 21.6%

Table 50. Motorised trips in Oslo and Akershus, 1000/year

From \ To	Inner city	Inside tollring	Outside tollring	Akershus West	Akershus North	Akershus South	**Total**
Inner city	25550	19710	21535	10950	7300	6570	91615
Inside tollring	20075	33215	15330	4015	6570	3650	82855
Outside tollring	21900	15695	31755	6205	5110	2920	83585
Akershus West	11315	4015	5840	50005	1095	2555	74825
Akershus North	7300	6935	5110	1095	63145	1460	85045
Akershus South	6570	3285	2555	1095	1095	27010	41610
Total	92710	82855	82125	73365	84315	44165	459535

Table 51. Public transport trips in Oslo and Akershus 1000/year

From \ To	Inner city	Inside tollring	Outside tollring	Akershus West	Akershus North	Akershus South	**Total**
Inner city	10220	9125	10585	4745	4015	4015	42705
Inside tollring	9490	5475	3650	1095	1460	1095	22265
Outside tollring	10585	3650	4745	1095	730	730	21535
Akershus West	4745	1095	730	5475	365	365	12775
Akershus North	4015	1460	730	365	7300	365	14235
Akershus South	4015	730	365	365	0	3285	8760
Total	43070	21535	20805	13140	13870	9855	122275

Table 52. Slow mode trips in Oslo and Akershus 1000/year

From \ To	Inner city	Inside tollring	Outside tollring	Akershus West	Akershus North	Akershus South	**Total**
Inner city	38337	5639	2223	273	63	19	46554
Inside tollring	5639	24108	1516	59	108	11	31441
Outside tollring	2223	1516	25507	540	448	275	30509
Akershus West	273	59	540	17521	1	14	18407
Akershus North	63	108	448	1	20604	0	21224
Akershus South	19	11	221	0	0	11927	12179
Total	46554	31441	30455	18393	21224	12247	160314

Demography

Table 53. Age distribution in percent for the whole region and the city of Oslo (1.1.1995).

	0-6	7-15	16-19	20-29	30-49	50-64	65<
Region	9.8	9.5	4.2	16	31.4	14	15
City	9.3	8	3.4	17.3	31.7	13.1	17.2

Average household size: Average household size is 1.93 persons in the whole region, 1.71 persons in the city of Oslo.

Rate of employment: The number of employed in the region is 419 453 (1994) and in the city of Oslo 212 032.

Car ownership: Car ownership per person is 0.37 for the region and 0.34 for the city (1995).

Economic development

The 60s and 70s saw the rapid development of the suburbs of zone 4, along with building of the metro to the same area.

Business and population have grown vigorously in the western part of Akershus for many decades, while the industrial base of the city of Oslo has been eroded.

The latter part of the 80s and first part of the 90s meant a triple crisis for Oslo. It consisted of a municipal financial crisis, a crash on the property market and rapidly soaring unemployment. From a level well below the national average, unemployment rose to one of the highest levels among the counties in Norway, reaching more than 10 % in some townships of zones 2 and 4. As a result, travel by private car in the Oslo region fell by 12 % between 1989 and 1990, for instance. Also, the tendency for young families with children to move from Oslo to Akershus was halted.

At present, the city has regained its financial strength, unemployment figures are going down, and property prices in the western part of the city have reached pre-crash levels. The city is however strongly divided between a well-to-do western part and an eastern part with considerable social problems. The construction industry is helped by big infrastructure projects, including the building of the new airport. The service industry, including government and public services, has however become overwhelmingly the most important industry.

Authorities involved in the decision-making process of transport policy measures

There are two counties in the region, Oslo and Akershus. Akershus consists of several municipalities, while Oslo is at the same time a county and a municipality.

The responsibility of the highways lies with the national government, and is carried out by the National Road Authority. The main road network in the region is thus not the responsibility of the local governments, who however have some influence at an advisory level. Taxes, including tolls at the toll ring, also are a national responsibility. The national government is also responsible for rail and air, and is a very important agent in Oslo through its big infrastructure projects for rail and air as well as other construction.

As a part of the system of financing local government, subsidies for local road construction and maintenance and for public transport are given to the county level, but are not earmarked for transport. The amount of road maintenance and public transport services are then decided at the county level, health care and higher education purposes being the primary competitors to transport purposes.

The municipality level (in Oslo: township level) has no responsibility for transport. The municipalities are responsible for land use, and for some policy areas with close ties to transport, such as parking and parking fees. However, their decisions are sometimes challenged and reversed by national government. Harbour policy in Oslo is somewhat special in that financial responsibility rests with Oslo, while several other counties are on the board, and with the national government frequently intervening.

3.8.2 Transport policy measures

A variety of transport policy measures are in use in Oslo MA. This includes a highway construction plan for the period 1988-2007, partly financed by a toll ring. Bus lanes on the new and old highways are an important part of this policy. A new airport is being built, and a high speed rail connection is to secure a high share of public transport to the airport. The metro system has been constantly improved, and measures such as signal prioritization and own rights of way are taken to increase journey speed of buses and tramways. On the other hand, traffic calming measures has been introduced in most residential areas. Parking policy has been restrictive in the inner city. Public transport fares policy has been changing, from rather big increases in the 80-ies to stable fares in the 90-ies. A unitary fare system for the whole region exists, and is shortly to be improved by electronic ticketing.

There are high taxes both on cars and fuel in Norway. There also exists a toll ring in Oslo the proceeds of which are used for highway construction. The major feature of the land use policy is the ban on building in the green belt area.

Table 54. Measures reported for Oslo MA.

No.	Measure Description	* Combination Measure Numbers	** Type of Measure (A,B,C,D,E)	*** Cat. of Realization (a,b,c,d,e)	Time Span Start Year	Time Span In Use	Time Span End Year	**** Authority (L,N,C,O)
1	Price structure, public transport		D	a				L/C
2	Level of prices, public transport		D	a				L/C
3	Subsidies, public transport		D	a				L/C
4	Light rail		A	a				L/C
5	Light rail line extensions		A	a				L/C
6	Public transport erminals		A	a				L/C
7	Metro, new lines		A	d				L/C
8	Active signal prioritization		B	a				L/C
9	HOV lanes		A	a				L/N/C
10	New airport	13	A	a	1998			N
11	Buses, increased frequ.& coverage		B	a				L/C
12	Service lines		B	a				L/C
13	Railway investments	15.1	A	a, d, e				N
14	Railway subsidies		D	a				N
15	Railway frequency	13	B	a				N
16	Railway, fare increase		D	d				N
17	Taxi liberalisation		B	d				N/C
18	Road pricing		D	d				N,L/C
19	New ticketing system		B	e				N, L/C
20	Toll ring	22, 23	A,D	a	1990	2005		N, L/C
21	Differentiating tolls by time of day		D	d				N, L/C
22	Main road investment package	20, 23	A	a, e	1988			N,LC
23	" " " Akershus	20, 22	A	a, e	1988			N, C
24	Increase maintenance		B	a				N
25	Downgrading, shutting/narrow.roads		A, B	a, d				N, L/C
26	Car ownership tax		D	a, d				N
27	Tax on new cars		D	a				N
28	Fuel taxes		D	a				N
29	Private car use of HOV lanes		B	d				N, L/C
30	Main bicycle network		A	a, e	1990			N, L/C
31	Recommended streets, bycycle		B	b				N, L/C
32	Cycling on sidewalks		B	a				N
33	Cycle lanes		B	a				N, LC
34	Cycle parking		B	e				L/C
35	Local roads, increased maintenance		B	a				L/C
36	No more big regional shop.centres		E	a, b				N, L/C
37	Regional development centres		E	a, e				L/C
38	Developm.along public trans.corrid.		E	a, e				L/C
39	Sequencing developm.plans		E	a				L/C
40	Urban renewal plan		E	b	1980			N, L/C
41	Increasing housing density		E	a				L/C
42	Localization permits		E	b				N
43	Regional housing/workplace balance		E	b				L/C
44	Restricting building heights		E	a				L/C
45	Freezing building zone borders		E	a				L/C
46	Traffic calming		A, B	a, b				L/C
47	Speed zoning		A, B	a	1983			L/C
48	Walking streets		A,B	a				L/C
49	Public transport corridors		B	a, e				L/C
50	Recom. corridors, heavy vehicles		B	b				N, L/C
51	Compulsory corridors, " " "		B	e				N, L/C
52	Traffic signalling, green wave		B	a				L/C
53	Trailer terminal		A, B	d				L/C
54	Parking space regulations		B	a				L/C
55	Parking houses		A,B	a				L/C
56	Fewer public parking places		B	d				L/C
57	Parking fee levels		D	a				L/C
58	Time structure of parking fees		D	a				L/C
59	New harbour site	60	A,E	d				N,C
60	Harbour areas to urban developm.	59	A,E	d				L/C
61	New container harbour		A,E	c				N, L/C
62	Banning of studded tyres		B	d				N
63	Renewable fuels		A, B	d				N, L/C
64	Electric car, propan vehicles		A, B	a				N, L/C
65	Noise protection		B	a				N, L/C
66	Freight consolidation		B	a				L/C
67	Environmental zones		B	a				L/C

* If the measure consists of a combination of two or more measures, please list each measure separately, and indicate numbers of the measures combined with this measure in this column

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*** Categories:
a) Measures presently in use
b) Measures used before but cha
c) Measures planned and tested i
d) Measures under consideration
e) Measures under preparation of traffic planner

****Authorities
L) Local
N) National
C) County
O) Other

3.9 Tromsø

3.9.1 General description of the city

Tromsø is a regional centre with a large hospital and several educational centres. The topology of Tromsø is special, with a large part of the town area on an island with bridges to both sides, and with steep hills and distinctive ribbonlike stretches of built up areas along the coast lines.

Land use

Zones: City centre on the Tromsø island (zone 50)
Rest of the Tromsø island (zones 11-45)
Mainland (zones 71-75 + external zones 83, 84)
Kvaløya (zones 61-63 + external zones 81, 82)

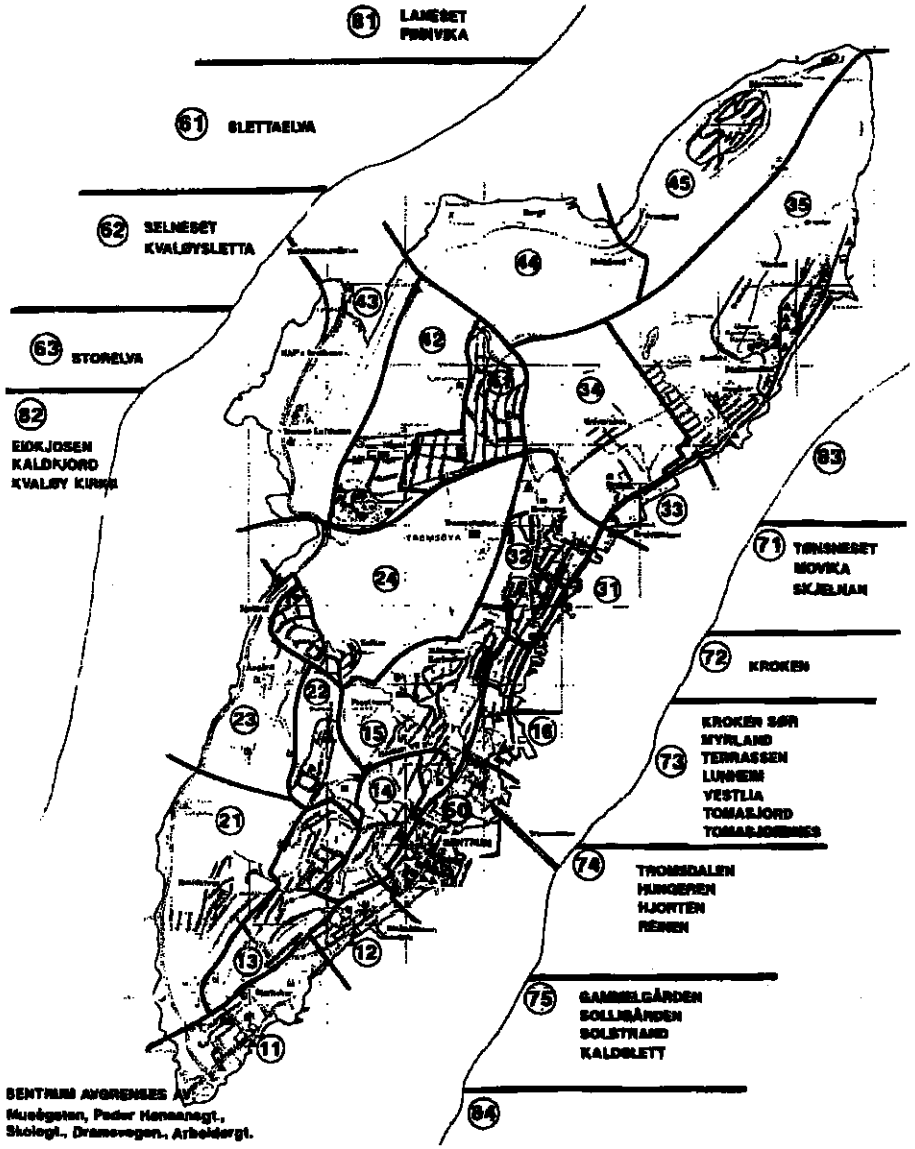

Figure 9. The zones of Tromsø.

Table 55. The population and working places for the zones of Tromsø 1996.

	Population	Students	Working places
City centre	4147	0	9459
Tromsø island	24210	8713	16585
Mainland	13696	0	2079
Kvaløya	6784	0	1074
	7778	0	717
Total	56615	8713	29914

Area: 2520 km^2

Transportation system

Available means of transport: Local and regional bus lines, private car and taxi.

Trips:

Total for the area (1990)
3.32 trips per person per day, persons of age 13 -74 years
Modal split

Bus	14.1 %
Walk/cycling	21.6 %
Car, driver	54.0 %
Car, passenger	10.3 %

Demography

Car ownership: Car ownership is 382 cars per 1000 inhabitants (1990).

Economic development

Tromsø is fast growing, approx. 2 % or 1000 persons/year in the 90's.

Authorities involved in the decision-making process of transport policy measures

- - The city of Tromsø
- - The Troms County: Local public transport, level of subsidy to the local bus company
- - The national road and road transport administration
- - The local bus company TROMSBUSS: operational planning of bus line system, fares etc.

3.9.2 Transport policy measures

Tromsø lies on an island and thus is physically separated from mainland. There are two special provisions; the first one is a local fuel tax for road construction and the second a private road tunnel crossing the island financed by toll collection. There is also another tunnel crossing the Tromsø strait implemented by national and local authorities and a third centre tunnel for reducing car traffic is under consideration.

Promoting public transport and restricting car traffic using parking policies are under preparation.

Table 56. Measures reported for Tromsø.

No.	Measure Description	* Combination Measure Numbers	** Type of Measure (A,B,C,D,E)	*** Cat. of Realization (a,b,c,d,e)	Time Span Start Year	In Use	End Year	**** Authority (L,N,C,O)
1	Local gasoline tax		D	a	1989	2001		L,N
2	New tunnell crossing the Tromsø strait		A	a	1993	x		N
3	Tunnell system on the Tromsø Island		A	a	1989	x		L (Private entrepen
4	Underground parking facilities	2	A	a	1989	x		L (Private entrepen
5	Extension of the tunnell system in Tromsø cen	3,4	A	d	?			L,N
6	High density land - use	7,8,9,10	E	e		2001/15		L
7	High petrol tax	6,8,9	D	e				N,L
8	Reduced p.t. fares		D	e				C
9	Increased p.t. supply		B	e				C
10	Parking, restrictions/pricing		D/B/E	e				L
11	Pedestrian areas		D/B/E	a,e	1994			L
12	Medium density land - use		E	e		2001/15		L
13	Traffic calming	5	A/B	a,e				L,N
14	Road tolls		B/D	c				L,N
15	Low density land use	7,8,9,10	E	e		2001/15		L

* If the measure consists of a combination of two or more measures, please list each measure separately, and indicate numbers of the measures combined with this measure in this column

** Types:
A) Infrastruct
B) Managem
C) Informatio
D) Pricing
E) Land Use

*** Categories:
a) Measures presently in use
b) Measures used before but cha
c) Measures planned and tested
d) Measures under consideration
e) Measures under preparation of traffic planners

****Authorities:
L) Local
N) National
C) County
O) Other

Measures belonging to a category that was consider as possible to model are marked with grey background

4 SUMMARY OF CITIES

This section summarises policy measures reported by each city. Only measures that were considered feasible to model are included, e.g. information measures have totally been left out because they could not be modelled or tested in the project. The measures are picked up from all the measures the nine cities have reported (Appendix 2). However it must be remembered that the level of reporting varies from one city to another e.g. cities with a vast variaty of measures may have omitted some most common ones. A summary table of these measures has been collected by the category of the measure (Table 57). In the table only one mark is indicated although originally there may be several different measures falling into the same category.

4.1 Infrastructure measures

In all cities road construction is seen as an important measure as well as on the other hand pedestrianisation and constructing of pedestrian areas. Developing the public transport infrastructure depends on the present public transport system and on the size of the city thus varying from city to city.

Bus and/or tram lanes are used or planned in the greater cities. Light rail systems are under planning in many cities and already in use in Turin and Oslo. In the greater cities park and ride facilities are being constructed whereas in the smaller ones off-street parking supplies are being constructed. Traffic calming infrastructure measures are used in the Austrian cities, Helsinki MA and Oslo MA. Constructing of cycle routes, lanes and/or paths has been reported for all other cities except for Turin and Tromsø.

4.2 Management measures

Traffic calming through management measures is used in all other cities except the Italian ones. Instead, in Turin they have regulatory restrictions on car use and such a measure is also being planned for Salerno. On-street parking is being reduced in the British cities and in Helsinki MA and there are plans to do likewise in the Norwegian cities.

Bus and tram priorities are used in many cities. Also promoting public transport by management measures such as the level of service or reliability has been reported for all other cities but Vienna.

4.3 Pricing measures

All cities except Salerno are using parking charge levels as a demand management measure. Road pricing is used in Oslo, planned in the British cities and rejected before or after being in use in Tromsø and Helsinki.

Using public transport fare levels as a measure has also been reported for most of the cities. Apart from the small cities, Merseyside is the only larger cities not to report it.

4.4 Land use measures

Land use measures are reported vaguely. Control of development, development within transport corridors and making the city structure more dense are the most common measures reported. Since the transport models used in the project are not in general adequate for representing land use changes, land use measures have not been considered in depth.

Table 57. Summary of measures (which are considered feasible to model) selected from the set of measures reported by the cities.

		Edinbu			Merse			Vienna			Eisens			Helsin			Torino			Salern			Oslo			Troms		
		U	P	R	U	P	R	U	P	R	U	P	R	U	P	R	U	P	R	U	P	R	U	P	R	U	P	R
A	**Infrastructure measures**																											
1	New road construction		x	x	x	x		x			x				x			x			x		x	x		x	x	
2	Parking supply, off-street	x									x										x					x		
3	Rail services	x	x		x	x		x						x	x			x			x		x	x				
4	Light rail		x			x									x		x	x			x			x				
5	Bus (tram) lanes							x						x			x	x						x				
7	Park and ride	x	x		x	x		x						x				x			x							
9	Traffic calming (speed humps, wide pavements)							x			x			x										x	x			
10	Cycle routes, lanes, paths	x				x		x			x			x	x						x			x	x			
11	Pedestrian areas, pedestrianisation	x	x		x			x			x			x				x			x		x			x	x	
B	**Management measures**																											
3	Traffic calming in residental areas	x			x	x		x			x			x									x	x		x	x	
4	Traffic calming on radials			x																								
6	Regulatory restrictions on car use																x				x							
7	Reduce on-street parking	x			x	x								x										x			x	
8	Parking controls			x							x			x									x				x	
11	Bus (tram) priorities		x		x	x		x						x			x	x										
12	Bus lanes		x											x	x		x	x			x		x					
14	Modified service levels of bus and rail services		x		x						x			x	x						x		x				x	
15	Improve the reliability of bus services					x								x			x											
D	**Pricing measures**																											
2	Fuel taxes							x						x									x			x	x	
4	Parking charges	x			x	x		x			x			x			x	x					x				x	
6	Public transport fare levels		x					x						x			x	x					x				x	
8	Road pricing		x			x										x							x	x				x
E	**Land use measures**																											
2	Densities of population and employment																x	x			x						x	
3	Development within transport corridors													x									x	x				
4	Development mix																											
		U IN USE																										
		P PLANNED																										
		R REJECTED																										

APPENDIX 1 **Questionnaire forms and instructions**
APPENDIX 2 **Detailed description of the measures for each city**
APPENDIX 3 **Description of how the measures are modelled in each city**

APPENDIX 1A

QUESTIONNAIRE FORMS (ROUND 1)

INVENTORY OF POLICY MEASURES
SUMMARY FORM (Form 1/1)

CITY:_____

OPTIMA
WP20

No.	Measure Description	* Combination Measure Numbers	** Type of th Measure (A,B,C,D,E)	*** Category of Realization (a,b,c,d,e)	Time Span Start Year	Time Span In Use (x)	Time Span End Year	**** Authority (L, N, C, O)
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								

* If the measure consists of a **combination of two or more measures**, please list each measure separately, and indicate numbers of the measures combined with this measure in this column

**** Types:**
A) Infrastructur
B) Management
C) Information
D) Pricing
E) Land Use

***** Categories:**
a) Measures presently in use
b) Measures used before but changed or rejected, o
c) Measures planned and tested but rejected
d) Measures under consideration of authorities
e) Measures under preparation of traffic planners

******Authorities:**
L) Local
N) National
C) County
O) Other, please indicate

VTT 4.3.1996

INVENTORY OF POLICY MEASURES
SUMMARY FORM (Form 1/2)

CITY:_____

OPTIMA
WP20

No.	Measure Description	* Combination Measure Numbers	** Type of the Measure (A,B,C,D,E)	*** Category of Realization (a,b,c,d,e)	Time Span			**** Authority (L, N, C, O)
					Start Year	In Use (x)	End Year	
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								

* If the measure consists of a **combination of two or more measures**, please list each measure separately, and indicate numbers of the measures combined with this measure in this column

**** Types:**
A) Infrastructur
B) Management
C) Information
D) Pricing
E) Land Use

***** Categories:**
a) Measures presently in use
b) Measures used before but changed or rejected, o
c) Measures planned and tested but rejected
d) Measures under consideration of authorities
e) Measures under preparation of traffic planners

******Authorities:**
L) Local
N) National
C) County
O) Other, please indicate

VTT 4.3.1996

CITY: _____ MEASURE NUMBER (See Form 1): _____
OR NUMBERS OF MEASURES COMBINED

1 Description of the measure

1.1 Description of the measure or the combination of measures

1.2 Main objectives of the measure

1.3 Area of implementation
(total area inside which the measure has been implemented; city centre, suburbs A+B etc.)

Name(s)	
Size (square kilometres)	
Population	
Type (centre, suburb, industrial, mixed etc. If residential area, type of housing)	

1.4 Dimensions / Extent of the measure
(absolute/relative value of money or degree of coverage in the area stated in Q 1.3)

2 Authorities involved in the implementation procedure of the measure

	Authority
Decision making	
Financing	
Implementation, upkeeping	

CITY: _____ MEASURE NUMBER (See Form 1): _____
OR NUMBERS OF MEASURES COMBINED

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

__ 1 Yes, exactly __ 2 Almost __ 3 Not at all

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)

_____

_____

_____

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure

_____

_____

_____

4.2 Public attitudes; attitudes of person groups that have expressed an opinion about the measure

Description of the group	Attitude (scale:1-5; 1= strictly against, 5=extremely supportive)	Reasons for the attitude

4.3 Other remarks concerning acceptance of the measure (e.g. organisational, legislative or institutional issues)

_____

_____

_____

_____

CITY: _____ MEASURE NUMBER (See Form 1): _____
OR NUMBERS OF MEASURES COMBINED

5 Reasons for rejection of the measure
(If the measure has been rejected)

6 Other issues concerning the measure
(e.g. local conditions or physical or economical constraints)

Please continue here or on another paper, if the space reserved for a question is not adequate.

INVENTORY OF POLICY MEASURES
CITY CHARACTERISTICS (Form 3)

OPTIMA
WP20

Please write a description containing information about the issues mentioned in the following five topics.

In chapter 1, Land Use, you are asked to divide the city into zones by land use characteristics. If possible, give all the information, requested under headlines 1 to 4, **separately for each zone** (the zones defined in chapter 1).

1. Land Use

- The area divided into 3 to 5 zones by land use characteristics (zones can be for example following: city centre, central city area, suburban area, distinct town centres in suburban area, other)
- Short description of the zones, possibly illustrated with a schematic drawing
- Population
- Area size
- Population density

2. Transportation System

- Available means of transport for trips between the zones and inside each zone
- Amount and division between car and public transport of following trips:
  - total trips in the area
  - trips inside each zone
  - trips to/from each zone and from/to the city centre (whole day and during rush hours)

3. Demography

- Age distribution
- Average household size
- Rate of employment or number of employed
- Car ownership per person or per household

4. Economic Development

- Essential points concerning the recent economic development of the city

5. Authorities Involved in the Decision-Making Process of Transport Policy Measures

- Local authorities
- National authorities that have influence on the transport policy of the city
- Roles of each authority

Note: Please check that all authorities listed in Form 1 are included in this description.

OPTIMA
Work Package 20; Identify Policy Instruments

LIST OF POLICY MEASURES

Policy measures can be grouped under the broad headings of infrastructure, management, information, pricing and land use. Examples of each type of policy measures are listed below.

5.1. Infrastructure measures

- New road construction
- Parking supply
- Rail services
- Light rail
- Guided bus
- Park and ride
- Terminals and interchanges to extend the coverage of public transport services
- Cycle routes
- Pedestrian areas

5.2. Management measures

- Traffic management
- Urban traffic control
- Traffic calming
- Physical restrictions on car use
- Regulatory restrictions on car use
- Parking controls
- Car sharing
- Bus priorities
- High occupancy vehicle (HOV) lanes
- Modified service levels of bus and rail services
- Service management measures to improve the reliability of bus services
- Cycle lanes
- Cycle parking

5.3. Information measures

- Direction signing
- Variable message signs
- Driver information
- Parking information
- Telecommunications
- Public awareness campaigns
- Timetable information
- Real-time passenger information
- Operation information systems to identify locations of buses and to reschedule services to reduce the impact of unreliability

5.4. Pricing measures

- Vehicle ownership taxes
- Fuel taxes
- Company car tax changes
- Parking charges
- Congestion charges
- Public transport fare levels
- Public transport fare structures
- Concessionary fares to provide lower fares or free travel to identifiable categories of passengers with special needs

5.5. Land use measures

- Flexible hours to reduce demand of peak travel
- Densities of population and employment
- Development within transport corridors
- Development mix
- Developer contributions to transport infrastructure
- Commuted payments
- Travel reduction ordinances
- Parking standards

APPENDIX 1B

QUESTIONNAIRE FORMS (ROUND 1

BG

Single

INVENTORY OF POLICY MEASURES
DETAILED DESCRIPTION (Form 2/1)

OPTIMA
WP20

CITY: _____ MEASURE NUMBER (See Form 1): _____
OR NUMBERS OF MEASURES COMBINED

1 Description of the measure

1.1 Description of the measure or the combination of measures

_____

_____

_____

1.2 Main objectives of the measure

_____

_____

_____

1.3 Area of implementation and extent of the measure

Zone(s)	Type of the area	Type of housing	Size sqkm	Population	Extent no/km etc.	% extent	Level of charges

Zone - according to the rough zoning of the city.
Type of the area - main land use type in the implementation area (centre,suburb,industrial, mixed etc.)
Type of housing - main housing type in the implementation area.
Area size - size of the implementation area within the zone in square kilometres or percents of the total area.
Population - population of the implementation area.
Extent - absolute extent of the measure (e.g. total kilometres or number of crossings treated).
% extent - coverage of the measure in percents (e.g. if the total length of bus lanes is 20 km on the main street network of 50 km, the coverage is 40 %; or if 5 crossings out of the total of 20 signalized crossings are treated, the coverage is 25 %.
Level of charges - fares or charges collected and their level compared to charges elsewhere in the city or the country.

APPENDIX 2

DETAILED DESCRIPTIONS OF POLICY MEASURES FOR EACH CITY (ORIGINAL FORMS)

EDINBURGH

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 1

1 Description of the measure

1.1 Description of the measure or the combination of measures

Western radial road

1.2 Main objectives of the measure

Improved accessibility to the west of the city

1.3 Area of implementation

Name(s) central, inner, outer

1.4 Dimensions / Extent of the measure

unknown

2 Authorities involved in the implementation procedure of the measure

Decision making L
Financing L
Implementation, upkeeping L

4 Acceptability

4.3 Other remarks concerning acceptance of the measure

Through the road in technically still "alive", in practice it is not being progessed due to lach of finance. Perhaps more importantly, public opinion is now heavily against highway construction.

5 Reasons for rejection of the measure

Technically, not yet rejected, but see 4.3 above.

6 Other issues concerning the measure

see 4.3 above

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 2

1 Description of the measure

1.1 Description of the measure or the combination of measures

Other highway schemes: inherited highway schemes tested in the JATES.

1.2 Main objectives of the measure

Accessibility

1.3 Area of implementation

Name(s) Various

1.4 Dimensions / Extent of the measure

Various

2 Authorities involved in the implementation procedure of the measure

Decision making L
Financing L
Implementation, upkeeping L

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure

Schemes not being progressed due to change in attitudes towards highway construction, and l lach of finance.

5 Reasons for rejection of the measure

These schemes were tested as part of the JATES highway strategy, which was not recommended.

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 3

1 Description of the measure

1.1 Description of the measure or the combination of measures

2nd Forth Road Bridge and associated approach roads.

1.2 Main objectives of the measure

Regional accessiblity.

1.3 Area of implementation

Name(s) Outer suburbs

2 Authorities involved in the implementation procedure of the measure

Decision making N
Financing N
Implementation, upkeeping N

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** Combination 4, 5, 6

1 Description of the measure

1.1 Description of the measure or the combination of measures

Reduce on - street parking in centre, complementary increase in short term off-street spaces, parking charges discourage long-stay parkers in centre, yet provide for shoppers.

1.2 Main objectives of the measure

Efficiency, accessibility, environment

1.3 Area of implementation

Name(s) Centre

2 Authorities involved in the implementation procedure of the measure

Decision making L
Financing L
Implementation, upkeeping L

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

X 1Yes, exactly __ 2 Almost __ 3 Not at all

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)

Effective technically in reducing long stay parking and therefore car commuters. (But note difficultly in controlling PNR parking.

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 7

1 Description of the measure

1.1 Description of the measure or the combination of measures

Extend Private Non-Residential parking provision.

1.2 Main objectives of the measure
To support the highway orientated scenario tested initially in JATES.

1.3 Area of implementation
Name(s) centre

2 Authorities involved in the implementation procedure of the measure
Decision making L
Financing L
Implementation, upkeeping L

4.3 Other remarks concerning acceptance of the measure
This was never a true policy option. It was invented to support a hypothetical highways - based scenario in model tests. Policy is new working in the opposite direction (see policies 4, 5, 6).

5 Reasons for rejection of the measure
see 4.3 above

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 8

1 Description of the measure
1.1 Description of the measure or the combination of measures
Park and ride: (i) at rail stations - already in operation, c. 100 spaces per station (ii) Bus park and ride: not yet implemented but sites bought & safeguarded (iii) possible future LTR p + ride (may be operated by concessionaires).

1.2 Main objectives of the measure
Reduction in travel to c. centre by car. Environmental and efficiency benefits (and safety).

1.3 Area of implementation
Name(s) Cordons in outer and inner suburbs.

2 Authorities involved in the implementation procedure of the measure
Decision making L
Financing L
Implementation, upkeeping L (carcessionaire?)

3 Effectiveness
3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)
x 1Yes, exactly **__ 2 Almost** **__ 3 Not at all**

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
contribution to increase in rail passengers.

4 Acceptability
4.1 Key characteristics affecting acceptability of the measure
No oppments so far. NIMBY opposition might occur when details go public of new schemes. Poss. opposition by countryside groups (loss of green belt)

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 9

1 Description of the measure

1.1 Description of the measure or the combination of measures

New/improved rail lines: Bathgate freight line re-opened for passengers 1987; Future possibilities: electrification of N. Berwick Branch Line; South Suburban line in Edinburg.

1.2 Main objectives of the measure

Encowaging public transport: efficiency, environment, safety.

1.3 Area of implementation

Name(s) central, inner, outer

2 Authorities involved in the implementation procedure of the measure

Decision making	Local authority,
Financing	plus Scotrail and
Implementation, upkeeping	Railtrack

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

X 1Yes, exactly **__ 2 Almost** **__ 3 Not at all**

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)

Passenger numbers doubles.

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 10

1 Description of the measure

1.1 Description of the measure or the combination of measures

New rail stations: 9 new stations since 1976, most in last 10 years. Plans to open more, including Edinburg Park to serve new commercial development in the west.

1.2 Main objectives of the measure

Encouraging public transport, serving new commercial development: environment, safety, efficiency.

1.3 Area of implementation

Name(s) inner and outer suburbs

2 Authorities involved in the implementation procedure of the measure

	Authority
Decision making	Local authenties with Scotrail and Railtrack.

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

X 1Yes, exactly __ 2 Almost __ 3 Not at all

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)

Contribution to increased rail passengers (one station only has been unsuccessful).

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 11, 12, 13

1 Description of the measure

1.1 Description of the measure or the combination of measures

Light rapid transit: long term possibility of a system probably with a N-S or E-W une, or both.

1.2 Main objectives of the measure
Encourage public transport: safety, efficiency, environment.

1.3 Area of implementation
Name(s) centre, inner and outer suburbs.

2 Authorities involved in the implementation procedure of the measure

Decision making L
Financing L
Implementation, upkeeping L

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure
No opposition in principle at this early stage.

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 14

1 Description of the measure

1.1 Description of the measure or the combination of measures
Guided bus on 11 km corridor from city centre to Western nes development and airport. Probably concessionaire operated (and built).

1.2 Main objectives of the measure
Encouraging public transport: safety, efficiency, environment.

1.3 Area of implementation
Name(s) centre, inner and outer suburbs.

2 Authorities involved in the implementation procedure of the measure

Decision making L
Financing L (concessionaire?)
Implementation, upkeeping L (concessionaire?)

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure
Using land reserved fo an earlier road scheme
No opposition except same neighbouring residents. Also some opposition from railway lobby
(N.B. much less opposition than western radial road proposed for same route)

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 15

1 Description of the measure

1.1 Description of the measure or the combination of measures
Greenways bus lanes: traffic management incl. parking restrictions to favour buses on radial and orbital routes: phased programme. Long set - backs at junctions (may give junction priority later). Operate 7 am to 7 pm.

1.2 Main objectives of the measure
Engouraging public transport: environment, safety, efficiency.

1.3 Area of implementation
Name(s) centre, inner and outer suburbs.

2 Authorities involved in the implementation procedure of the measure

Decision making L
Financing L
Implementation, upkeeping L

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure
Bus lanes do not go right up to junction stop lines, so little motorist opposition. (There is increasing willingness to accept reductions in junction capacity in order to promote buses.

4.3 Other remarks concerning acceptance of the measure
Shopkeepers along routes oppose, due to parking controls.
Some concern from resident it could became a bus speedway. Main conflict exists at shopping centres a main radials

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 16

1 Description of the measure

1.1 Description of the measure or the combination of measures
Cyde routes: paving and lighting old railway lines. Incorporating facilities for cyclists in all Traffic management

1.2 Main objectives of the measure
Environment, safety, efficiency

1.3 Area of implementation
Name(s) Centre, inner and outer suburbs

2 Authorities involved in the implementation procedure of the measure

Decision making L
Financing L
Implementation, upkeeping L

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)
X 1Yes, exactly **__ 2 Almost** **__ 3 Not at all**

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
Cycling is increasing, including recreational routes

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 17

1 Description of the measure

1.1 Description of the measure or the combination of measures
City centre pedestrianisation/pedestrian priorities:Pedestrianisation of Rose St (in centre) has taken place; aspiratious for partial pedestrianisation of Princes Street (shared with buses) and general policy of giving pedestrians more space / as in Royal Mile.

1.2 Main objectives of the measure
Efficiency, safety, environment

1.3 Area of implementation
Name(s) centre

2 Authorities involved in the implementation procedure of the measure

Decision making L
Financing L
Implementation, upkeeping L

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

X 1 Yes, exactly __ 2 Almost __ 3 Not at all

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 18

1 Description of the measure

1.1 Description of the measure or the combination of measures

New bus station nr. Haymarket Railway Station (and redevelopment of existing bus station).

1.2 Main objectives of the measure

Port of overall attempt to promote public transport.

1.3 Area of implementation

Name(s) centre

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 19

1 Description of the measure

1.1 Description of the measure or the combination of measures

UTC system in city centre: scoot already exists but will be upgraded in 1997. Possible later extension of UTC area.

1.2 Main objectives of the measure

centre

1.3 Area of implementation

Name(s) centre

2 Authorities involved in the implementation procedure of the measure

	Authority
Decision making	L
Financing	L
Implementation, upkeeping	L

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 20

1 Description of the measure

1.1 Description of the measure or the combination of measures

Increase inner orbital capacity. Not a true policy measure: introduced as hypothetical component of highways´scenario tested, and rejected, in JATES

5 Reasons for rejection of the measure

See 1.1 above.

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 21

1 Description of the measure

1.1 Description of the measure or the combination of measures

Increase capacity in other main routes
Not a true policy measure: introduced as hypothetical component of "highways" scenario tested and rejected in JATES

1.2 Main objectives of the measure

all

5 Reasons for rejection of the measure

see 1.1. above

1 Description of the measure

1.1 Description of the measure or the combination of measures

Recuce capacity for cars in radial routes.
Introduced as hypothetical component of rail scenario tested in JATES. Not a current policy, though could effectively become so if greater priority is given to buses at junctions (see measure no 15)

1.3 Area of implementation

Name(s) inner and outer suburbs

5 Reasons for rejection of the measure

See 1.1 above

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 23

1 Description of the measure

1.1 Description of the measure or the combination of measures

Traffic calming in residential areas. Much planned traffic calming is linked to Greenways (measure 15) which could encourage "rat-running

1.2 Main objectives of the measure

reduction in rat-running
safety

1.3 Area of implementation

Name(s) centre, inner and outer suburbs

2 Authorities involved in the implementation procedure of the measure

Decision making L
Financing L
Implementation, upkeeping L

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

X 1Yes, exactly **__ 2 Almost** **__ 3 Not at all**

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)

Volumes, speeds, accidents reduced (monitored)

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure

not liked by bus etc operators
80 % of resident accept the idea in principle but same problems with detailed design.

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 24

1 Description of the measure

1.1 Description of the measure or the combination of measures

Traffic calming in radials: introduced as part of a "rail-based" scenario for testing in JATES - not a true policy

1.2 Main objectives of the measure

Engouraging public transport use.

5 Reasons for rejection of the measure

see 1.1

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 25

1 Description of the measure

1.1 Description of the measure or the combination of measures

Extend a street parking central. Longer-term possibility. This refers to extending a street permits for residents from existing city centre scheme to dense inner suburbs.

1.2 Main objectives of the measure

Reduce commuting by car. Environmental safety.

1.3 Area of implementation

Name(s) inner suburbs

2 Authorities involved in the implementation procedure of the measure

Decision making L
Financing L
Implementation, upkeeping L

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 26

1 Description of the measure

1.1 Description of the measure or the combination of measures

Bus priorities other than bus lanes. Possible future upgrading of Greenways and other locations by e.g. priority for buses at signals.

1.2 Main objectives of the measure

Encourage public transport. Safety, environment.

1.3 Area of implementation

Name(s) all areas

2 Authorities involved in the implementation procedure of the measure

Decision making L
Financing L
Implementation, upkeeping L

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 27

1 Description of the measure

1.1 Description of the measure or the combination of measures
Car sharing scheme 1992 - 1994. Not LA funded; involving motoring organisations. Intended to be big but failed (ineffective publicity?)

1.2 Main objectives of the measure
Reduce car volumes. Efficiency, environment

1.3 Area of implementation
Name(s) all

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
Opinion: in effective publicity

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure
No objections to this scheme

5 Reasons for rejection of the measure

Usual reasons for difficulties with car-sharing schemes, plus ineffective (through extensive) publicity.

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 28

1 Description of the measure

1.1 Description of the measure or the combination of measures
Car-charing: co-operative car hire in residential areas.

1.2 Main objectives of the measure
Reduce car volumes. Efficiency, environment.

1.3 Area of implementation
Name(s) all

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 29.3

1 Description of the measure

1.1 Description of the measure or the combination of measures
Increase in bus and rail service levels: escentially outside local government control (deregulation & privatisation), but LA unlikely to want to pay for this.

1.2 Main objectives of the measure
Engourage public transport, efficiency, safety, environment

1.3 Area of implementation
(total area inside which the measure has been implemented; city centre, suburbs A+B etc.)
Name(s) all

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure
see 1.1 above

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 31.32

1 Description of the measure

1.1 Description of the measure or the combination of measures

Cycle lanes and priorities and parking: included in traffic management measures, especially at traffic signals. Exemption from traffic calming movement restrictions.

1.2 Main objectives of the measure

Promoting cycling: safety, environment, efficiency

1.3 Area of implementation

Name(s) all

2 Authorities involved in the implementation procedure of the measure

Decision making L
Financing L
Implementation, upkeeping L

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

X 1Yes, exactly **__ 2 Almost** **__ 3 Not at all**

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 33.34

1 Description of the measure

1.1 Description of the measure or the combination of measures

Pedestrian routes:

1.2 Main objectives of the measure

safety, environment

1.3 Area of implementation

Name(s) mainly CBD and inner suburb

2 Authorities involved in the implementation procedure of the measure

Decision making L
Financing L
Implementation, upkeeping L

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

__ 1Yes, exactly **__ 2 Almost** **__ 3 Not at all** **x promising**

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)

too early to say but good results from the one route already implemented.

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 35.36

1 Description of the measure

1.1 Description of the measure or the combination of measures

Reduction in bus and rail lanes: Not seriously considered as LA unlikely to want to pay to do this (expect for concessionary lanes (measure 31). (Note: integrated ticheting planned for 1997).

1.2 Main objectives of the measure

Encourage bus and rail use: efficiency, environment, safety

1.3 Area of implementation
Name(s) all

2 Authorities involved in the implementation procedure of the measure
Decision making L
Financing L
Implementation, upkeeping L

4 Acceptability
4.1 Key characteristics affecting acceptability of the measure
see 1.1 above

1 Description of the measure
1.1 Description of the measure or the combination of measures
Concessionary lanes. (Expensive measure - indirectly affects service levels).

1.2 Main objectives of the measure
Reduced lanes for OAPs and disabled: encourage public transport use, improve mobility

1.3 Area of implementation
Name(s) all

2 Authorities involved in the implementation procedure of the measure
Decision making L
Financing L
Implementation, upkeeping L

3 Effectiveness
3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)
X 1Yes, exactly **__ 2 Almost** **__ 3 Not at all**

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
well used

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 38

1 Description of the measure
1.1 Description of the measure or the combination of measures
Road/congestion pricing: Cordon charges most favoured (round outer edge of city). "User charge" rather than a traffic deterrent in tax

1.2 Main objectives of the measure
Reduce car traffic to centre: environment, safety, efficiency

1.3 Area of implementation
Name(s) Centre and perhaps inner suburbs

2 Authorities involved in the implementation procedure of the measure
Decision making L
Financing L
Implementation, upkeeping L

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure
Politically unacceptable at present - even the Labour group is not fully behind teh scheme. There is a general reluctance to implement ?? schemes for fear of alienating motorists and those living/working near the schemes boundary

4.3 Other remarks concerning acceptance of the measure
(e.g. organisational, legislative or institutional issues)
C. Government legislation is needed to implement road pricing in UK.

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 39

1 Description of the measure

1.1 Description of the measure or the combination of measures
Estate with zero car ownership. 2 km west of city centre, between 2 radial routes with good bus services. c. 120 houses of mixed tenure.

1.2 Main objectives of the measure
Reduce car travel, encourage public transport. Environment, safety, efficiency.

1.3 Area of implementation
Name(s) inner suburbs

1.4 Dimensions / Extent of the measure
(absolute/relative value of money or degree of coverage in the area stated in Q 1.3)
c. 120 homes

2 Authorities involved in the implementation procedure of the measure

Decision making	Housing association
Financing	"
Implementation, upkeeping	"

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure
No opposition from any group

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 40

1 Description of the measure

1.1 Description of the measure or the combination of measures
Land use cartools are developers. Structure plan for Lothian tries to concentrate new employment and herising in areas with good access and prevent piecemeal out of town shopping etc. development.

1.2 Main objectives of the measure
Maintain accessibility, efficiency

1.3 Area of implementation
Name(s) all

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 41

1 Description of the measure

1.1 Description of the measure or the combination of measures

Road Network Information
VMS for Park and Ride and City centre car parks

1.2 Main objectives of the measure

Efficiency

1.3 Area of implementation

Name(s) all

2 Authorities involved in the implementation procedure of the measure

Decision making L (and C)
Financing L (and C)
Implementation, upkeeping L (and C)

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 42

1 Description of the measure

1.1 Description of the measure or the combination of measures

Public transport information:
timetable info (telephare and remote terminals) a
real-time information in bus routes (b)

1.2 Main objectives of the measure

Upgrade public transport: environment, safety, efficiency

1.3 Area of implementation

Name(s) all

2 Authorities involved in the implementation procedure of the measure

Decision making L
Financing L
Implementation, upkeeping L

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 43

1 Description of the measure

1.1 Description of the measure or the combination of measures

Public awareners campaigns: aimed at persuading travellers to change their travel behaviour based on better information about issues/alternatives

1.2 Main objectives of the measure

Efficiency, safety, environment

1.3 Area of implementation

Name(s) all

2 Authorities involved in the implementation procedure of the measure

Decision making L and C
Financing L and C
Implementation, upkeeping L and C

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 44

1 Description of the measure

1.1 Description of the measure or the combination of measures
Develope contributions: ti infrastructure, including "usual" access roads etc and also public transport

1.2 Main objectives of the measure
practicability

1.3 Area of implementation
Name(s) all

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)
X 1Yes, exactly __ 2 Almost __ 3 Not at all

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 45

1 Description of the measure

1.1 Description of the measure or the combination of measures
Commuted payments: LA trying to develop this, but legally difficult. (Difficult to relate payment to what LA provides

1.2 Main objectives of the measure
Prictícability

1.3 Area of implementation
Name(s) all

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure
see 1.1

CITY: Edinburgh **MEASURE NUMBER (See Form 1):** 46

1 Description of the measure

1.1 Description of the measure or the combination of measures
Parking standards: recently revised into a fairly detailed system depending on public transport accessibility. V. restrictive maximum standard where urb. transport is good. Out-of-town areas tend to have minimum provision

1.2 Main objectives of the measure
Reduction in private vehicle use: environment, safety, efficiency

1.3 Area of implementation
Name(s) all

2 Authorities involved in the implementation procedure of the measure

Decision making L
Financing L
Implementation, upkeeping L

MERSEYSIDE

CITY: Merseyside **MEASURE NUMBER (See Form 1):** 1

1 Description of the measure

1.1 Description of the measure or the combination of measures
Highway construction: additions or improvements to the highway network - a number of schemes being implemented and planned

1.2 Main objectives of the measure
Accessibility improvement: to aid economic regeneration

1.3 Area of implementation
Name(s) all areas

1.4 Dimensions / Extent of the measure
committed schemes: 30 million
planned to 2000: £ 85 million (approximale values)

2 Authorities involved in the implementation procedure of the measure

Decision making all 5 local authorities
Financing "
Implementation, upkeeping "

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
Perceived to be affective in reaching objective but not monitored.

CITY: Merseyside **MEASURE NUMBER (See Form 1):** 2 and 3

1 Description of the measure

1.1 Description of the measure or the combination of measures
Less parking space and higher parking charges

1.2 Main objectives of the measure
Ongoing programme of restraint on car use: environment, efficiency

1.3 Area of implementation
Name(s) mainly central

2 Authorities involved in the implementation procedure of the measure

Decision making L
Financing L
Implementation, upkeeping L

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)
__ 1 Yes, exactly X 2 Almost __ 3 Not at all

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
Not directly monitored. Difficulty with control of private non-residential parking.

4 Acceptability n/a

6 Other issues concerning the measure

Merseyside has comparatively little congestion. It is hoped that measures (ongoing) to restrain car use especially commuters) will prevent future severe congestion

CITY: Merseyside **MEASURE NUMBER (See Form 1):** 4,5,6,7,8

1 Description of the measure

1.1 Description of the measure or the combination of measures
Encouraging rail use: new stations, park and ride, rail electrification, new rail lines, higher service fregvencies

1.3 Area of implementation
Name(s) all areas

1.4 Dimensions / Extent of the measure
at least £ 14 million in capital costs of major schemes, plus minor scheme costs

2 Authorities involved in the implementation procedure of the measure

Decision making local authorities and rail operators
Financing "
Implementation, upkeeping "

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)
X 1 Yes, exactly **__ 2 Almost** **__ 3 Not at all**

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
increasing rail use

CITY: Merseyside **MEASURE NUMBER (See Form 1):** 9

1 Description of the measure

1.1 Description of the measure or the combination of measures
Electronic ticketing for all prepaid tickets and consessionary travel passes

1.2 Main objectives of the measure
Encouraging public transport use: safety, environment

1.3 Area of implementation
Name(s) all

1.4 Dimensions / Extent of the measure
£ 10 million

2 Authorities involved in the implementation procedure of the measure

Decision making L
Financing L
Implementation, upkeeping L

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure
no opposition

CITY: Merseyside **MEASURE NUMBER (See Form 1):** 10.11

1 Description of the measure

1.1 Description of the measure or the combination of measures
Lightrail/guided bus. In the shorter term future a bus-based system in preferred is preferred in cost grunds. Later on LRT system may be introduced.

1.2 Main objectives of the measure
Encourage public transport: Environment, safety, efficiency

1.3 Area of implementation
Name(s) unknown

1.4 Dimensions / Extent of the measure
£ 39+ (for LRT or guided bus or a combination)

2 Authorities involved in the implementation procedure of the measure

Decision making L
Financing L
Implementation, upkeeping L

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure
No objections in principle, but some NIMBY objections could be expected when detailed schemes are put forward.

CITY: Merseyside **MEASURE NUMBER (See Form 1):** 12

1 Description of the measure

1.1 Description of the measure or the combination of measures
Cycle routes: over whole conurbation

1.3 Area of implementation
Name(s) all

1.4 Dimensions / Extent of the measure
unknown

2 Authorities involved in the implementation procedure of the measure

Decision making L
Financing L
Implementation, upkeeping L

CITY: Merseyside **MEASURE NUMBER (See Form 1):** 13

1 Description of the measure

1.1 Description of the measure or the combination of measures
Pedestrianisation

1.2 Main objectives of the measure
Environment, safety, economic regeneration

1.3 Area of implementation
Name(s) mainly central

1.4 Dimensions / Extent of the measure
same main shopping streets in Liverpool centre.

2 Authorities involved in the implementation procedure of the measure

Decision making L
Financing L
Implementation, upkeeping L

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)
X 1Yes, exactly **__ 2 Almost** **__ 3 Not at all**

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
Public/commercial acceptance of the measure, despite same opposition before implementation.

CITY: Merseyside **MEASURE NUMBER (See Form 1):** 14

1 Description of the measure

1.1 Description of the measure or the combination of measures
Urban Traffic Control: existing UTC system plus planned upgrade, including SCOOT, CCTV and signal renewal.

1.2 Main objectives of the measure
Efficiency

1.3 Area of implementation
Name(s) central

1.4 Dimensions / Extent of the measure
£ 4,3 million

2 Authorities involved in the implementation procedure of the measure

Decision making L
Financing L
Implementation, upkeeping L

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)
X 1Yes, exactly **__ 2 Almost** **__ 3 Not at all**

CITY: Merseyside **MEASURE NUMBER (See Form 1):** 15

1 Description of the measure

1.1 Description of the measure or the combination of measures
Traffic management, including junction improvements and signing

1.3 Area of implementation
Name(s) all areas

1.4 Dimensions / Extent of the measure
£ 5+ million

2 Authorities involved in the implementation procedure of the measure

Decision making L
Financing L
Implementation, upkeeping L

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

X 1Yes, exactly **__ 2 Almost** **__ 3 Not at all**

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)

Minor schemes perceived as being effective in total.

CITY: Merseyside **MEASURE NUMBER (See Form 1):** 16

1 Description of the measure

1.1 Description of the measure or the combination of measures

Traffic calming: mainly in residential areas and local centres.

1.2 Main objectives of the measure

Environment, safety

1.3 Area of implementation

Name(s) inner, outer, central

1.4 Dimensions / Extent of the measure

£ 10 million

2 Authorities involved in the implementation procedure of the measure

Decision making L
Financing L
Implementation, upkeeping L

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

X 1Yes, exactly **__ 2 Almost** **__ 3 Not at all**

CITY: Merseyside **MEASURE NUMBER (See Form 1):** 17

1 Description of the measure

1.1 Description of the measure or the combination of measures

Road pricing cordon round the central area

1.2 Main objectives of the measure

Environment, encourage public transport, safety, efficiency (encourage economic regeneration)

1.3 Area of implementation

Name(s) central

2 Authorities involved in the implementation procedure of the measure

Decision making L & national
Financing L
Implementation, upkeeping L

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure
Politically unacceptable at present, particularly with current low levels of congestion

4.3 Other remarks concerning acceptance of the measure
Depending on the type of scheme, central government legislation could be needed

6 Other issues concerning the measure

Plans for Merseyside suggest that this measure may need to be considered if high future growth is concentrated in the central and inner areas.

CITY: Merseyside **MEASURE NUMBER (See Form 1):** 18

1 Description of the measure

1.1 Description of the measure or the combination of measures
Car sharing (future possibility only)

1.2 Main objectives of the measure
Efficiency, environment

1.3 Area of implementation
Name(s) all

1.4 Dimensions / Extent of the measure
unknown

2 Authorities involved in the implementation procedure of the measure

Decision making	local organisations/employers
Financing	"
Implementation, upkeeping	"

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure
No opposition in principle

CITY: Merseyside **MEASURE NUMBER (See Form 1):** 19,20,21,22

1 Description of the measure

1.1 Description of the measure or the combination of measures
Bus priorities on "selected corridors", new (SMART) buses, passenger information, new/improved bus stations and on-street infrastructure.

1.2 Main objectives of the measure
Encourage public transport use: efficiency, safety, environment

1.3 Area of implementation
Name(s) all

1.4 Dimensions / Extent of the measure
unknown

2 Authorities involved in the implementation procedure of the measure

Decision making	L and operators
Financing	"
Implementation, upkeeping	"

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
too early to know

CITY: Merseyside **MEASURE NUMBER (See Form 1): 23**

1 Description of the measure

1.1 Description of the measure or the combination of measures
Cycle facilities: particularly the provision of secure parking facilities at appreprate locations, to help integrate cycling with other modes.

1.2 Main objectives of the measure
Promotion of cycling: efficiency, environment

1.3 Area of implementation
Name(s) all

1.4 Dimensions / Extent of the measure
£ 2+ million

2 Authorities involved in the implementation procedure of the measure

Decision making L
Financing L
Implementation, upkeeping L

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
too early to know

CITY: Merseyside **MEASURE NUMBER (See Form 1): 24**

1 Description of the measure

1.1 Description of the measure or the combination of measures
Telecommuting (possible longer-term trend)

1.2 Main objectives of the measure
Encouragement of telecommuting seen as one way to reduce travel demand and enhance Merseyside´s image as a forward-thinking area.

1.3 Area of implementation
Name(s) all

1.4 Dimensions / Extent of the measure
unknown

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure
no opposition in principle

CITY: Merseyside **MEASURE NUMBER (See Form 1): 25**

1 Description of the measure

1.1 Description of the measure or the combination of measures
Public awareness campaigns to influence travel patterns (possible larger term measure)

1.2 Main objectives of the measure
Environment, efficiency

1.3 Area of implementation
Name(s) all

2 Authorities involved in the implementation procedure of the measure

Decision making L and operators
Financing "
Implementation, upkeeping "

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure
no opposition in principle

CITY: Merseyside **MEASURE NUMBER (See Form 1):** 26

1 Description of the measure

1.1 Description of the measure or the combination of measures
Development control

1.2 Main objectives of the measure
Efficiency, environment (reduce the demand for travel)

1.3 Area of implementation
Name(s) all

2 Authorities involved in the implementation procedure of the measure

Decision making L
Financing L
Implementation, upkeeping L

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
Only a limited amount so far, so larger term effect unkown yet

CITY: Merseyside **MEASURE NUMBER (See Form 1):** 27

1 Description of the measure

1.1 Description of the measure or the combination of measures
Developer contributions/commuted payments

1.2 Main objectives of the measure
Efficiency, environment

1.3 Area of implementation
Name(s) all

2 Authorities involved in the implementation procedure of the measure

Decision making L
Financing L and developers
Implementation, upkeeping L

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
only recently started - longer term effects not yet clear

VIENNA

CITY: VIENNA **MEASURE NUMBER (See Form 1):** 1, 26

1 Description of the measure

1.1 Description of the measure or the combination of measures

Provision of Park and Ride facilities, especially for commuters
Provision of Bike and Ride facilities, especially for commuters

1.2 Main objectives of the measure

Promoting the use of public transport for commuters
Reducing car traffic in the city

1.3 Area of implementation

Name(s)	Park and Ride, Bike and Ride
Size	32.089 Ha for Park and Ride
Population	872 466
Type	inside disticts (3 locations) outside districts (8 locations) wide-area districts (13 locations)

1.4 Dimensions / Extent of the measure

3.344 parking place, 85 parking place in construction, 7.750 in planning
1.100 Mio ATS investment for park-and-ride and bike-and-ride

2 Authorities involved in the implementation procedure of the measure

Decision making	province/regional
Financing	province/regional PT authority
Implementation, upkeeping	regional PT authority

CITY: VIENNA **MEASURE NUMBER (See Form 1):** 2,3,17

1 Description of the measure

1.1 Description of the measure or the combination of measures

Provision of Bicycle facilities

1.2 Main objectives of the measure

Promoting the use of bicycle
Promoting cyclist's safety including a separation with pedestrian

1.3 Area of implementation

Name(s)	Provision of Bicycle facilities
Size	City-wide
Population	City-wide
Type	City Wide

1.4 Dimensions / Extent of the measure

City Wide
71 Km bicycle path and 464 Km bicycle network, 270 Km bicycle route, 21 Km bicycle lanes
400 Mio ATS Investment

2 Authorities involved in the implementation procedure of the measure

Decision making	province/district
Financing	province/district
Implementation, upkeeping	province/district

CITY: VIENNA **MEASURE NUMBER (See Form 1):** 4

1 Description of the measure

1.1 Description of the measure or the combination of measures

Underground construction/extension
Commuter Train (Schnellbahn) construction/extension

1.2 Main objectives of the measure

Promoting the use of public transport
Reducing car traffic in the city
Reducing energy consumption
Promoting environmentally friendly transport

1.3 Area of implementation

Name(s)	Underground construction/extension
Size	City/region-wide area coverage = 6.423,23 km2 (for Vienna = 414,97 km2)
Population	City/region-wide population coverage = 2,179 Mio (for Vienna = 1,6 Mio)
Type	City/region-wide

1.4 Dimensions / Extent of the measure

City/region-wide
274.800 Mio ATS Investment
486,4 Km network

2 Authorities involved in the implementation procedure of the measure

Decision making	province and national (for commuter train)
Financing	province/national/regional PT authority
Implementation, upkeeping	national/province/regional PT authority

CITY: VIENNA **MEASURE NUMBER (See Form 1):** 5, 6, 7, 16

1 Description of the measure

1.1 Description of the measure or the combination of measures

Provision of PT facilities to increase PT system speed and
to increase service coverage of trams and buses

1.2 Main objectives of the measure

Promoting the use of public transport through speed increase, punctuality and regularity

1.3 Area of implementation

Name(s)	Provision of tram and bus Facilities
Size	City/region-wide
Population	City/region-wide
Type	City/region-wide wide-area districts (13 locations)

1.4 Dimensions / Extent of the measure

City/region-wide, 834 Km tram and bus network
1.700 Mio ATS Investment for speed increase
3.300 Mio ATS Investment for network extension

2 Authorities involved in the implementation procedure of the measure

Decision making	province
Financing	province/regional PT authority
Implementation, upkeeping	province/regional PT authority

CITY: VIENNA **MEASURE NUMBER (See Form 1):** 9,10,11,12

1 Description of the measure

1.1 Description of the measure or the combination of measures
Implementation of pedestrian area and pedestrian facilities

1.2 Main objectives of the measure

To promote car-free areas/streets
- Mobility and communication at public space
- Improvement of living environment
- Promoting non-motorised traffic

To increase safety for pedestrians, including disabled people

1.3 Area of implementation

Name(s)	Improvements for Pedestrian facilities	
Size	927.73	Ha Pedestrian Area
Population		City-wide
Type	City-wide	

1.4 Dimensions / Extent of the measure
(absolute/relative value of money or degree of coverage in the area provinced in Q 1.3)
2,28 % from total area is Pedestrian Area
14,12 % from city centre area is Pedestrian Area
100 Mio. ATS investment

2 Authorities involved in the implementation procedure of the measure

Decision making	province/district
Financing	province/district
Implementation, upkeeping	province/district

CITY: VIENNA **MEASURE NUMBER (See Form 1):** 14.15

1 Description of the measure

1.1 Description of the measure or the combination of measures
The introduction of speed limit zones and residential streets through regulation and physical measures, i.e. rugged surface

1.2 Main objectives of the measure
Reducing accident blackspots
Improvement for public transport user
Increasing safety for the vulnerables

1.3 Area of implementation

Name(s)	Traffic Calming measures
Size	City-wide
Population	City-wide
Type	City-wide

1.4 Dimensions / Extent of the measure
residential streets = 10 km = 0,4 % os all city street's length, spreaded city-wide
speed limit coverage : 34 % of city street's length, 30 % of all street's length
500 Mio. ATS Investment

2 Authorities involved in the implementation procedure of the measure

Decision making	province/district
Financing	province/district
Implementation, upkeeping	province/district

CITY: VIENNA **MEASURE NUMBER (See Form 1):** 19, 20

1 Description of the measure

1.1 Description of the measure or the combination of measures
Parking management through pricing and parking regulation as well as provision of parking garage

1.2 Main objectives of the measure
Improvement of Parking supply for the residents
Reducing car traffic, especially for commuter traffic
Service improvement for commercial and good transport

1.3 Area of implementation

Name(s)	Parking Management and Provision of Parking Garage	
Size	1 127	Ha for short term parking
Population	142 962	Person at short term parking area
Type	City Centre	
	Inside districts	

1.4 Dimensions / Extent of the measure
10 Mio ATS Investment for Parking Management
1.000 Mio ATS Investment for the Provision of Parking Garage
80 locations and 29.645 parking places available at parkinghouses/garages

2 Authorities involved in the implementation procedure of the measure

Decision making	province/district
Financing	province/district/private
Implementation, upkeeping	province/district/private

CITY: VIENNA **MEASURE NUMBER (See Form 1):** 21, 22, 23, 24

1 Description of the measure

1.1 Description of the measure or the combination of measures
Improvement of public transport services through integrated operation (single tariff) and price segmentation by distance/region, period and user

1.2 Main objectives of the measure
Promoting the use of public transport

1.3 Area of implementation

Name(s)	Public transport integration
Size	City/region-wide
Population	City/region-wide
Type	City/region-wide

1.4 Dimensions / Extent of the measure
City/region-wide

2 Authorities involved in the implementation procedure of the measure

Decision making	province
Financing	national/province/regional PT authority
Implementation, upkeeping	province/regional PT authority

CITY: VIENNA **MEASURE NUMBER (See Form 1):** 18

1 Description of the measure

1.1 Description of the measure or the combination of measures
Public transport campaign through media, public participation, and incentive

1.2 Main objectives of the measure
Promoting the use of public transport

1.3 Area of implementation

Name(s)	Public Transport Campaign
Size	City/region-wide

1.4 Dimensions / Extent of the measure
City/region-wide

2 Authorities involved in the implementation procedure of the measure

Decision making	province/regional PT authority
Financing	province/regional PT authority
Implementation, upkeeping	province/regional PT authority

CITY: VIENNA **MEASURE NUMBER (See Form 1):** 13

1 Description of the measure

1.1 Description of the measure or the combination of measures
The construction of motorway by-pass connecting south and east motorway and road network extensions

1.2 Main objectives of the measure
To facilitate the development of south part of Vienna
To improve regional and over-regional transportation
To improve traffic in the city

1.3 Area of implementation

Name(s)	Road network improvement
Size	36 598 Ha
Population	1 135 913
Type	outside districts wide-area districts

1.4 Dimensions / Extent of the measure
22.500 Mio ATS investment
18 Km by-pass (and 12 Km under planning/consideration), 23 Km network extension

2 Authorities involved in the implementation procedure of the measure

Decision making	national/province/district
Financing	national/province
Implementation, upkeeping	national/province

CITY: VIENNA **MEASURE NUMBER (See Form 1):** 25

1.1 Description of the measure

Description of the measure or the combination of measures

Fuel tax, additional tax levied to fuel consumer to be used for financing public transport improvement

1.2 Main objectives of the measure

Promoting the use of public transport

1.3 Area of implementation

Name(s)	Fuel tax
Size	nation-wide

1.4 Dimensions / Extent of the measure

nation-wide

a tax of 10 % from 10 ATS/litre gasoline price

2 Authorities involved in the implementation procedure of the measure

Decision making	national/province
Financing	national/province
Implementation, upkeeping	national/province

EISENSTADT

CITY: EISENSTADT **MEASURE NUMBER (See Form 1):** 1

1 Description of the measure

1.1 Description of the measure or the combination of measures

Provision of bicycle path

1.2 Main objectives of the measure

Promoting the use of bicycle
Promoting cyclist's safety including a separation with pedestrian

1.3 Area of implementation

Name(s) Bicycle path
Size city-wide

Zone(s)	Type of the area	Type of housing	Size sqkm	Population	Extent km
central city area	business shopping area		1.62	2584	1.7
distinct town centre	separate town centre		24.3	3037	4.6
business and industry	dedicated industrial centre		8.89	440	2.5

1.4 Dimensions / Extent of the measure

11,3 km city-wide

1.5 Costs per year and revenues (total charges)

Zone(s)	Capital		Operating		Revenues
	Base Year	Horizon Year	Base Year	Horizon Year	
central city	177 kECU		2,0 kECU		
distinct town	478 kECU		5,3 kECU		
business	260 kECU		2,9 kECU		
Total	915 kECU		10,2 kECU		

2 Authorities involved in the implementation procedure of the measure

Decision making city
Financing city
Implementation, upkeeping city

CITY: EISENSTADT **MEASURE NUMBER (See Form 1):** 2,3,4

1 Description of the measure

1.1 Description of the measure or the combination of measures

Implementation of pedestrian area and pedestrian facilities

1.2 Main objectives of the measure

To promote car-free areas/streets
Mobility and communication at public space
Improvement of living environment
Promoting non-motorised traffic

To increase safety for pedestrians, including disabled people

1.3 Area of implementation and extent of the measure

1.4

Name(s) Improvements for Pedestrian facilities
Size City centre/City-wide
Type city centre is dedicated for pedestrian zone

Zone(s)	Type of the area	Type of housing	Size sqkm	Population	Extent m2, units	% extent	Level of charges
city centre	business		0.66	767	12530 6	1.90 %	m2 pedestrian area locations raised intersection
central city area	business shopping area		1.62	2584	2		
residential area	residential		7.41	3521	6		
distinct town centre	separate town centre		24.3	3037	2		
business and industry	dedicated industrial centre		8.89	440			

City-wide
pedestrian zone = 12.530 m2 = 2,92m2/km2 = 1,21 m2/city residents
16 locations of raised intersection surface

1.5 Costs per year and revenues (total charges)

Zone(s)	Capital		Operating		Revenues
	Base Year	Horizon Year	Base Year	Horizon Year	
city centre	1,44 Mio ECU		9,7 kECU		
Total	1,44 Mio ECU		9,7 kECU		

pedestrian area only

2 Authorities involved in the implementation procedure of the measure

Decision making city
Financing city
Implementation, upkeeping city

CITY: EISENSTADT **MEASURE NUMBER (See Form 1):** 5, 6, 9, 12

1 Description of the measure

1.1 Description of the measure or the combination of measures

Parking management through pricing and parking regulation as well as provision of parking garage

1.2 Main objectives of the measure

Improvement of Parking supply for the residents
Service improvement for commercial and good transport

1.3 Area of implementation and extent of the measure

1.4 Name(s) **Parking Management and Provision of Parking Garage**
Size 902.59 Ha in central city and residential area
Population 6 545 population in central city and residential area

Zone(s)	Type of the area	Type of housing	Size sqkm	Population	Extent parkplace	% extent	Level of charges
city centre	business		0.66	767	342		50 ATS/30 min max 2 hours
central city area	business shopping area		1.62	2584	147 607		50 ATS/30 min max 2 hours 231 free, 376 15-20 ATS/h

City-wide
1037 parking places (free and charged), including 489 short term parking places

1.5 Costs per year and revenues (total charges)

Zone(s)	Capital		Operating		Revenues
	Base Year	Horizon Year	Base Year	Horizon Year	
city centre	5,3 Mio ECU		157,8 kECU		
central city	2,8 Mio ECU		348 kECU		
Total	8,1 Mio ECU		505,8 kECU		

2 Authorities involved in the implementation procedure of the measure

Decision making city
Financing city/private
Implementation, upkeeping city/private

CITY: EISENSTADT **MEASURE NUMBER (See Form 1):** 7.8

1 Description of the measure

1.1 Description of the measure or the combination of measures

The introduction of speed limit zones and residential streets through regulation and physical measures, i.e. rugged surface

1.2 Main objectives of the measure

Reducing accident blackspots
Improvement for public transport user
Increasing safety for the vulnerables

1.3 Area of implementation and extent of the measure

1.4 Name(s) Traffic Calming measures
Size City-wide

Zone(s)	Type of the area	Type of housing	Size sqkm	Population	Extent km'	% extent	Level of charges
central city area	business shopping area		1.62	2584	0.35		speed limit
distinct town centre	separate town centre		24.3	3037	0.5		residential street
business and industry	dedicated industrial centre		8.89	440	3.55		residential street

speed limit street = 3,9 km = 5,8 % of the total city streets
residential streets = 0,5 km = 0,7 % of the total city streets

1.5 Costs per year and revenues (total charges)

Zone(s)	Capital		Operating		Revenues
	Base Year	Horizon Year	Base Year	Horizon Year	
central area	1,1 kECU				
distinct town	1,56 kECU				
business	11,18 kECU				
Total	13,84 kECU				

2 Authorities involved in the implementation procedure of the measure

Decision making city
Financing city
Implementation, upkeeping city

CITY: EISENSTADT **MEASURE NUMBER (See Form 1):** 10.13

1 Description of the measure

1.1 Description of the measure or the combination of measures

Provision of public transport for the residents using subsidised city taxi

1.2 Main objectives of the measure

To reduce the use of private cars/city traffic

1.3 Area of implementation

Name(s) Subsidised city taxi
Size city-wide

1.4 Dimensions / Extent of the measure

city-taxi
Every person pays 20 ATS and receive 30 ATS subsidy from the city
125.181 passengers in 1995, 10 taxies are available

2 Authorities involved in the implementation procedure of the measure

Decision making city
Financing city/private
Implementation, upkeeping city/private

CITY: EISENSTADT **MEASURE NUMBER (See Form 1):** 11, 17

1 Description of the measure

1.1 Description of the measure or the combination of measures

Provision of regional train through improved train schedule and an additional train stop

1.2 Main objectives of the measure

Improvement of regional train service
Increasing area of coverage

1.3 Area of implementation

Name(s) Regional train service improvement
Size City/region-wide

Zone(s)	Type of the area	Type of housing	Size sqkm	Population	Extent unit
central city area	business shopping area		1.62	2584	1

1.4 Dimensions / Extent of the measure

city/region-wide

1.5 Costs per year and revenues (total charges)

Zone(s)	Capital		Operating		Revenues
	Base Year	Horizon Year	Base Year	Horizon Year	
central city	76,93 kECU				
Total	76,93 kECU				

revenue belongs to regional train services

2 Authorities involved in the implementation procedure of the measure

Decision making Province/national
Financing Province/regional PT authority
Implementation, upkeeping Province/regional PT authority

CITY: EISENSTADT **MEASURE NUMBER (See Form 1):** 14

1 Description of the measure

1.1 Description of the measure or the combination of measures
Construction of motorway bypass

1.2 Main objectives of the measure
Improvement of through traffic, reducing city traffic

1.3 Area of implementation and extent of the measure
1.4 Name(s) Motorway bypass
Size region-wide

Zone(s)	Type of the area	Type of housing	Size sqkm	Population	Extent km	% extent	Level of charges
distinct town centre	separate town centre		24.3	3037	1.6		
business and industry	dedicated industrial centre		8.89	440	4.3		

6,5 km by pass

1.5 Costs per year and revenues (total charges)

Zone(s)	Capital		Operating		Revenues
	Base Year	Horizon Year	Base Year	Horizon Year	
disticnct town	18,5 Mio ECU		73,8 kECU		
business	49,6 Mio ECU		198,5 kECU		
Total	63,1 Mio ECU		273,3 kECU		

2 Authorities involved in the implementation procedure of the measure

Decision making national/province/city
Financing national
Implementation, upkeeping national/province/city

CITY: EISENSTADT **MEASURE NUMBER (See Form 1):** 16

1 Description of the measure

1.1 Description of the measure or the combination of measures
Improvement of regional public transport services through integrated operation (single tariff) and price segmentation by distance/region, period and user

1.2 Main objectives of the measure
Promoting the use of public transport

1.3 Area of implementation and extent of the measure
1.4 Name(s) Public transport integration
Size City/region-wide

Zone(s)	Type of the area	Type of housing	Size sqkm	Population	Extent no/km etc.	% extent	Level of charges
city centre	business		0.66	767			see separate file
central city area	business shopping area		1.62	2584			
residential area	residential		7.41	3521			
distinct town centre	separate town centre		24.3	3037			
business and industry	dedicated industrial centre		8.89	440			

2 Authorities involved in the implementation procedure of the measure

Decision making Province/national
Financing National/province/regional PT authority
Implementation, upkeeping Province/regional PT authority

CITY: EISENSTADT **MEASURE NUMBER (See Form 1):** 15

1 Description of the measure

1.1 Description of the measure or the combination of measures
Area which is dedicated for business and industrial activities

1.2 Main objectives of the measure
Easier land use control

1.3 Area of implementation
Name(s) Area dedicated for commerce/industry - Land use control
Size 889 Ha
Population 454 person , living in the zone

1.4 Dimensions / Extent of the measure
City/region-wide
85 Ha dedicated for business/industrial region = 9,56 % zone area

2 Authorities involved in the implementation procedure of the measure

Decision making Province/city
Financing Province/city
Implementation, upkeeping Province/city

CITY: EISENSTADT **MEASURE NUMBER (See Form 1):** 19

1 Description of the measure

1.1 Description of the measure or the combination of measures

Introduiction of one way streets around the city centre

1.2 Main objectives of the measure

To improve car traffic movement

1.3 Area of implementation

Name(s)	One way streets	
Size	902.59	Ha in central city and residential area
Population	6 545	population in central city and residential area

1.4 Dimensions / Extent of the measure

680 m of one way streets

2 Authorities involved in the implementation procedure of the measure

Decision making	City
Financing	City
Implementation, upkeeping	City

HELSINKI

CITY Helsinki **MEASURE NUMBER (See Form 1)** 1,3,4

1 Description of the measure

1.1 Description of the measure or the combination of measures

Development of radial PT trunk network based on heavy rail traffic
New local railway line North-West, first underground line East and local traffic separation on Main and Coast railway lines

1.2 Main objectives of the measure

Improve PT network and its competitiveness to car

1.3 Area of implementation

Name(s) Whole area

1.4 Dimensions/Extent of the measure

heavy rail on 4/5 sectors, 80%

1.5 Costs per year and revenues (total charges)

Zone(s)	Capital		Operating		Revenues
	Base Year	Horizon Year	Base Year	Horizon Year	
5	250 Mill. FIM			-7 Mill.FIM/year	
1,3,4	730 Mill. FIM			-40 Mill.FIM/year	
4,5	550 Mill. FIM			0	
Total	1 530 Mill.FIM				

2 Authorities involved in the implementation procedure of the measure

Decision making YTV, VR, Cities, LM

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

X 1 **Yes, exactly** __ 2 **Almost** __ 3 **Not at all**

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure

Expensive infrastructure

CITY Helsinki **MEASURE NUMBER (See Form 1)** 2, 5

1 Description of the measure

1.1 Description of the measure or the combination of measures

Park and ride possibility at underground stations, park and ride possibility at suburban railway stations, variable PT departure signs on roads before the station

1.2 Main objectives of the measure

Tempt car-users to PT

1.4 Name(s) Eastern corridor
4-5 stations

Zone(s)	Type of the area	Type of housing	Size sqkm	Population 1000	Extent no/km etc.	% extent	Level of charges
2	inner city	blocks of flats + *	19	97			
3	mixed	mixed	170	348	total: 41 stations	50 % of the stations	
4	main centre in suburb	blocks of flats + *	58	153			
5	suburb	mixed	510	203			

* office and commercial buildings

2 Authorities involved in the implementation procedure of the measure
Decision making Hki

3 Effectiveness
3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)
__ 1 **Yes, exactly** X 2 **Almost** __ 3 **Not at all**

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
Not much used, good access/egress bus service

CITY:
Helsinki **MEASURE NUMBER (See Form 1)** **5**

1 Description of the measure
1.1 Description of the measure or the combination of measures
Park & ride possibility at suburban railway stations
Variable PT departure signs on roads before the station, test at 4 spots

1.2 Main objectives of the measure
Tempt car-users to PT

1.3 Area of implementation and extent of the measure

1.4 Info signs by 4-5 stations, Espoo and Kauniainen: 6/10 stations

2 Authorities involved in the implementation procedure of the measure
Decision making YTV

3 Effectiveness
3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)
__ 1 **Yes, exactly** _ 2 **Almost** X 3 **Not at all**

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
Not much used, neither with nor without the signs

4 Acceptability
4.1 Key characteristics affecting acceptability of the measure
Parking must be free of charge, PT ticket is enough.

CITY Helsinki **MEASURE NUMBER (See Form 1)** 6

1 Description of the measure

1.1 Description of the measure or the combination of measures

Light Rail
Crosstown line and/or Western corridoor

1.2 Main objectives of the measure

Extending rail trunk network

1.3 Area of implementation and extent of the measure

Zone(s)	Type of the area	Type of housing	Size sqkm	Population 1000	Extent no/km etc.	% extent	Level of charges
3	mixed	mixed	170	348			
4	main centre in suburb	blocks of flats + *	58	153	total will be	total 100 %	
					about 30 km + 16 km "underground"		

* office and commercial buildings

1.4 Costs per year and revenues (total charges)

Zone(s)	Capital		Operating		Revenues
	Base Year	Horizon Year	Base Year	Horizon Year	
	680 Mill.FIM			-6 Mill.FIM/year	
	1000 Mill. FIM			-55 Mill.FIM/year	
Total	1 680 Mill. FIM				

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure

People are believing it to be as fast as metro, serving much better and being much cheaper

CITY Helsinki **MEASURE NUMBER (See Form 1)** 7

1 Description of the measure

1.1 Description of the measure or the combination of measures

Improving crosstown PT services
Bus services (bus lanes) at first, later maybe LTR

1.2 Main objectives of the measure

Improving crosstown PT services
Make PT more attractive (faster)

1.3 Area of implementation and extent of the measure

Name(s) Ring Road I level, nearby Inner City border.

Zone(s)	Type of the area	Type of housing	Size sqkm	Population 1000	Extent no/km etc.	% extent	Level of charges
3	mixed	mixed	170	348	30 km	20 %	
4	main centre in suburb	blocks of flats + *	58	153	25 km	20 %	

* office and commercial buildings

1.4 Cost 130 mill. FIM

2 Authorities involved in the implementation procedure of the measure

Decision making YTV, Cities

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure

People are believing it to be as fast as metro, serving much better and being much cheaper

CITY Helsinki **MEASURE NUMBER (See Form 1)** 8,9,10

1 Description of the measure

1.1 Description of the measure or the combination of measures

Very strict parking policy in City Centre and Inner City
Parking restrictions and charges also in suburban centres and residential areas

1.2 Main objectives of the measure

Less cars in city centre and in main centres of the suburbs

1.3 Area of implementation and extent of the measure

1.4 Name(s) Central areas

Only short-time parking in Centre. Zonal system for charges and max duration.

Zone(s)	Type of the area	Type of housing	Size sqkm	Population 1000	Extent no/km etc.	% extent	Level of charges
1	centre	blocks of flats + *	7	59		100	12 FIM/h
2	inner city	blocks of flats + *	19	97		100	6 FIM/h
3,4					street side parking places	40	2 FIM/h

* office and commercial buildings

2 Authorities involved in the implementation procedure of the measure

Decision making Cities

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

X 1 **Yes, exactly** __ 2 **Almost** __ 3 **Not at all**

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure

Payment system was too difficult, personal parking metre too expensive.
The system has been simplified.

CITY Helsinki **MEASURE NUMBER (See Form 1)** 11

1 Description of the measure

1.1 Description of the measure or the combination of measures

Variable sign parking guidance

1.2 Main objectives of the measure

Avoid unnecessary driving in centres for seeking free parking space

Area of implementation

Name(s) City centre and Tapiola /Espoo shopping centre. Zone 1 1/out of 7 zone 4.

1.4 Dimensions / Extent of the measure
(absolute/relative value of money or degree of coverage in the area stated in Q 1.3)
Some ten parking lots controlled together, information given on incoming streets,

2 Authorities involved in the implementation procedure of the measure

Decision making City

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)
__ 1 **Yes, exactly** _X_ 2 **Almost** __ 3 **Not at all**

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
When all spaces are full, it does not work.

CITY Helsinki **MEASURE NUMBER (See Form 1)** 12

1 Description of the measure

1.1 Description of the measure or the combination of measures
Regional uniform PT fare system for all modes
Two-zonal: 1) Inside each municipality (Kauniainen goes with Espoo)
2) Regionwide
Fare reduction daytime, PT highly subvented by local authorities

1.2 Main objectives of the measure
Ease of travel by PT, more passengers during non-peak period, making PT cheaper than private car

1.3 Area of implementation
Name(s) Whole area

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)
X 1 **Yes, exactly** __ 2 **Almost** __ 3 **Not at all**

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
Monitoring

CITY Helsinki **MEASURE NUMBER (See Form 1)** 13,14

1 Description of the measure

1.1 Description of the measure or the combination of measures
Bus or tram lines and priorities

1.2 Main objectives of the measure

Make PT faster

1.3 Area of implementation and extent of the measure

1.4 Name(s) Radial main streets from border of Inner City and 10 kms on Western Motorway 10 km
Tram runs mostly on separated lanes everywhere

Zone(s)	Type of the area	Type of housing	Size sqkm	Population 1000	Extent no/km etc.	% extent	Level of charges
1	centre	blocks of flats + *	7	59			
2	inner city	blocks of flats + *	19	97	total area about		
3	mixed	mixed	170	348	700 km main	15 %	
4	main centre in suburb	blocks of flats + *	58	153	streets		

* office and commercial buildings

Priorities in main crossings, mostly for tram.

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

__ 1 **Yes, exactly** X 2 **Almost** __ 3 **Not at all**

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)

Cars tend to use bus lanes in congested traffic

CITY Helsinki **MEASURE NUMBER (See Form 1)** 15, 17, 35

1 Description of the measure

1.1 Description of the measure or the combination of measures

PT line & timetable information, all modes
Comprehesive timetable booklets, timetables with passing times at stops,
real-time passinger information at stops and information terminals at stations

1.2 Main objectives of the measure

Increase information on PT, easy to obtain

1.3 Area of implementation

Name(s) Whole area
real-time info test on 1 line, will be extended

1.4 Dimensions / Extent of the measure

Timetable booklets are delivered home for each household free of charge

2 Authorities involved in the implementation procedure of the measure

Financing YTV, Cities

3 Effectiveness

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)

Cannot be separated from other measures.

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure

No charge

CITY Helsinki **MEASURE NUMBER (See Form 1)** 18

1 Description of the measure

1.1 Description of the measure or the combination of measures
Fare reduction daytime

1.2 Main objectives of the measure
More passengers during non-peak period, level out peak hour.

1.3 Area of implementation
Name(s) Espoo and Vantaa buses, Helsinki tram

1.4 Dimensions / Extent of the measure
(absolute/relative value of money or degree of coverage in the area stated in Q 1.3)
25% reduction

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)
__ 1 **Yes, exactly** X 2 **Almost** __ 3 **Not at all**

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
Amount of passengers has increased

CITY Helsinki **MEASURE NUMBER (See Form 1)** 19, 20

1 Description of the measure

1.1 Description of the measure or the combination of measures

Pedestrian areas in city centre and at suburb centres

1.2 Main objectives of the measure
Calming traffic in centres, make them pleasant and safe for pedestrians

1.3 Area of implementation and extent of the measure
1.4

Name(s) City Centre, suburban centres
2 streets in city centre, some 7-8 areas in suburban centres

Zone(s)	Type of the area	Type of housing	Size sqkm	Population 1000	Extent no/km etc.	% extent	Level of charges
1	centre	blocks of flats + *	7	59	1 km	2 %	
4	main centre in suburb	blocks of flats + *	58	153	about 7 areas	70 %	

* office and commercial buildings

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure
Time, getting used to.
In suburban areas pedestrian areas have been constructed when building the area

CITY Helsinki **MEASURE NUMBER (See Form 1)** 21,25,26

1 Description of the measure

1.1 Description of the measure or the combination of measures

Calming on residential streets and in the centre
speed limits, pavement widening, humps, bollards

1.2 Main objectives of the measure

Avoid unnecessary traffic

1.3 Area of implementation and extent of the measure

1.4 Name(s) residential streets and roads all over the area

Speed limit of 40 km/h on residential areas and in City Centre. The whole scale of 40-50-60-70-80 km/h is used. Humps are also used on about 10 % of residential streets. Bollards and pillars are used for totally prevent car traffic.

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

__ 1 **Yes, exactly** X 2 **Almost** __ 3 **Not at all**

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure

The measure must be permanent (or look like one). Temporal bollards were not accepted, they were lifted aside.

CITY Helsinki **MEASURE NUMBER (See Form 1)** 22, 23, 24

1 Description of the measure

1.1 Description of the measure or the combination of measures

Improve biking facilities, lanes, parking,information, safety

1.2 Main objectives of the measure

Encourage the use of bicycle on short trips

1.3 Area of implementation and extent of the measure

1.4 Name(s) all over

Around 1500 km of cycle lanes & paths in the area 1993, a map of the routes and signs on the routes

Zone(s)	Type of the area	Type of housing	Size sqkm	Population 1000	Extent no/km etc.	% extent	Level of charges
1	centre	blocks of flats + *	7	59			
2	inner city	blocks of flats + *	19	97	total 1500 km	100 %	
3	mixed	mixed	170	348	bicycle paths		
4	main centre in suburb	blocks of flats + *	58	153			
5	suburb	mixed	510	203			

* office and commercial buildings

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure

Parking is not safe, bicycles are stolen and broken. Still, no parking charge is accepted.

CITY Helsinki **MEASURE NUMBER (See Form 1)** 28

1 Description of the measure

1.1 Description of the measure or the combination of measures
PT highly subvented by local authorities

1.2 Main objectives of the measure
Make PT cheaper than private car

1.4 Dimensions / Extent of the measure
(absolute/relative value of money or degree of coverage in the area stated in Q 1.3)
45 % of costs is subvented.

CITY Helsinki **MEASURE NUMBER (See Form 1)** 29

1 Description of the measure

1.1 Description of the measure or the combination of measures
High fuel taxes

1.2 Main objectives of the measure
Money to the state
Reduce the use of automobiles (also for the environmental reasons)

1.3 Area of implementation
Name(s) Whole country

1.4 Dimensions / Extent of the measure
Around 75 % of the fuel price are taxes.
330 000 automobiles (100 %)

2 Authorities involved in the implementation procedure of the measure

Decision making Government

CITY Helsinki **MEASURE NUMBER (See Form 1)** 34

1 Description of the measure

1.1 Description of the measure or the combination of measures
Car-share legalized

1.2 Main objectives of the measure
Have HOVs, less cars on peak hours

1.3 Area of implementation
Name(s) Nationwide

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
Not much used before or after, but now you can openly apply for co-travellers.
Main users are long distance commuters. May also attract earlier PT-users, door-to-door possibility.

CITY Helsinki Metro **MEASURE NUMBER (See Form 1):** 27

1 Description of the measure

1.1 Description of the measure or the combination of measures
Planning of land use in the whole of the Helsinki metropolitan area (together with traffic planning)

1.2 Main objectives of the measure
Density of the city structure in order to reduce the need for travelling, and increase possibilities for public transport as well as for walking and cycling.

1.3 Area of implementation and extent of the measure
1.4 Name(s) Helsinki Metropolitan Area: Helsinki, Espoo, Vantaa, Kauniainen
Population 890 000

Zone(s)	Type of the area	Type of housing	Size sqkm	Population 1000	Extent no/km etc.	% extent	Level of charges
1	centre	blocks of flats + *	7	59	7 sqkm	100	
2	inner city	blocks of flats + *	19	97	19	100	
3	mixed	mixed	170	348	170	100	
4	main centre in suburb	blocks of flats + *	58	153	58	100	
5	suburb	mixed	510	203	510	100	

* office and commercial buildings

2 Authorities involved in the implementation procedure of the measure
Decision making YTV Council
Financing Metropolitan area towns, the state

CITY Helsinki Metro **MEASURE NUMBER (See Form 1):** 31,32

1 Description of the measure
1.1 Description of the measure or the combination of measures
New tunnel road under city centre, main street network construction in suburban areas

1.2 Main objectives of the measure
Reduce unnecessary driving by linking the main centres in suburbs together and by getting the cars in the centre to main roads

1.3 Area of implementation and extent of the measure

Zone(s)	Type of the area	Type of housing	Size sqkm	Population 1000	Extent no/km etc.	% extent	Level of charges
1	centre	blocks of flats + *	7	59	2 km		
4	main centre in suburb	blocks of flats + *	58	153	4 + 5 75 km		
5	suburb	mixed	510	203			

* office and commercial buildings

1.5 Costs per year and revenues (total charges)

Zone(s)	Capital		Operating		Revenues
	Base Year	Horizon Year	Base Year	Horizon Year	
1 (road tunnel)	500 mill. FIM				

TURIN

CITY Torino **MEASURE NUMBER (See Form 1)** 1

1 Description of the measure

1.1 Description of the measure or the combination of measures

Progetto Torino - Traffic Light Control

1.2 Main objectives of the measure

The system gets with continuity from controlled area informations about traffic conditions and operates traffic lights in order to optimize traffic flows (minimize travel time).

1.3 Area of implementation

Name(s) Line 10 alignment and neighbouring areas
Size 7

1.4 Dimensions / Extent of the measure

The control system is applied to 40 signalized junctions and 4 pedestrian crossing: with 414 sensors of private flows.

2 Authorities involved in the implementation procedure of the measure

Decision making Municipality of Torino

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

X 1Yes, exactly __ 2 Almost __ 3 Not at all

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)

Tests carried out in 1986 showed , for the controlled area, an increase of speed for private traffic of about 16%.

CITY Torino **MEASURE NUMBER (See Form 1)** 2

1 Description of the measure

1.1 Description of the measure or the combination of measures

Progetto Torino - Public transport priority. The measure has been applied to tramway line 10.

1.2 Main objectives of the measure

The project tests traffic-light priority to public transport lines, in connection with traffic light control (measure 1).

1.3 Area of implementation

Name(s) Line 10 alignment and neighbouring areas
Size 7

1.4 Dimensions / Extent of the measure

At the end of 1994, traffic light priority for public transport was applied to 40 of the 620 signalized junctions.

2 Authorities involved in the implementation procedure of the measure

Decision making Municipality of Torino

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

X 1Yes, exactly __ 2 Almost __ 3 Not at all

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)

For line 10 increase of commercial speed (+15%) due to shrinkage of waiting times at traffic-lights (-3 minutes for run, -40%) and decrease of halt number at signalized junctions (from 48% to 18-20%) have been observed.

CITY Torino **MEASURE NUMBER (See Form 1)** 3

1 Description of the measure

1.1 Description of the measure or the combination of measures

ATM, the company which operates public transport in the metropolitan area of Torino, has adopted a "Service Information System" (SIS), for the telematic monitoring and regulation of public transport means (trams, buses).

1.2 Main objectives of the measure

The measure deals with monitoring public network in order to gain (or increase) regularity, punctuality, safety, reliability.

1.3 Area of implementation

Name(s)	Torino and metropolitan area
Size	612
Population	1454000 (95)
Type	Centre and suburbs

1.4 Dimensions / Extent of the measure

At present SIS controls all the 11 tramway lines and 40 of the main bus lines (86% of total network). At the end of 1994 SIS interacted with traffic control in order to obtain priority for public transport at 40 traffic lights (6,5% of all signalized junctions). In '92 the global investment amounted to 20 mlr liras.

2 Authorities involved in the implementation procedure of the measure

Decision making	Azienda Tranvie Municipali (ATM)
Financing	Company investment.

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

__ 1Yes, exactly X 2 Almost __ 3 Not at all

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)

An increase of regularity (+ 21%) has been observed in 1990.

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure

Initially, bus drivers showed perplexities about the system, which was seen as a sort of control of their work.

CITY Torino **MEASURE NUMBER (See Form 1)** 4

1 Description of the measure

1.1 Description of the measure or the combination of measures

Light rail - line 3

1.2 Main objectives of the measure

The line, operating from 1982, was part of a most extensive project ("Piano di Sviluppo dei Trasporti Pubblici in area di Torino - 1981) which designed a transport network consisting of 5 LRT lines on main demand lines, supported by an orthogonal tramway network.

1.3 Area of implementation

Name(s)	Line 3 alignement and neighbouring areas
Size	9

1.4 Dimensions / Extent of the measure

The line, 9,8 km long, represents the 9 % of tramway network.

2 Authorities involved in the implementation procedure of the measure

Decision making Municipality of Torino

CITY Torino **MEASURE NUMBER (See Form 1)** 4

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

__ 1Yes, exactly X 2 Almost __ 3 Not at all

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)

Good performances have been observed where the line has a high level of separation from private traffic. Particularly, performances decrease in the central section (crossing piazza Repubblica), where the line passes through a commercial area. For this section a tunnel is planned (measure n. 15).

CITY Torino **MEASURE NUMBER (See Form 1)** 5

1 Description of the measure

1.1 Description of the measure or the combination of measures

Traffic limited zone (ZTL) in central area, with no thoroughfare for private traffic from 7.30 to 13.00

1.2 Main objectives of the measure

To reduce the use of private car for trips to work in the central area

1.3 Area of implementation

Name(s) Torino centre
Size 7
Population 83000 (31/12/94)

2 Authorities involved in the implementation procedure of the measure

Decision making Municipality of Torino

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

__ 1Yes, exactly X 2 Almost __ 3 Not at all

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)

ZTL produced an increase of passengers on public lines crossing the city centre

CITY Torino **MEASURE NUMBER (See Form 1)** 6

1 Description of the measure

1.1 Description of the measure or the combination of measures

Torino Urban Traffic Plan foresees the extension of pedestrian areas in the city centre. Particularly, a system of 3 pedestrian areas is planned, covering a good part of the city centre. These areas, which extend the existing pedestrian streets, will be connected with parkings sited in the neighbourings.

1.2 Main objectives of the measure

To decrease pollution in the city centre, making easier pedestrian mobility and reducing traffic flows.

1.3 Area of implementation

Name(s) Torino centre
Size 7
Population 83000 (31/12/94)

2 Authorities involved in the implementation procedure of the measure

Decision making Municipality of Torino

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

__ 1Yes, exactly X 2 Almost __ 3 Not at all

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)

This measure is planned for the newt two years; contextually is planned a reduction of traffic limited zone (measure 5).

CITY Torino **MEASURE NUMBER (See Form 1)** 7

1 Description of the measure

1.1 Description of the measure or the combination of measures

Streets completely reserved to public transport

1.2 Main objectives of the measure

The measure aims to separate public transport from private traffic in order to improve its performances

1.3 Area of implementation

Name(s)	Central area
Size	7
Population	83000 (31/12/94)

1.4 Dimensions / Extent of the measure

At present there are 3 km of streets completely reserved to public transport, representing the 0,5% of the total network (562 km).

2 Authorities involved in the implementation procedure of the measure

Decision making Municipality of Torino

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

__ 1Yes, exactly X 2 Almost __ 3 Not at all

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)

There have been problems about the prohibition observance: despite the no thoroughfare, some cars continue running on these streets.

CITY Torino **MEASURE NUMBER (See Form 1)** 8

1 Description of the measure

1.1 Description of the measure or the combination of measures

Lanes completely reserved to public transport, protected with big nails, kerbs, etc.

1.2 Main objectives of the measure

To assure to public transport a complete separation from private traffic.

1.3 Area of implementation

Name(s)	Torino
Size	130
Population	924000 ('95)

1.4 Dimensions / Extent of the measure

At present, 10,5% of public transport network (562 km) runs on reserved/protected lanes: 4,8% lanes on streets protected by kerbs, big nails, stripes; 5,7% lanes separated from the street.

2 Authorities involved in the implementation procedure of the measure

Decision making Municipality of Torino

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

__ 1Yes, exactly X_ 2 Almost __ 3 Not at all

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)

The measure is effective where there is a physical separation between public transport and private traffic (kerbs, big nails, etc).

CITY Torino **MEASURE NUMBER (See Form 1)** 9

1 Description of the measure

1.1 Description of the measure or the combination of measures

Extension of lanes completely reserved to public transport.

1.2 Main objectives of the measure

This measure is planned by Urban Traffic Plan of Torino in order to assure continuity of performances to the main lanes of public network.

1.3 Area of implementation

Name(s)	Torino
Size	130
Population	924000 ('95)

2 Authorities involved in the implementation procedure of the measure

Decision making Municipality of Torino

CITY Torino **MEASURE NUMBER (See Form 1)** 10

1 Description of the measure

1.1 Description of the measure or the combination of measures

Reserved lanes against traffic for public transport

1.2 Main objectives of the measure

To guarantee free travelling for public transport in high congested reserved lanes

1.4 Dimensions / Extent of the measure

At present the measure is adopted for two tramway lines (10 e 18) and for bus line 61, on a lenght of about 3 km (0,5% of total network).

2 Authorities involved in the implementation procedure of the measure

Decision making Municipality of Torino

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

X_ 1Yes, exactly __ 2 Almost __ 3 Not at all

CITY Torino **MEASURE NUMBER (See Form 1)** 11

1 Description of the measure

1.1 Description of the measure or the combination of measures

Extension of reserved lanes against traffic for public transport

1.2 Main objectives of the measure

To guarantee free travelling for public transport in high congested reserved lanes

2 Authorities involved in the implementation procedure of the measure

Decision making Municipality of Torino

CITY Torino **MEASURE NUMBER (See Form 1)** 12

1 Description of the measure

1.1 Description of the measure or the combination of measures

Pay parking has been introduced at the end of '94 in Torino central area.
In 1995 the measure has been extended to the neighbouring zones.

1.2 Main objectives of the measure

To reduce long period parking.

1.3 Area of implementation

Name(s) Central area
Size 7
Population 83000 (31/12/94)

1.4 Dimensions / Extent of the measure

At present the area subject to toll parking contains about 13000 places.
At present 150 parking wardens control toll-payment.

2 Authorities involved in the implementation procedure of the measure

Decision making Municipality of Torino

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

X 1Yes, exactly __ 2 Almost __ 3 Not at all

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)

A decrease of private traffic searching for parking and a reduction of conflicts with public transport have been observed.

CITY Torino **MEASURE NUMBER (See Form 1)** 13

1 Description of the measure

1.1 Description of the measure or the combination of measures

Pay parking extension to the entire city centre and to other historical or commercial zones.

1.2 Main objectives of the measure

To reduce long-period parking.

1.3 Area of implementation

Name(s) Central area and neighbouring zones.
Size 7
Population 83000 (31/12/94)

1.4 Dimensions / Extent of the measure

An extension of about 12000 places is planned in the Urban Traffic Plan of the city of Torino.

2 Authorities involved in the implementation procedure of the measure

Decision making Municipality of Torino

CITY Torino **MEASURE NUMBER (See Form 1)** 14

1 Description of the measure

1.1 Description of the measure or the combination of measures

Fare integration between public transport companies in the metropolitan area (Satti, ATM, FS).The measure will be operating from April '96.

1.2 Main objectives of the measure
To increase the use of public transport introducing a fare integration between urban/suburban transport and railway. This measure is connected with the physical integration of the systems.

1.3 Area of implementation
Name(s) Torino metropolitan area and some railway main lines
Size Torino and 155 towns

2 Authorities involved in the implementation procedure of the measure
Decision making Regione Piemonte, Provincia di Torino, Comune di Torino

CITY Torino **MEASURE NUMBER (See Form 1)** 15

1 Description of the measure
1.1 Description of the measure or the combination of measures
Construction of a subway under Piazza Repubblica and arrangement of traffic conditions on surface. The measure is planned by Urban Traffic Plan of Torino

1.2 Main objectives of the measure
To improve traffic speed in the area of piazza Repubblica junction.

1.3 Area of implementation
Name(s) P. Repubblica area

2 Authorities involved in the implementation procedure of the measure
Decision making Municipality of Torino

CITY Torino **MEASURE NUMBER (See Form 1)** 16

1 Description of the measure
1.1 Description of the measure or the combination of measures
Park and ride is planned in the Torino Urban Traffic Plan at terminals of some tramway lines

1.2 Main objectives of the measure
To reduce private traffic flows in central areas, facilitating interchange with public transport lines

1.3 Area of implementation
Type suburb

1.4 Dimensions / Extent of the measure
Urban Traffic Plan forsees 6 park and ride point for an amount of about 1600 places.

2 Authorities involved in the implementation procedure of the measure
Decision making Municipality of Torino

CITY Torino **MEASURE NUMBER (See Form 1)** 17

1 Description of the measure
1.1 Description of the measure or the combination of measures
Tramway network extension is planned in the Torino Urban Traffic Plan.

1.2 Main objectives of the measure
To increase and strenghten tramway network in the main demand lanes. This measure is associated with the planned extension of streets and lanes reserved to public transport.

1.3 Area of implementation
Type suburb

1.4 Dimensions / Extent of the measure
An extension of tramway network for a total of 8 km is planned.

2 Authorities involved in the implementation procedure of the measure
Decision making Municipality of Torino

CITY Torino **MEASURE NUMBER (See Form 1)** 18

1 Description of the measure
1.1 Description of the measure or the combination of measures
5T Project (Telematic Technologies for Transport and traffic in Turin) : Control of Private Traffic Subsystem. This subsystem is responsible for the distributed hierarchical control of traffic light regularion in the area equipped with centralised "controllers". Control of Private Traffic is the extension and a structural and functional complementof the "Torino Project" system.

1.2 Main objectives of the measure
The main goal is "optimal control" of private traffic in the various possible conditions and at different individual areas, arteries and intersections. At the same time it assigns absolute and/or selective priority to public transport. The subsystem also monitors traffic, and centralise the diagnosis of its components.

1.3 Area of implementation

Name(s)	Torino
Size	130
Population	924000('95)

1.4 Dimensions / Extent of the measure
150 traffic-light controlled junctions.

2 Authorities involved in the implementation procedure of the measure
Decision making 5T Consortium

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
Tests will begin in Mars 1996

CITY Torino **MEASURE NUMBER (See Form 1)** 19

1 Description of the measure
1.1 Description of the measure or the combination of measures
5T Project (Telematic Technologies for Transport and traffic in Turin) : Control of Public Transport. This subsystem is applied on the basis of and through the existing SIS system (measure 3). Within the 5T project it collects data relating to the travel time of public transport, as well as informations on supply demand, it provides informations to the public at stops and on board vehicles. Interacting with the traffic light control system, it's able to assure priority for selected vehicles.

1.2 Main objectives of the measure
The subsystem has the following goals: to improve service to passengers (increase regularity, identification of events), to improve working conditions of drivers, to improve operating conditions of the service.

1.3 Area of implementation

Name(s)	Torino
Size	130
Population	924000('95)

1.4 Dimensions / Extent of the measure
The subsystem consists of 150 equipements for passengers counting and of 100 VIA to visualize arrival informations at bus stops.

2 Authorities involved in the implementation procedure of the measure

Decision making 5T Consortium

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
Tests will begin in Mars 1996

CITY Torino **MEASURE NUMBER (See Form 1)** 20

1 Description of the measure

1.1 Description of the measure or the combination of measures
5T Project (Telematic Technologies for Transport and traffic in Turin): Collective Routing (VMS).
The subsystem uses two types of Variable Message Signs (VMS) rispectively to direct traffic to optimal routes and to indicate parking areas.

1.2 Main objectives of the measure
The subsystem has the following goals: to direct traffic according to set parameters, so as to optimise the use of road network, to warn and suggest turnoffs to alternative routes in particular conditions (congestion, pollution), to indicate diversions due to particular events, to back-up informations to the parking area system, to present information to motorists.

1.3 Area of implementation

Name(s)	Torino
Size	130
Population	924000('95)

1.4 Dimensions / Extent of the measure
The subsystem consists of 22 VMS for routing and 23 VMS for parking.

2 Authorities involved in the implementation procedure of the measure

Decision making 5T Consortium

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
Tests will begin in Mars 1996

CITY Torino **MEASURE NUMBER (See Form 1)** 21

1 Description of the measure

1.1 Description of the measure or the combination of measures
5T Project (Telematic Technologies for Transport and traffic in Turin): Environmental Control.
The level of air pollution is the parameter to be kept under control. Mathematical models are used to estimate the current and predictable state of pollution. The preventive link-up with other systems means that traffic control strategies can be inplemented in areas where pollution is approaching danger levels.

1.2 Main objectives of the measure
The subsystem sets out to reduce the effects of pollution caused by vehicle traffic inside the urban area.

1.3 Area of implementation

Name(s)	Torino
Size	130
Population	924000('95)

1.4 Dimensions / Extent of the measure
The subsystem consists of 9 environmental sensors.

2 Authorities involved in the implementation procedure of the measure

Decision making 5T Consortium

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
Tests will begin in Mars 1996

CITY Torino **MEASURE NUMBER (See Form 1)** 22

1 Description of the measure

1.1 Description of the measure or the combination of measures
5T Project (Telematic Technologies for Transport and traffic in Turin): Informative Media Control (IMC)
The system distributes informations before a journey and during the journey using different information transmission technologies: databases accessible at home through the Videotel system, bulletins on the Televideo, databases and interactive services operating through special PIA (Automathic Information Poins), located in different parts of the Town.

1.2 Main objectives of the measure
The aim of this subsystem is to collect and make available information on traffic, environment, parking areas and public transport.

1.3 Area of implementation

Name(s)	Torino
Size	130
Population	924000('95)

1.4 Dimensions / Extent of the measure
The subsystem consists of 10 PIA also equipped for payment of public transport services and of parking areas.

2 Authorities involved in the implementation procedure of the measure

Decision making 5T Consortium

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
Tests will begin in Mars 1996

CITY Torino **MEASURE NUMBER (See Form 1)** 23

1 Description of the measure

1.1 Description of the measure or the combination of measures
5T Project (Telematic Technologies for Transport and traffic in Turin): Supervisor subsystem.
5T is an "integrated system", the sum-total of several subsystems, each with specific functions. At its heart is the Supervisor wich coordinates all the rest. This system collects all significant data relating to the other subsystems, supplies "the state of traffic and transport present at the moment", and provides the point of equilibrium that the system needs to reach

1.2 Main objectives of the measure
Supervisor operates in order to integrate the various subsystems, and direct them to a common goal.
The system can interact with the Authorities responsible for traffic oparation and environment.

1.3 Area of implementation

Name(s)	Torino
Size	130
Population	924000('95)

2 Authorities involved in the implementation procedure of the measure

Decision making 5T Consortium

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
Tests will begin in Mars 1996

CITY Torino **MEASURE NUMBER (See Form 1)** 24

1 Description of the measure

1.1 Description of the measure or the combination of measures

5T Project (Telematic Technologies for Transport and traffic in Turin) :other subsystems.
Maximum priority : controls vehicle fleets used in emergency conditions so as to increase the level of efficiency and safety of the service; Route Guidance :guiding the individual vehicle, fitted with the necessary equipment, in its choice of best route; Integration of Charges and payment, which aims to create a standard method of payment for public transport and private traffic; Monitoring of Parking Areas, managing and monitoring parking spaces and supplying motorists with informations regarding parkings.

1.3 Area of implementation

Name(s)	Torino
Size	130
Population	924000('95)

1.4 Dimensions / Extent of the measure

Maximum Priority : 10 vehicles(ambulances) equipped in order to manage their location and routing. Route Guidance: 50 vehicles equipped for individual routing, 5 beacons (special transmitters) for communication with vehicles. 10 parkings which give informations on the state of occupancy.

2 Authorities involved in the implementation procedure of the measure

Decision making 5T Consortium

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)

Tests will begin in Mars 1996

CITY Torino **MEASURE NUMBER (See Form 1)** 25

1 Description of the measure

1.1 Description of the measure or the combination of measures

Strenghtening of Torino railway junction, through the quadruplication of tracks and the construction of a railway tunnel for urban crossing.

1.2 Main objectives of the measure

To create a railway regional network, crossing the city, with regular passages.
This system will give a better distribution of mobility over the metropolitan area, with interchanges points with public transport lines

1.3 Area of implementation

Name(s)	Torino and metropolitan area
Size	612
Population	1454000 ('95)
Type	Centre and suburbs

1.4 Dimensions / Extent of the measure

The total lenght of urban railway section is 9 km.
The total investment amounts to 1400 MLR liras.

2 Authorities involved in the implementation procedure of the measure

Decision making Ferrovie dello Stato

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)

The new railway system will be operating in 2002.

CITY Torino **MEASURE NUMBER (See Form 1)** 26

1 Description of the measure

1.1 Description of the measure or the combination of measures

"Spina Centrale" : new arterial road for urban penetration planned by Torino Town Plan.
This road is a wide boulevard and is placed over the railway tunnel (measure number 5)

1.2 Main objectives of the measure

The measure aims to facilitate urban penetration for private traffic, and improve accessibility for town-planning transformation zones planned by Torino Town Plan.

1.3 Area of implementation

Name(s) "Spina Centrale" area
Size 3
Type Centre and neighbouring zones

2 Authorities involved in the implementation procedure of the measure

Decision making Municipality of Torino

CITY Torino **MEASURE NUMBER (See Form 1)** 27

1 Description of the measure

1.1 Description of the measure or the combination of measures

Construction of a subway under Piazza Statuto and arrangement of traffic conditions on surface.
The measure is connected with the boulvard "Spina Centrale" (measure 26) planned by Torino Town Plan

1.2 Main objectives of the measure

To decrease congestion in the area of piazza Statuto junction.

1.3 Area of implementation

Name(s) P. Statuto area
Type Centre

2 Authorities involved in the implementation procedure of the measure

Decision making Municipality of Torino

CITY Torino **MEASURE NUMBER (See Form 1)** 28

1 Description of the measure

1.1 Description of the measure or the combination of measures

Torino Town Plan, recently adoptded by the Municipality, plans a relocalization of activities in some areas of urban renewal.

1.2 Main objectives of the measure

Town-planning reorganization, particularly in main dismantled or unused areas.

1.3 Area of implementation

Name(s) Torino
Size 130
Population 924000 ('95)

1.4 Dimensions / Extent of the measure

The interventions involve settlements for about 34000 inhabitants, 70000 employees, 30000 students.

2 Authorities involved in the implementation procedure of the measure

Decision making Municipality of Torino

CITY Torino **MEASURE NUMBER (See Form 1)** 29

1 Description of the measure

1.1 Description of the measure or the combination of measures

Projec of first section line 1 of metro (Campo Volo - Porta Nuova).

1.2 Main objectives of the measure

To carry out a public transport system with high performances and capacity on main demand lines.

1.4 Dimensions / Extent of the measure

The construction of a first section of line 1 (Campo Volo - Porta Nuova), 9 km long, 15 stations, is forseen in the next years. VAL system has been chosen for this line, with a maximum capacity of 35000 places/hour for direction

2 Authorities involved in the implementation procedure of the measure

Decision making Municipality of Torino

CITY Torino **MEASURE NUMBER (See Form 1)** 30

1 Description of the measure

1.1 Description of the measure or the combination of measures

Projec of line 1 of metro (Rivoli - Nichelino), which is comprehensive of the first section C.Volo - P.Nuova. (see measure 29). The line connects the city centre with municipalities of Rivoli, Collegno, Grugliasco and Nichelino

1.2 Main objectives of the measure

To carry out a public transport system with high performances and capacity on main demand lines.

1.3 Area of implementation

Name(s)	Torino + metropolitan area
Size	612
Population	350000 inhabitants in areas crossed by line 1

1.4 Dimensions / Extent of the measure

Line 1 Rivoli Nichelino is km23 long.

2 Authorities involved in the implementation procedure of the measure

Decision making Municipality of Torino

CITY Torino **MEASURE NUMBER (See Form 1)** 31

1 Description of the measure

1.1 Description of the measure or the combination of measures

Projec of line 4 of metro Falchera - C.Mario.

1.2 Main objectives of the measure

To carry out a public transport system with high performances and capacity on main demand lines.

1.3 Area of implementation

Name(s)	Torino
Size	130
Population	120000 inhabitants in areas crossed by line 4

1.4 Dimensions / Extent of the measure

Line 4 Falchera - Caio Mario is km 16 long.

2 Authorities involved in the implementation procedure of the measure

Decision making Municipality of Torino

CITY Torino **MEASURE NUMBER (See Form 1)** 32

1 Description of the measure

1.1 Description of the measure or the combination of measures

Projec of lines 2 of metro with semicircular layout, completing urban metro system.

1.2 Main objectives of the measure

This line connects mobility external to central areas and some new relocalizationsplanned in Torino Town Plan.

1.3 Area of implementation

Name(s)	Torino
Size	130
Population	200000 inhabitants in areas crossed by line 2
Type	suburb

2 Authorities involved in the implementation procedure of the measure

Decision making	Municipality of Torino

SALERNO

CITY: SALERNO **MEASURE NUMBER (See Form 1):** 1

1 Description of the measure

1.1 Description of the measure or the combination of measures

CONSTRUCTION OF THREE NEW ROADS:
1) VARIANTE OGLIARA
2) LINK BETWEEN VIA GATTI AND VIA SPIRITO
3) NEW ROAD BY THE SIDE OF RIVER IRNO

1.2 Main objectives of the measure

IMPROVEMENT OF ACCESIBILITY OF SUBURBS TOWARDS THE CITY CENTRE

1.3 Area of implementation

Name(s)	OGLIARA - MATIERNO - FRATTE
Size	3
Population	20.000 INHABITANTS
Type	SUBURBS

2 Authorities involved in the implementation procedure of the measure

Decision making	LOCAL
Financing	LOCAL
Implementation, upkeeping	LOCAL

CITY: SALERNO **MEASURE NUMBER (See Form 1):** 2

1 Description of the measure

1.1 Description of the measure or the combination of measures

PARKING SUPPLY: CONSTRUCTION OF TWO UNDERGROUND PARKINGS IN THE CITY CENTRE

1.2 Main objectives of the measure

INCREASING THE SUPPLY OF PARKING IN THE CITY CENTRE AND AVOIDING THE PARKING ALONG THE ROADS AND IN THE SQUARES OF CITY CENTRE

1.3 Area of implementation

Name(s)	SEASIDE: PIAZZA MAZZINI AND CORSO GARIBALDI
Size	1
Population	50.000 INHABITANTS
Type	CITY CENTRE

2 Authorities involved in the implementation procedure of the measure

Decision making	LOCAL
Financing	LOCAL AND PRIVATE SUBJECTS
Implementation, upkeeping	PRIVATE

CITY: SALERNO **MEASURE NUMBER (See Form 1):** 3

1 Description of the measure

1.1 Description of the measure or the combination of measures

CONSTRUCTION OF AN UNDERGROUND LINE ADJOINING THE RAILWAY LINE SALERNO - BATTIPAGLIA

1.2 Main objectives of the measure

FLOWING SMOOTHLY ON THE ROUTE EAST - WEST

1.3 Area of implementation

Name(s)	UNDERGROUND LINE CENTRAL STATION - ARECHI STADIUM
Size	6
Population	100.000 INHABITANTS
Type	CITY CENTRE - INDUSTRIAL AREA

2 Authorities involved in the implementation procedure of the measure

Decision making	NATIONAL - NATIONAL RAILWAYS
Financing	NATIONAL - NATIONAL RAILWAYS
Implementation, upkeeping	NATIONAL - NATIONAL RAILWAYS

CITY: SALERNO **MEASURE NUMBER (See Form 1):** 4

1 Description of the measure

1.1 Description of the measure or the combination of measures

CONSTRUCTION OF A LIGHT RAIL

1.2 Main objectives of the measure

IMPROVEMENT OF PUBLIC TRANSPORT SYSTEM

1.3 Area of implementation

Name(s)	SALERNO LIGHT RAIL
Size	6
Population	100.000 INHABITANTS
Type	CITY CENTRE - INDUSTRIAL AREA

2 Authorities involved in the implementation procedure of the measure

Decision making	LOCAL
Financing	LOCAL
Implementation, upkeeping	LOCAL

CITY: SALERNO **MEASURE NUMBER (See Form 1):** 5

1 Description of the measure

1.1 Description of the measure or the combination of measures

CONSTRUCTION OF A RAIL LINK BETWEEN THE PORT OF SALERNO AND THE RAILWAY STATION

1.2 Main objectives of the measure

REPLACEMENT THE ACTUAL RAIL ALONG THE PEDESTRIAN AREA IN THE PARK ON THE SEASIDE

1.3 Area of implementation

Name(s)	RAIL LINK PORT - CENTRAL STATION
Size	2.50
Population	50.000 INHABITANTS
Type	CITY CENTRE - HARBOUR AREA

2 Authorities involved in the implementation procedure of the measure

Decision making	NATIONAL (NATIONAL RAILWAYS) - LOCAL(PORT AUTHORITY)
Financing	NATIONAL (NATIONAL RAILWAYS) - LOCAL (PORT AUTHORITY)
Implementation, upkeeping	NATIONAL (NATIONAL RAILWAYS)

CITY: SALERNO **MEASURE NUMBER (See Form 1):** 6

1 Description of the measure

1.1 Description of the measure or the combination of measures

REALISATION OF THREE "PARK AND RIDE" AREAS:
- VIA LIGEA
- FRATTE
- ARECHI STADIUM

1.2 Main objectives of the measure
REDUCING PRIVATE CARS COMING FROM COUNTY AREA AND GOING TO THE CITY CENTRE
REDUCING PARKING DEMAND IN THE CITY CENTRE

1.3 Area of implementation

Name(s)	SALERNO PARK AND RIDE SYSTEM
Size	30
Population	*120.000 INHABITANTS*
Type	CITY CENTRE - SUBURBS - INDUSTRIAL AREA

2 Authorities involved in the implementation procedure of the measure

Decision making	LOCAL
Financing	LOCAL
Implementation, upkeeping	LOCAL

CITY: SALERNO **MEASURE NUMBER (See Form 1):** 7

1 Description of the measure

1.1 Description of the measure or the combination of measures
CONSTRUCTION OF THE BUS TERMINAL

1.2 *Main objectives of the measure*
AVOIDING THE URBAN ROUTES OF "COUNTY LINES"
OPTIMISATION OF COUNTY BUS SERVICES

1.3 Area of implementation

Name(s)	SALERNO BUS TERMINAL
Size	30
Population	120.000 INHABITANTS
Type	CITY CENTRE

2 Authorities involved in the implementation procedure of the measure

Decision making	COUNTY
Financing	COUNTY
Implementation, upkeeping	COUNTY

CITY: SALERNO **MEASURE NUMBER (See Form 1):** 8

1 Description of the measure

1.1 Description of the measure or the combination of measures
CONTRUCTION OF AN ESCALATORS SYSTEM

1.2 Main objectives of the measure
REALISATION OF EQUIPPED LINKS BETWEEN ANCIENT AREA AND CITY CENTRE

1.3 Area of implementation

Name(s)	ESCALATORS SYSTEM
Size	0.5
Population	10.000 INHABITANTS
Type	ANCIENT CENTRE

2 Authorities involved in the implementation procedure of the measure

Decision making	LOCAL
Financing	LOCAL
Implementation, upkeeping	LOCAL

CITY: SALERNO **MEASURE NUMBER (See Form 1):** 9

1 Description of the measure

1.1 Description of the measure or the combination of measures

CONTRUCTION OF CYCLE LANES ALONG THE SEASIDE

1.2 Main objectives of the measure

SAFETY REASONS: AVOIDING THE MIX OF TRAFFIC PRIVATE CARS AND CYCLE TRAFFIC

1.3 Area of implementation

Name(s)	SALERNO SEASIDE CYCLE LANES
Size	3
Population	60.000 INHABITANTS
Type	CITY CENTRE

2 Authorities involved in the implementation procedure of the measure

Decision making	LOCAL
Financing	LOCAL
Implementation, upkeeping	LOCAL

CITY: SALERNO **MEASURE NUMBER (See Form 1):** 10

1 Description of the measure

1.1 Description of the measure or the combination of measures

PEDESTRIAN AREAS

1.2 Main objectives of the measure

MAKING ENJOYABLE WIDE AREAS OF CITY CENTRE TO PEDESTRIANS AVOIDING TRAFFIC FLOWS

1.3 Area of implementation

Name(s)	SALERNO PEDESTRIAN AREAS
Size	0.60
Population	70.000 INHABITANTS
Type	CITY CENTRE

2 Authorities involved in the implementation procedure of the measure

Decision making	LOCAL
Financing	LOCAL
Implementation, upkeeping	LOCAL

CITY: SALERNO **MEASURE NUMBER (See Form 1):** 11

1 Description of the measure

1.1 Description of the measure or the combination of measures

URBAN TRAFFIC CONTROL

1.2 Main objectives of the measure

REAL TIME REGULATION AND TRAFFIC ADAPTIVE OF MAIN CROSSINGS OF ROAD URBAN NETWORK

1.3 Area of implementation

Name(s)	URBAN TRAFFIC CONTROL
Size	20
Population	80.000 INHABITANTS
Type	CITY CENTRE

2 Authorities involved in the implementation procedure of the measure

Decision making	LOCAL
Financing	LOCAL
Implementation, upkeeping	LOCAL

CITY: SALERNO **MEASURE NUMBER (See Form 1):** 12

1 Description of the measure

1.1 Description of the measure or the combination of measures
BUS LANES

1.2 Main objectives of the measure
INCREASING THE RELIABILITY OF PUBLIC TRANSPORT SERVICES AVOIDING INTERFERENCES WITH CAR FLOWS

1.3 Area of implementation

Name(s)	BUS NETWORK
Size	20
Population	80.000 INHABITANTS
Type	CITY CENTRE

2 Authorities involved in the implementation procedure of the measure

Decision making	LOCAL
Financing	LOCAL
Implementation, upkeeping	LOCAL

CITY: SALERNO **MEASURE NUMBER (See Form 1):** 13

1 Description of the measure

1.1 Description of the measure or the combination of measures
BUS SERVICES IMPROVEMENT

1.2 Main objectives of the measure
IMPROVEMENT OF BUS SERVICES
INCREASING MODAL SPLIT (PUBLIC TRANSPORT)

1.3 Area of implementation

Name(s)	IMPROVEMENTS PLAN OF ATACS
Size	54
Population	150.000 INHABITANTS
Type	WHOLE TOWN

2 Authorities involved in the implementation procedure of the measure

Decision making	LOCAL BUS COMPANY
Financing	LOCAL BUS COMPANY
Implementation, upkeeping	LOCAL BUS COMPANY

CITY: SALERNO **MEASURE NUMBER (See Form 1):** 14

1 Description of the measure

1.1 Description of the measure or the combination of measures
BUSES MONITORING

1.2 Main objectives of the measure
OPERATION INFORMATION SYSTEMS TO IDENTIFY LOCATIONS OF BUSES AND TO RESCHEDULE SERVICES TO REDUCE THE IMPACT OF UNRELIABILITY

1.3 Area of implementation

Name(s)	URBAN BUS NETWORK MONITORING
Size	12
Population	100.000 INHABITANTS
Type	CITY CENTRE - INDUSTRIAL AREA - SUBURBS

2 Authorities involved in the implementation procedure of the measure

Decision making	LOCAL BUS COMPANY
Financing	LOCAL BUS COMPANY
Implementation, upkeeping	LOCAL BUS COMPANY

CITY: SALERNO **MEASURE NUMBER (See Form 1):** 15

1 Description of the measure

1.1 Description of the measure or the combination of measures
FLEXIBLE HOURS FOR SHOPS, OFFICES AND SCHOOLS

1.2 Main objectives of the measure
REDUCING DEMAND OF PEAK TRAVEL

1.3 Area of implementation

Name(s)	FLEXIBLE HOURS
Size	15
Population	120.000 INHABITANTS
Type	CITY CENTRE - INDUSTRIAL AREA

2 Authorities involved in the implementation procedure of the measure

Decision making	LOCAL
Financing	LOCAL
Implementation, upkeeping	LOCAL

CITY: SALERNO **MEASURE NUMBER (See Form 1):** 16

1 Description of the measure

1.1 Description of the measure or the combination of measures
CONSTRUCTION OF A RAIL LINK BETWEEN RAILWAY LINE SALERNO - M.S.SEVERINO AND THE UNIVERSITY

1.2 Main objectives of the measure
DIRECT CONNECTION BETWEEN THE CITY OF SALERNO AND ITS COUNTY AND THE UNIVERSITY OF FISCIANO AND LANCUSI

1.3 Area of implementation

Name(s)	RAIL LINK FISCIANO - UNIVERSITY
Size	COUNTY OF SALERNO AND AVELLINO
Population	40.000 STUDENTS
Type	COUNTY OF SALERNO AND AVELLINO

2 Authorities involved in the implementation procedure of the measure

Decision making	NATIONAL RAILWAYS
Financing	NATIONAL RAILWAYS
Implementation, upkeeping	NATIONAL RAILWAYS

CITY: SALERNO **MEASURE NUMBER (See Form 1):** 17

1 Description of the measure

1.1 Description of the measure or the combination of measures

DECENTRALISATION OF PUBLIC OFFICES: LAWCOURT - COUNTY ADMINISTRATIVE OFFICES - TECHNICAL COUNTY OFFICES

1.2 Main objectives of the measure

REDUCING TRANSPORT DEMAND COMING FROM OUTSIDE THE TOWN TOWARD COUNTY OFFICES

1.3 Area of implementation

Name(s)	DECENTRALISATION PUBLIC OFFICES
Size	30
Population	120.000 INHABITANTS
Type	CITY CENTRE

2 Authorities involved in the implementation procedure of the measure

Decision making	LOCAL - NATIONAL - COUNTY
Financing	LOCAL - NATIONAL - COUNTY
Implementation, upkeeping	LOCAL - NATIONAL - COUNTY

CITY: SALERNO **MEASURE NUMBER (See Form 1):** 18

1 Description of the measure

1.1 Description of the measure or the combination of measures

DIRECTION SIGNING ON ROADS OF ADMITTANCE TO SALERNO CITY

1.2 Main objectives of the measure

AVOIDING CROSSING FLOWS ON URBAN ROAD NETWORK

1.3 Area of implementation

Name(s)	DIRECTION SIGNING
Size	30
Population	100.000 INHABITANTS
Type	CITY CENTRE - SUBURBS

2 Authorities involved in the implementation procedure of the measure

Decision making	LOCAL
Financing	LOCAL
Implementation, upkeeping	LOCAL

CITY: SALERNO **MEASURE NUMBER (See Form 1):** 19

1 Description of the measure

1.1 Description of the measure or the combination of measures

ACUSTICAL AND ENVIRONMENTAL POLLUTION CONTROL

1.2 Main objectives of the measure

MONITORING POLLUTION LEVELS TO OPERATE ON URBAN TRAFFIC CONTROL

1.3 Area of implementation

Name(s)	POLLUTION MONITORING
Size	30
Population	100.000 INHABITANTS
Type	CITY CENTRE - FRATTE SUBURBS

2 Authorities involved in the implementation procedure of the measure

Decision making	LOCAL
Financing	LOCAL
Implementation, upkeeping	LOCAL

CITY: SALERNO **MEASURE NUMBER (See Form 1):** 20

1 Description of the measure

1.1 Description of the measure or the combination of measures

REGULATORY RESTRINCTIONS ON CAR USE

1.2 Main objectives of the measure

REDUCING DEMAND ON PEAK TRAVEL

1.3 Area of implementation

Name(s)	CAR USE REGULATION
Size	30
Population	100.000 INHABITANTS
Type	CITY CENTRE

2 Authorities involved in the implementation procedure of the measure

Decision making	LOCAL
Financing	LOCAL
Implementation, upkeeping	LOCAL

OSLO

CITY Oslo **MEASURE NUMBER (See Form 1):** 1

1 Description of the measure

1.1 Description of the measure or the combination of measures

Travelcards and railcards are made cheaper relatively to single tickets

1.2 Main objectives of the measure

Reduce costs of ticketing and boarding times. Second degree price discrimination?

1.3 Area of implementation

Name(s) Whole

2 Authorities involved in the implementation procedure of the measure

Decision making Oslo Sporveier, Stor-Oslo lokaltrafikk

4.3 Other remarks concerning acceptance of the measure

A un unitary fare structure for all public transport in the region is established.
The involved parties (Oslo, Akershus and the railway company, NSB) have, however, differing interests, especially concerning division of the proceeds, free access for commuters from Akershus to congested lines in Oslo; and possibly NSB will also want an extra surcharge on travelling through the Oslo tunnel.

Explantation of the structure of government and local public transport
Two counties: Oslo and Akershus. Oslo is at the same time a county
and a local government (fylke og kommune).
Oslo owns "Oslo sporveier", the main public transport company in Oslo,
with responsibility for both buses, metro and tramways/lightrail.
Akershus owns "Stor-Oslo lokaltrafikk", mainly in charge of buses. NSB is the stateowned company, and runs local and regional railway lines in the region.
A unitary fare system is established. A tickets bought on one line for the most part is also valid on others. The proceeeds are divided between the companies according to certain rules.

CITY Oslo **MEASURE NUMBER (See Form 1):** 1

1 Description of the measure

1.1 Description of the measure or the combination of measures

Reduce or freeze fare levels

1.2 Main objectives of the measure

* Attract passengers to public transport, reduce car trafikk
* Equity issue (low income group should have access to the same activities as others)

1.3 Area of implementation

Name(s) Whole

2 Authorities involved in the implementation procedure of the measure

Decision making Oslo and Akershus (citycouncil/countycouncil)
Financing Oslo and Akershus (citycouncil/countycouncil)
Implementation, upkeeping Oslo and Akershus (citycouncil/countycouncil)

CITY Oslo **MEASURE NUMBER (See Form 1):** 2

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

__ 1 Yes, exactly X 2 Almost __ 3 Not at all

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)

Public transport ridership has increased. Difficult to say how much is due to fares.

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure

The reverse of this measure in increased subsidy or decreasing levels of service.
Neither of these has happened, though.

4.2 Public attitudes; attitudes of person groups that have expressed an opinion about the measure

Description of the group	Attitude	Reasons for the attitude
Labour and left wing parties	5	See 1.2.
Experts and executives	2	Sets limits to service improvements, runs contrary to marginal cost pricing principles.

6 Other issues concerning the measure

Uniform fare levels at all times of the say seems to be an undisputed constraint.
Please continue here or on another paper, if the space reserved for a question is not adequate.

CITY Oslo **MEASURE NUMBER (See Form 1):** 3

1 Description of the measure

1.1 Description of the measure or the combination of measures

Oslo Sporveier is subsidized to the amount of NOK 400-500 millions per year.
Public transport companies in Akershus are also subsidized.

1.2 Main objectives of the measure

Secure a planned level of public transport service (given fares).

1.3 Area of implementation

Name(s) Whole

2 Authorities involved in the implementation procedure of the measure

Decision making	City council/county council
Financing	City council/county council
Implementation, upkeeping	City council/county council

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

__ 1 **Yes, exactly** X__ 2 **Almost** __ 3 **Not at all**

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)

There have been instances where Oslo Sporveier has been refinanced.
Private bus companies (Akershus, and some in Oslo) are often considered to be excessively profitable.

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure

Subsidizing transport competes with use of the same money in health care, schooling etc.
Private companies should not profit excessively.

4.2 Public attitudes; attitudes of person groups that have expressed an opinion about the measure

Description of the group	Attitude	Reasons for the attitude
Right wing parties	2	Effectiveness (there exists a potential for cost savings
Labour party	3	Effectiveness (there exists a potential for cost savings
Left wing parties	4	Increase public transport frquency etc.

6 Other issues concerning the measure

Subsidy leves have been reduced by abouut 50% in 7-8 years. Need for subsidies are thought to be less if acutioning is used.

CITY Oslo **MEASURE NUMBER (See Form 1):** 4

1 Description of the measure

1.1 Description of the measure or the combination of measures

Tram lines are given their own lanes in the streets, and separated from car wherever possible.
Tram stops are upgraded.

1.2 Main objectives of the measure

Increased speed of the tram lines

2 Authorities involved in the implementation procedure of the measure

Decision making	City council
Financing	City council
Implementation, upkeeping	Oslo sporveier

CITY Oslo **MEASURE NUMBER (See Form 1):** 4

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

__ 1 **Yes, exactly** _X_ 2 **Almost** __ 3 **Not at all**

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)

The programme has only started a few years ago, and is not fully implemented yet.

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure

Streets and lanes for car use diminishes. Parking possibilities along streets may be reduced.
At certain places, shops have claimed loss of customers because of this.

4.2 Public attitudes; attitudes of person groups that have expressed an opinion about the measure

Description of the group	Attitude	Reasons for the attitude
Right wing parties	1	Loss for small shops, freedom of car use
Labour and left wing parties	5	Essential for the future of tram in the city

4.3 Other remarks concerning acceptance of the measure

New uses of street area has to be "regulated", which is a slow and cumbersome process including public hearing. Improvements are therefore gradual.

CITY Oslo **MEASURE NUMBER (See Form 1):** 5

1 Description of the measure

1.1 Description of the measure or the combination of measures

New tramcar lines with the quality of light rail are introduced. Implemented: "Aker brygge".
Planned: "Aker sykehus", "Gaustad" and others. Shut-down of other (low quality) lines may also be considered.

1.2 Main objectives of the measure

* Public transport connections to new big hospitals, shopping areas etc.
* Fewer buses in congested corridors.

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)

Too early to say.

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure

* The light rail lines must be seen as providing better service than existing bus lines etc.
* Cuts through well establihsed dwelling areas

4.2 Public attitudes; attitudes of person groups that have expressed an opinion about the measure

Description of the group	Attitude	Reasons for the attitude
Shops at Aker brygge	5	Easy access for customers
Neighbours to planned lines	1	Noise, etc.
Some groups of travellers	2	Better served by bus or existing tram

4.3 Other remarks concerning acceptance of the measure (e.g. organisational, legislative or institutional issues)
Shopowners at Aker brygge initiated the proposal and plegded to cofinance it -, however, in the end, they pulled out of the financing part.B86

CITY Oslo **MEASURE NUMBER (See Form 1):** 6

1 Description of the measure

1.1 Description of the measure or the combination of measures
New public transport erminals are built for easy change-over between public modes, existing ones are improved.

1.2 Main objectives of the measure
* Increase accessibility by public modes, reduce waiting and walking times

1.4 Dimensions / Extent of the measure (absolute/relative value of money or degree of coverage in the area stated in Q 1.3)
NSB (Oslo S, the Bryn terminal), city council

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
Too early to say

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure
Increase in traffic may induce resistance from the local neighbourhood of the terminal

4.2 Public attitudes; attitudes of person groups that have expressed an opinion about the measure

Description of the group	Attitude	Reasons for the attitude
Local neighbours and locla authorities		Traffic, noise, etc.

1.hel

6 Other issues concerning the measure

The Bryn terminal: Dependent on the exat localization of the Gamlebyen tunnel (see 13)
Difficulties with finding enough parking space at Oslo S
(Oslo S is the most important of all public transport terminals.)

CITY Oslo **MEASURE NUMBER (See Form 1):** 7

1 Description of the measure

1.1 Description of the measure or the combination of measures
The metro system is extended in the following ways: 1) Eastern and western system are connected. 2) A "ring metro" is to be built. 3) Some existing lines are extended.

1.2 Main objectives of the measure
* Increase public transport ridership and accessibility
* Shorter travel times

2 Authorities involved in the implementation procedure of the measure

Decision making City council

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

__ 1 **Yes, exactly** X 2 **Almost** __ 3 **Not at all**

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)

The connection of the eastern and western metro network has created relatively big problems reliability. These are "baby diseases".B63

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure

Reliability of the new schedules.
Environment issues connected to the ring metro-building.

4.2 Public attitudes; attitudes of person groups that have expressed an opinion about the measure

Description of the group	Attitude	Reasons for the attitude
Western localities	2	Noise; longer waling distances because of the modernization of the western stations.
Other neighbours to new lines	2	Noise. loss of property value
Left wing parties	5	Qualitatively better public transport

4.3 Other remarks concerning acceptance of the measure

"Regulation" of areas need for new lines may be a slow process

CITY Oslo **MEASURE NUMBER (See Form 1):** 8

1 Description of the measure

1.1 Description of the measure or the combination of measures

Public transport shall not have to wait at signal junctions, but get the green light immediately (by the way, the green light is not green for public transport lanes).

1.2 Main objectives of the measure

Reduce travel times by tram, bus.

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

_X_ 1 **Yes, exactly** __ 2 **Almost** __ 3 **Not at all**

4.3 Other remarks concerning acceptance of the measure

There is always an ongoing discussion on whether or not taxis shall have the right to use public transport lanes and be prioritized at signal junctionsd. To some extent, this will reduce the gain for buses.

CITY Oslo **MEASURE NUMBER (See Form 1):** 9

1 Description of the measure

1.1 Description of the measure or the combination of measures

A lane in each direction on the main road is reserved for public transport.
In older parts of the street and road network, lanes are reserved for public transport to the extent possible.

1.2 Main objectives of the measure

Reduced travel times by bus and tram

1.3 Area of implementation

Name(s) Whole

2 Authorities involved in the implementation procedure of the measure

Decision making National Road Authority, City Council
Financing State and local

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

__ 1 **Yes, exactly** _X_ 2 **Almost** __ 3 **Not at all**

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure

Queing in the private car lane when the public transport lane is empty will inevitably annoy some private car users, and the "sacrosanctity" of the HOV lane can be undermined.

4.3 Other remarks concerning acceptance of the measure

Building HOV lanes on the new main roads is categorized as public transport measures, and the use of the funds from the toll ring for this purpose is seen by many as a breach of the agreement that these funds shall be used for highway building.

CITY Oslo **MEASURE NUMBER (See Form 1):** 10

1 Description of the measure

1.1 Description of the measure or the combination of measures

A new airport is built at Gardermoen. When opened in 1998, the old airport Fornebu is closed. A new railroad line is built to the airport.

1.2 Main objectives of the measure

* Increase the take off and landing capacity to meet travel forecasts
* Increase economic growth of the north-eastern part of the Oslo-region.

1.4 Dimensions / Extent of the measure

The single biggest transport infrastructure invstment ever in Norway

2 Authorities involved in the implementation procedure of the measure

Decision making Stortinget
Financing Stortinget
Implementation, upkeeping Luftfartsverket

3 Effectiveness

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)

Not opened yet.

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure

Regional economic effects (at Gardermoen and Fornebu)
Environmental issues: the sustainability of air travel. the shifting of noise patterns (localization of air routes).

6 Other issues concerning the measure

The most important political issue has been the localization of the airport. However, this is now a thing of the past.

CITY Oslo **MEASURE NUMBER (See Form 1):** 11

1 Description of the measure

1.1 Description of the measure or the combination of measures

A more diversified bus service; more direct ("express") buslines, feeder bus lines to rail, supplementing the "star" structure of present lines with direct connections between outer areas; easy bordering of buses etc.

1.2 Main objectives of the measure
Better quality public transport service, reduce travel times.

2 Authorities involved in the implementation procedure of the measure

Decision making City and county council
Financing Local

CITY Oslo **MEASURE NUMBER (See Form 1):** 12

1 Description of the measure

1.1 Description of the measure or the combination of measures
Small buses with facilities for wheel-chairs etc. that services small locaties

1.2 Main objectives of the measure
Increase mobility of elderly and handicapped

1.3 Area of implementation
Name(s) Oslo

2 Authorities involved in the implementation procedure of the measure

Decision making City council
Financing City council
Implementation, upkeeping Oslo sporveier

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)
_X_ 1 **Yes, exactly** __ 2 **Almost** __ 3 **Not at all**

CITY Oslo **MEASURE NUMBER (See Form 1):** 13

1 Description of the measure

1.1 Description of the measure or the combination of measures
New railway line to Gardermoen. Major investments on the local and regional railway network, including double tracks, new lines, increased capacity through Oslo and improvements of stations.

1.2 Main objectives of the measure
* High percentage of rail feeder transport to the airport
* Reduced travel time for commuters
* Improve environment in the old city (Gamlebytunnelen)

1.3 Area of implementation Whole

2 Authorities involved in the implementation procedure of the measure

Decision making Stortinget
Financing Stortinget
Implementation, upkeeping NSB

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
Not implemented yet

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure
Percentage of air passenger that will use rail to Gardermoen.
Punctuality of trains after the measure.
Environmental impacts

4.2 Public attitudes; attitudes of person groups that have expressed an opinion about the measure

Description of the group	Attitude	Reasons for the attitude
commuters	4	Low punctuality now

4.3 Other remarks concerning acceptance of the measure
Trains to the airport are planned to have higher fares than other trains and to not take along other passengers.

CITY Oslo **MEASURE NUMBER (See Form 1):** 14

1 Description of the measure

1.1 Description of the measure or the combination of measures
Local traffic by railway is not profitable for the railway company (NSB). The state pays subsidies to NSB in return for a contractnally defined level of service of local railways.

1.2 Main objectives of the measure
to achieve a defined level of service (frequency etc) on the local railway lines.

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)
__ 1 **Yes, exactly** _X_ 2 **Almost** __ 3 **Not at all**

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure
Whether or not it provides stable financial conditions for NSB and gives them necessary freedom of action to improve efficiency.

4.3 Other remarks concerning acceptance of the measure (e.g. organisational, legislative or institutional issues)
The total level of subsidy for rail is under attack; this is not mainly directed against subsidy for local railway lines in Oslo, but will tend to increase conflict between Oslo and other regions on where to concentrate available funds.

CITY Oslo **MEASURE NUMBER (See Form 1):** 14

1 Description of the measure

1.1 Description of the measure or the combination of measures
Local traffic by railway is not profitable for the railway company (NSB). The state pays subsidies to NSB in return for a contractnally defined level of service of local railways.

1.2 Main objectives of the measure
to achieve a defined level of service (frequency etc) on the local railway lines.

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)
__ 1 **Yes, exactly** _X_ 2 **Almost** __ 3 **Not at all**

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure
Whether or not it provides stable financial conditions for NSB and gives them necessary freedom of action to improve efficiency.

4.3 Other remarks concerning acceptance of the measure
The total level of subsidy for rail is under attack; this is not mainly directed against subsidy for local railway lines in Oslo, but will tend to increase conflict between Oslo and other regions on where to concentrate available funds.

CITY Oslo MEASURE NUMBER (See Form 1): 15

1 Description of the measure

1.1 Description of the measure or the combination of measures
Frequency is limited by capacity in the Oslo tunnel (railway). See 13.

CITY Oslo MEASURE NUMBER (See Form 1): 16

1 Description of the measure

1.1 Description of the measure or the combination of measures
Increase fares for railway travel through the Oslo tunnel (congestion pricing).

1.2 Main objectives of the measure
* Economic efficiency
* Decrease subsidy levels

2 Authorities involved in the implementation procedure of the measure

Decision making NSB, City and county council

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
this measure is only just contemplated

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure
Equity (affects long distance commuters)

4.3 Other remarks concerning acceptance of the measure (e.g. organisational, legislative or institutional issues)
As explained in (1), there is a cooperation on fares between Oslo Sporveier, Stor-Oslo lokaltrafikk and NSB. This means that local fares on the railway is strongly influenced by Akershus county council, who may be thought to oppose it strongly.

CITY Oslo MEASURE NUMBER (See Form 1): 17

1 Description of the measure

1.1 Description of the measure or the combination of measures
To be described later

CITY Oslo MEASURE NUMBER (See Form 1): 18

1 Description of the measure

1.1 Description of the measure or the combination of measures
Cars are debited electronically when passing points on the road network.
These points are more frequent or costs more in congested areas.

1.2 Main objectives of the measure
* Make car users pay the real social costs of travel

1.3 Area of implementa Whole

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
Not implemented

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure

Equity issues
Levels of the prices

4.2 Public attitudes; attitudes of person groups that have expressed an opinion about the measure

Description of the group	Attitude	Reasons for the attitude
Environmentalists	5	Restrict car use in cities
Some electronic businesses	5	Can deliver the system
Car organizations	2	Too many taxes on car

4.3 Other remarks concerning acceptance of the measure

The surveillance aspect not only has to be solved, but also people has to be sure that it is solved.

1 Description of the measure

1.1 Description of the measure or the combination of measures

To be filled in later

CITY Oslo **MEASURE NUMBER (See Form 1):** 20

1 Description of the measure

1.1 Description of the measure or the combination of measures

A system of 17 toll stations, forming a ring, charging all inbound cars. The toll is a approximately the same level as the ticket on public transport . Proceeds are used for highway construction.

1.2 Main objectives of the measure

To speed up implementation of a major highway and road tunnel investment plan for the Oslo region (se 22 and 23)

2 Authorities involved in the implementation procedure of the measure

Decision making	Stortinget
Financing	Stortinget
Implementation, upkeeping	National Road Authority

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

_X_ 1 **Yes, exactly** __ 2 **Almost** __ 3 **Not at all**

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)

The financial result has been in line with expectations.

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure

* Toll level
* Use of the proceeds as originally agreed

4.2 Public attitudes; attitudes of person groups that have expressed an opinion about the measure

Description of the group	Attitude	Reasons for the attitude
Local communities near ring	2	Severance effects
Car organizations	1	Car pays to much taxes
Left wing parties	2	Purpose of the ring is highway building
Labour and moderately right wing	4	Purpose of the ring is highway building
Car users	3	Getting used

4.3 Other remarks concerning acceptance of the measure

Legislation only permits toll financing of highway projects; to use tolls for road pricing purposes is not allowed. However, change in the legislation is considered.

CITY Oslo **MEASURE NUMBER (See Form 1):** 21

1 Description of the measure

1.1 Description of the measure or the combination of measures

Today, the toll in the toll ring is the same regardsless og time of day of weekday.
A higher toll on weekday and a lower or free toll at night and in weekends is considered.

1.2 Main objectives of the measure

* Congestion pricing (economic efficiency)
* Save wages for toll collectors

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)

Not tried

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure

* The size of the toll in rush hours and in the afternoon
* Whether of not it means that toll collection continues after year 2005

4.2 Public attitudes; attitudes of person groups that have expressed an opinion about the measure

Description of the group	Attitude	Reasons for the attitude
Left wing parties	4	New instrument for restricting car use
Right wing parties	2	Fear that the toll ring becomes permanent

4.3 Other remarks concerning acceptance of the measure

A change in the law is required

CITY Oslo **MEASURE NUMBER (See Form 1):** 22-23

1 Description of the measure

1.1 Description of the measure or the combination of measures

Starting in 1990, a programme of highway and main road building in Oslo and Akershus was implemented, financed 50/50 by tollrevue and public funds.

1.2 Main objectives of the measure

Reduce congestion and thereby emmissions, accidents and travel times.

1.4 Dimensions / Extent of the measure (absolute/relative value of money or degree of coverage in the area stated in Q 1.3)

NOK 4 Billion (1990-1997) for Oslo alone

2 Authorities involved in the implementation procedure of the measure

Decision making	Stortinget
Financing	Stortinget
Implementation, upkeeping	National Road Authority

CITY Oslo **MEASURE NUMBER (See Form 1):** 22
OR NUMBERS OF MEASURES COMBINED

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

__ 1 **Yes, exactly** _x_ 2 **Almost** __ 3 **Not at all**

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)

Congestion has been relieved. However, it may come back.

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure

Some of the funds are used to public transport investments. Opinions are divided as to if this is a breach of the initial agreement.

CITY Oslo **MEASURE NUMBER (See Form 1):** 24

1 Description of the measure

1.1 Description of the measure or the combination of measures

Changed highway and main street maintenance policy (for example: use of salt, snow clearance, repavement).

1.3 Area of implementation

Whole

2 Authorities involved in the implementation procedure of the measure

Decision making	Stortinget
Financing	Stortinget
Implementation, upkeeping	National Road Authority

CITY Oslo **MEASURE NUMBER (See Form 1):** 25

1 Description of the measure

1.1 Description of the measure or the combination of measures

As new main roads and tunnels are built, some old main roads are either shut for private cars, narrowed to 2 lanes or tranferred from National Road Authority to local county.

1.2 Main objectives of the measure

* Environment near old main roads
* Less through-traffic in living areas

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

__ 1 **Yes, exactly** _X_ 2 **Almost** __ 3 **Not at all**

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)

Some streets has got lower traffic levels, but others have got more. The net effect is positive.

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure

Numbers of affected people that has got improved living conditions.

CITY Oslo **MEASURE NUMBER (See Form 1):** 26

1 Description of the measure

1.1 Description of the measure or the combination of measures

* Differentiate the yearly tax on car ownership according to environmental qualities of the car (under consideration at the Ministry of Transport)
* Increase progressivity of weight-based yearly tax for trucks and trailers

1.2 Main objectives of the measure

* More environmentally friendly cars
* Make heavy vehicles pay more of their damage to roads

1.3 Area of implementation
Whole

2 Authorities involved in the implementation procedure of the measure

Decision making Stortinget
Financing Stortinger

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
Not implemented

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure
* Total level of car taxes
* Competitiveness of Norwegian freight industry

4.3 Other remarks concerning acceptance of the measure
Taxes on the freight industry must be in line with other countries.

CITY Oslo **MEASURE NUMBER (See Form 1):** 27

1 Description of the measure

1.1 Description of the measure or the combination of measures
Starting from 1996, the tax on new cars is levied on weight, engine effect and cylindre volum. The tax level is slightly reduced for most cars and increased for minibuses etc.

1.2 Main objectives of the measure
* Stop tax induced buying of minibuses etc for private travel purposes
* Environmental considerations (high energy consumption = high tax)
* Traffic safety (no tax on safety-increasing equipment, etc).

1.3 Area of implementa Whole

2 Authorities involved in the implementation procedure of the measure

Decision making Stortinget

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
Too early to say

4 Acceptability

4.2 Public attitudes; attitudes of person groups that have expressed an opinion about the measure

Description of the group	Attitude	Reasons for the attitude
Right wing and centre parties	2	Concerns for big families
Right wing and centre parties	2	Car's taxes too high
Car sellers	4	Sales boom for the cars that have become cheaper

4.3 Other remarks concerning acceptance of the measure
The proposals of the ministry was somewhat changed by Stortinget in the direction of cheaper family cars (middle size).

CITY Oslo **MEASURE NUMBER (See Form 1):** 28

1 Description of the measure

1.1 Description of the measure or the combination of measures
Fuel taxes are differentiated according to lead-content of the fuel, and sulphure content of diesel. The level of the fuel tax is an strument in environmental policy.
A CO_2-tax is included in the fuel taxes.B21

1.2 Main objectives of the measure
* Reduce emmisions
* Raise revnue

1.3 Area of implementa Whole

2 Authorities involved in the implementation procedure of the measure
Decision making Stortinget

3 Effectiveness
3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)
__ 1 **Yes, exactly** _x_ 2 **Almost** __ 3 **Not at all**

4 Acceptability
4.1 Key characteristics affecting acceptability of the measure
Total level of car taxes

4.2 Public attitudes; attitudes of person groups that have expressed an opinion about the measure

Description of the group	Attitude	Reasons for the attitude
Right wing parties	2	Car taxes too high

4.3 Other remarks concerning acceptance of the measure
The possibility of buying gas in Sweden reduces the freedom of using this instrument.

CITY Oslo **MEASURE NUMBER (See Form 1):** 29

1 Description of the measure
1.1 Description of the measure or the combination of measures
a) Private cars with at least 3 passengers can use the lanes otherwise reservered for public transport
b) Private cars can use such lanes if they shall turn right at the next junction

1.2 Main objectives of the measure
a) Reduce number of private car trips
b) Reduce congestion of lanes for private cars

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
Not implemented

4.2 Public attitudes; attitudes of person groups that have expressed an opinion about the measure

Description of the group	Attitude	Reasons for the attitude
road authorities	4	

4.3 Other remarks concerning acceptance of the measure
These measures have not been proposed by government, but are from time to time proposed by road authorities.

CITY Oslo **MEASURE NUMBER (See Form 1):** 30

1 Description of the measure
1.1 Description of the measure or the combination of measures
A network of high quality cycle roads

1.2 Main objectives of the measure
More trips by cycle
Less cycle accidents

1.4 Dimensions / Extent of the measure
600 million NOK - 150 kilometres

2 Authorities involved in the implementation procedure of the measure
Financing Stortinget (mainly)

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
The network is by now only piecemal. The number of cycle accidents have risen as cycling becomes more popular

4 Acceptability
4.1 Key characteristics affecting acceptability of the measure
The uniformity of the network is crucial: the cyclists shall not be forced by the cycle network to pass dangerous and difficult points

CITY Oslo **MEASURE NUMBER (See Form 1):** 31

1 Description of the measure
1.1 Description of the measure or the combination of measures
Cycling is directed to recommended streets, with cycling lanes

1.2 Main objectives of the measure
Separate cyclists from car and walking

CITY Oslo **MEASURE NUMBER (See Form 1):** 32

1 Description of the measure
1.1 Description of the measure or the combination of measures
Cycling on sidewalks is allowed

1.2 Main objectives of the measure
Separate cars and cyclists at points where the cyclist find it too dangerous to use the street. Reduce accidents with cycling children.

3 Effectiveness
3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)
__ 1 **Yes, exactly** __ 2 **Almost** _X_ 3 **Not at all**

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
conflict between pedestrians and cyclists that use too high speed on sidewalks

4 Acceptability
4.1 Key characteristics affecting acceptability of the measure
The extent to which cyclists respect traffic rules

CITY Oslo **MEASURE NUMBER (See Form 1):** 33

1 Description of the measure
1.1 Description of the measure or the combination of measures
A part of the street is reserved for cycling either by a ponted line or by more elaborate measures

1.2 Main objectives of the measure
Separate cycling from car and traffic. Increase cycling trips.

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
Parking in the cycle lane may force cyclists to depart from it.
Junctions poses dangers to cyclists.
The quality of the cycle lane is crucial.

CITY Oslo **MEASURE NUMBER (See Form 1):** 34

1 Description of the measure

1.1 Description of the measure or the combination of measures
Cycle parking facilities at public transport terminals and elsewhere.

1.2 Main objectives of the measure
Increase use of cycling

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure
Safety from theft etc.

CITY Oslo **MEASURE NUMBER (See Form 1):** 35

1 Description of the measure

1.1 Description of the measure or the combination of measures
In the period 1990-93, maintenance of local roads and streets was halved.
An increase is needed for repavement, snow clearing etc.

1.2 Main objectives of the measure
* Reduce costs for car users
* Reduce accidents
* Reduce emission of particles+B26

1.3 Area of implementa Oslo

CITY Oslo **MEASURE NUMBER (See Form 1):** 36

1 Description of the measure

1.1 Description of the measure or the combination of measures
Car-base big shopping centres have been established at points well outside the city centre. "Regulatory" action is taken to stop this development.

1.2 Main objectives of the measure
* Reduce the use of car for shopping purposed
* Keep the city centre as a shopping area, retain shopping opportunities at small local centres.

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)
__ 1 **Yes, exactly** _X_ 2 **Almost** __ 3 **Not at all**

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
Big regional shopping centres are still established. The city centre's share of shopping is diminishing.

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure
Parking facilities at other locations

4.2 Public attitudes; attitudes of person groups that have expressed an opinion about the measure

Description of the group	Attitude (scale:1-5; 1= strictly against, 5=extremely supportive)	Reasons for the attitude
Environmentalists	5	Against car use
Local shopping centres	4	Heavy investments to stay competitive

CITY Oslo **MEASURE NUMBER (See Form 1):** 37

1 Description of the measure

1.1 Description of the measure or the combination of measures

A land use policy to attract housing and business development to specially appointed regional centres is adopted

1.2 Main objectives of the measure

Make efficient use of existing infrastructure, avoid major new infrastructure investments

2 Authorities involved in the implementation procedure of the measure

Decision making City council

CITY Oslo **MEASURE NUMBER (See Form 1):** 38

1 Description of the measure

1.1 Description of the measure or the combination of measures

Major new housing areas is preferably located near existing public transport infrastructure

1.2 Main objectives of the measure

Increase public mode's share of trips
Economize on infrastructure investment

CITY Oslo **MEASURE NUMBER (See Form 1):** 39

1 Description of the measure

1.1 Description of the measure or the combination of measures

Land development plans are only permitted if the necessary transport infrastructure is in place before the new buildings are finished

1.2 Main objectives of the measure

* Avoid congestion and environmental problems along existing infrastructure
* Planning for increase in public mode shares

CITY Oslo **MEASURE NUMBER (See Form 1):** 40

1 Description of the measure

1.1 Description of the measure or the combination of measures

A major plan, starting in 1980, to renew the oldest and degraded parts of the city centre, provide better flats and better outdoor environment for innercity inhabitants.

1.2 Main objectives of the measure

* Improve living conditions in the inner city
* Attract "good taxpayers" to Oslo (from Akershus)

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)
__ 1 **Yes, exactly** _X_ 2 **Almost** __ 3 **Not at all**

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
Most of the plan is implemented. However, the plan came to a stop with the financial crisis of the implementing bodies. Also, the new flats have in many instances become to expensive.

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure
The level of rents after the improvement.
The degree of paricipation of inhabitants.
Quality of the work.

5 Reasons for rejection of the measure

(If the measure has been rejected)
A deep recession in the property market in Oslo brought down the implementing bodies and left the "renewed" inhabitants in a debt crisis.

6 Other issues concerning the measure

A revised plan is about to be launched: in it, the government direct involvement is reduced, and guarantees the inhabitants on the future level of rent are provided.

CITY Oslo **MEASURE NUMBER (See Form 1):** 41

1 Description of the measure

1.1 Description of the measure or the combination of measures
Housing density in the outer parts of the inner city is increased.

1.2 Main objectives of the measure
Provide for increase in population without extending ghe "building zone" into the green belt, and with a minimum of new infrastructure.

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
Not yet implemented

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure
How the new houses will fit into existing environment

4.2 Public attitudes; attitudes of person groups that have expressed an opinion about the measure

Description of the group	Attitude (scale:1-5; 1= strictly against, 5=extremely supportive)	Reasons for the attitude
Right wing party	5	Keep existing local environment

4.3 Other remarks concerning acceptance of the measure
The measures will be voluntary, not forced

CITY Oslo **MEASURE NUMBER (See Form 1):** 42

1 Description of the measure

1.1 Description of the measure or the combination of measures
Any new business establishment had to get a permit to locate in Oslo

1.2 Main objectives of the measure
To counter the tendency of centralization

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

__ 1 **Yes, exactly** __ 2 **Almost** _X_ 3 **Not at all**

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)

Centralization continued up to about 1980, thereafter, the problem became the reverse, namely loss of workplaces in Oslo.

5 Reasons for rejection of the measure

(If the measure has been rejected)

* Increse in bureaucrazy
* Strong tendency for industry to move away from Oslo increased opposition to the measure

CITY Oslo **MEASURE NUMBER (See Form 1):** 43

1 Description of the measure

1.1 Description of the measure or the combination of measures

As Oslo has more workplaces than workers, and Akershus more workes than workplaces, regional planning tried to get a better balance by increased house-building in Oslo and business in Akershus

1.2 Main objectives of the measure

* Less commuting
* Increased number of "good taxpayers" in Oslo

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

__ 1 **Yes, exactly** __ 2 **Almost** _X_ 3 **Not at all**

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)

Theregional imbalance remains

4.3 Other remarks concerning acceptance of the measure

A regional plan was difficult to implement because of conflicting interests between the two counties, and because each local government in Akeshus was free to establish new housing areas.

5 Reasons for rejection of the measure

(If the measure has been rejected)

The necessary instruments to implement the plan did not exist

CITY Oslo **MEASURE NUMBER (See Form 1):** 44

1 Description of the measure

1.1 Description of the measure or the combination of measures

Building heights in different parts of the city are strictly regulated

1.2 Main objectives of the measure

Maintain existing ae Oslo

2 Authorities involved in the implementation procedure of the measure

Decision making City counsil

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)

__ 1 **Yes, exactly** _X_ 2 **Almost** __ 3 **Not at all**

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
Blocks in inner city is of uniform height, with some notable exceptions. New houses fits into existing building style.

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure
Profitability of property development plans

4.2 Public attitudes; attitudes of person groups that have expressed an opinion about the measure

Description of the group	Attitude	Reasons for the attitude
Extreme right wing party	1	Freedom of property and business
Architects etc.	5	Aesthetic qualities

4.3 Other remarks concerning acceptance of the measure
The issue of the extension of a "low" city has not been raised

CITY Oslo **MEASURE NUMBER (See Form 1):** 45

1 Description of the measure

1.1 Description of the measure or the combination of measures
The borders between the green belt and the building zone are frozen for the foreseeable future

1.2 Main objectives of the measure
To retain the green b Whole

2 Authorities involved in the implementation procedure of the measure

Decision making City counsil

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)
_X_ 1 **Yes, exactly** __ 2 **Almost** __ 3 **Not at all**

4.2 Public attitudes; attitudes of person groups that have expressed an opinion about the measure

Description of the group	Attitude (scale:1-5; 1= strictly against, 5=extremely supportive)	Reasons for the attitude
Nearly all	5	

4.3 Other remarks concerning acceptance of the measure
The measure must be taken as a given constraint on land use in Oslo

CITY Oslo **MEASURE NUMBER (See Form 1):** 46

1 Description of the measure

1.1 Description of the measure or the combination of measures
In most of the city, motorized traffic is directed to certain streets by closing others, a system of one-way streets etc.

1.2 Main objectives of the measure
Separate living areas and traffic as much as possible

2 Authorities involved in the implementation procedure of the measure

Decision making City counsil

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)
__ 1 Yes, exactly _X_ 2 Almost __ 3 Not at all

CITY Oslo **MEASURE NUMBER (See Form 1):** 47

1 Description of the measure

1.1 Description of the measure or the combination of measures
A speed of 30 km/h generally is imposed in living areas through "sleeping policemen" etc.

1.2 Main objectives of the measure
Traffic safety
Avoid through-traffic in living areas

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)
_X_ 1 **Yes, exactly** __ 2 **Almost** __ 3 **Not at all**

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
10 years ago, there was much resistance to this measure from car drivers, especially bus drivers.
This has vanished. Streets with buses uses narrowing instead of sleeping policemen.

4.2 Public attitudes; attitudes of person groups that have expressed an opinion about the measure

Description of the group	Attitude	Reasons for the attitude
Nearly all	5	

CITY Oslo **MEASURE NUMBER (See Form 1):** 48

1 Description of the measure

1.1 Description of the measure or the combination of measures
Some streets in the city centre is for walking only

1.2 Main objectives of the measure
Better conditions for pedestrains

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)
_X_ 1 **Yes, exactly** __ 2 **Almost** __ 3 **Not at all**

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure
Possibility of servicing shop by trucks etc. early in the morning.

CITY Oslo **MEASURE NUMBER (See Form 1):** 49

1 Description of the measure

1.1 Description of the measure or the combination of measures
Buses and tram routes often use the same streets.
Private cars can not use these streets.

1.2 Main objectives of the measure
Avoid delays for public transport

CITY Oslo MEASURE NUMBER (See Form 1): 50

1 Description of the measure

1.1 Description of the measure or the combination of measures
A network for heavy vehicles, the use of which is not compulsory, but recommended.

1.2 Main objectives of the measure
Reduce noise etc. in other streets.

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)
__ 1Yes, exactly __ 2 Almost X 3 Not at all

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
Heavy vehicles have never used this recommended network.

CITY Oslo MEASURE NUMBER (See Form 1): 51

1 Description of the measure

1.1 Description of the measure or the combination of measures
A network for heavy vehicles, the use of which is compulsory

1.2 Main objectives of the measure
Reduce noise etc. in other streets

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
Not implemented (under consideration)

CITY Oslo MEASURE NUMBER (See Form 1): 52

1 Description of the measure

1.1 Description of the measure or the combination of measures
Traffic signals are set to produce a "green wave" in heavily used corridors.

1.2 Main objectives of the measure
Reduce travel times by car

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)
__ 1Yes, exactly X 2 Almost __ 3 Not at all

CITY Oslo MEASURE NUMBER (See Form 1): 53

1 Description of the measure

1.1 Description of the measure or the combination of measures
A terminal where trucks and trailers can park, and with all necessary facilities for drivers

1.2 Main objectives of the measure
Avoid parking of trailers velsewhere.
Help reduce noise and other problems with trailers in other parts of the city.

CITY Oslo **MEASURE NUMBER (See Form 1):** 54

1 Description of the measure

1.1 Description of the measure or the combination of measures

The number of parking places for inhabitants in new housing is regulated

1.2 Main objectives of the measure

Avoid street parking

2 Authorities involved in the implementation procedure of the measure

Decision making City counsil

CITY Oslo **MEASURE NUMBER (See Form 1):** 55

1 Description of the measure

1.1 Description of the measure or the combination of measures

Public and private parking houses. A parking fee is collected.

1.2 Main objectives of the measure

Avoid street parking

CITY Oslo **MEASURE NUMBER (See Form 1):** 56

1 Description of the measure

1.1 Description of the measure or the combination of measures

The number of public parking places in the streets is subject to political decisions

1.2 Main objectives of the measure

Reduce travel by car to some areas of the city

CITY Oslo **MEASURE NUMBER (See Form 1):** 57

1 Description of the measure

1.1 Description of the measure or the combination of measures

Parking fee levels are increased

1.2 Main objectives of the measure

Avoid travel by car to areas of the city well served by public transport

CITY Oslo **MEASURE NUMBER (See Form 1):** 58

1 Description of the measure

1.1 Description of the measure or the combination of measures

Parking fees are differentiated by time of day and weekday - usually, parking in weekends and at night are free.

CITY Oslo **MEASURE NUMBER (See Form 1):** 59

1 Description of the measure

1.1 Description of the measure or the combination of measures

New locations for the harbour is proposed. One proposal is to concentrate harbour activities to the eastern part of the harbour, another to move it to Fornebu or elsewhere.

1.2 Main objectives of the measure
Urban development of the harbour areas.
Better environment for existing neighbours

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
No decision is made yet.

CITY Oslo **MEASURE NUMBER (See Form 1):** 60

1 Description of the measure

1.1 Description of the measure or the combination of measures
Parts of the harbour can be used for urban development

CITY Oslo **MEASURE NUMBER (See Form 1):** 61

1 Description of the measure

1.1 Description of the measure or the combination of measures
A new container harbour at Filipstad, with areas for storage and with 2 cranes.
A new quai has to be constructed

1.2 Main objectives of the measure
More efficient harbour.
More freight by sea.

3.2 Results / Reasons / Comments (Is the answer to Q 3.1 based on monitoring or opinions?)
Stopped

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure
Aestetic characteristics
Environment: On one hand, shifting of freight transport from land to sea, on the other, urban environment.

4.2 Public attitudes; attitudes of person groups that have expressed an opinion about the measure

Description of the group	Attitude	Reasons for the attitude
Neighbours	1	Noise etc.
Environmentalists	1-5	Strongly divided

CITY Oslo **MEASURE NUMBER (See Form 1):** 62

1 Description of the measure

1.1 Description of the measure or the combination of measures
Banning of studded tyres in the Oslo region

1.2 Main objectives of the measure
Lower emission of particulates
Reduce maintenance costs of roads

4 Acceptability

4.1 Key characteristics affecting acceptability of the measure
Characteristics of alternative winter tyres

CITY Oslo **MEASURE NUMBER (See Form 1):** 63-64

1 Description of the measure

1.1 Description of the measure or the combination of measures

Increased use of renewable fuels and fuels with better environmental qualities than gasoline.
Use of propane for buses; electric cars for postal services and other public services.

1.2 Main objectives of the measure

Save fossile fuels.

CITY Oslo **MEASURE NUMBER (See Form 1):** 65

1 Description of the measure

1.1 Description of the measure or the combination of measures

noise protection of heavily exposed neighbourhoods, including walls, better facades and windows etc.

1.2 Main objectives of the measure

Reduce indoor and outdoor noise levels

CITY Oslo **MEASURE NUMBER (See Form 1):** 66

1 Description of the measure

1.1 Description of the measure or the combination of measures

Indrease the use of freight consolidation

1.2 Main objectives of the measure

Reduce heavy vehicle traffic in the city

CITY Oslo **MEASURE NUMBER (See Form 1):** 67

1 Description of the measure

1.1 Description of the measure or the combination of measures

Environmental zones

TROMSØ

CITY Tromsø **MEASURE NUMBER (See Form 1)** 1

1 Description of the measure

1.1 Description of the measure or the combination of measures
Local 0.65 NOK/litre taxation of petrol,

1.2 Main objectives of the measure
Financing of new road investments over a period of years

1.3 Area of implementation
Name(s) The city of Tromsø
Population 55 000

1.4 Dimensions / Extent of the measure
0.65 NOK/litre of petrol

CITY Tromsø **MEASURE NUMBER (See Form 1)** 2

1 Description of the measure

1.1 Description of the measure or the combination of measures
Constructing a new 4 lane tunnel crossing the "Tromsø-strait" from the mainland
to the Tromsø Island

1.2 Main objectives of the measure
Increase the capasity from the previously 2-lane bridge

1.3 Area of implementation
Name(s) Tromsø
Population 55000

1.4 Dimensions / Extent of the measure
300 mill NOK

2 Authorities involved in the implementation procedure of the measure

Decision making National road administartion,, the city of Tromsø, "Stortinget"
Financing Local Pertrol tax + state budget
Implementation, upkeeping Natinal road administration

3 Effectiveness

3.1 Has the measure worked as expected? (Compared with the objectives in Q 1.2)
__ 1 **Yes, exactly** X 2 **Almost** __ 3 **Not at all**

CITY Tromsø **MEASURE NUMBER (See Form 1)** 3

1 Description of the measure

1.1 Description of the measure or the combination of measures
Road tunnell crossing the Tromsø Island, privately financed and regulated
Financed by toll,

1.3 Area of implementation
Name(s) The Tromsø Island
Type centre suburb, industrial

CITY Tromsø **MEASURE NUMBER (See Form 1)** 4

1 Description of the measure

1.1 Description of the measure or the combination of measures
Underground parking facilities

1.3 Area of implementation
Name(s) Tromsø city centre

1.4 Dimensions / Extent of the measure
800 Parking places, underground

2 Authorities involved in the implementation procedure of the measure

Decision making Private entrepeneur
Financing Private
Implementation, upkeeping Private entrepeneur

CITY Tromsø **MEASURE NUMBER (See Form 1)** 5

1 Description of the measure

1.1 Description of the measure or the combination of measures
Extension of the tunnell system in Tromsø centre
("Sentrumstangenten")

1.2 Main objectives of the measure
Draining traffic from city centre - Redused congestion

CITY Tromsø **MEASURE NUMBER (See Form 1)** 7

1 Description of the measure

1.1 Description of the measure or the combination of measures
High petrol tax

1.2 Main objectives of the measure
Reduced use of fuel - reduced emission of Co2

CITY Tromsø **MEASURE NUMBER (See Form 1)** 8

1 Description of the measure

1.1 Description of the measure or the combination of measures
Reduced public transport fares

1.2 Main objectives of the measure
Increased patronage on buses

CITY Tromsø **MEASURE NUMBER (See Form 1)** 9

1 Description of the measure

1.1 Description of the measure or the combination of measures
Increased public transport supply

1.2 Main objectives of the measure
Reduction in the needs for private cars, increased accesibilty for people without a car

CITY Tromsø **MEASURE NUMBER (See Form 1)** 10

1 Description of the measure

1.1 Description of the measure or the combination of measures
Parking, restrictions/pricing

1.2 Main objectives of the measure
Reduced use of private car, redused energy consumption and emissions from traffic
Reduced use of land to parking

1.3 Area of implementation
Name(s) Tromsø, new industrial areas, hospital, university, new shopping centres

1.4 Dimensions / Extent of the measure
City centre
New developed areas for emplyment county hospital, University, New shopping centres

CITY Tromsø **MEASURE NUMBER (See Form 1)** 11

1 Description of the measure

1.1 Description of the measure or the combination of measures
Pedestrian areas

1.2 Main objectives of the measure
Icreased accessibilty for pedestrians in the city centre

1.3 Area of implementation
Population 1200
Type centre

2 Authorities involved in the implementation procedure of the measure

Decision making Local
Financing Local
Implementation, upkeeping Local

CITY Tromsø **MEASURE NUMBER (See Form 1)** 12

1 Description of the measure

1.1 Description of the measure or the combination of measures
Medium density land - use

1.2 Main objectives of the measure
Achieve redused need for transportation (see 6) and at the samt time
save green areas for recreation etc

CITY Tromsø **MEASURE NUMBER (See Form 1)** 13

1 Description of the measure

1.1 Description of the measure or the combination of measures
Trafiic calming
Physical reduction in traffic capasity in residental areas

1.2 Main objectives of the measure
Drain traffic to better/new roads, traffic safety, local environment

2 Authorities involved in the implementation procedure of the measure

Implementation, upkeeping L

CITY Tromsø **MEASURE NUMBER (See Form 1)** 14

1 Description of the measure

1.1 Description of the measure or the combination of measures

Road tolls

1.2 Main objectives of the measure

Reduction of traffic volumes , possible to implement in rush hour as alternative to heavy investment in increased road capacity

1.3 Area of implementation

Type centre, bridges

CITY Tromsø **MEASURE NUMBER (See Form 1)** 15

1 Description of the measure

1.1 Description of the measure or the combination of measures

Low density land use

APPENDIX 3

DESCRIPTION OF HOW THE MEASURES ARE MODELLED FOR EACH CITY

CITY: *Edinburgh, Merseyside*	DESCRIPTION OF HOW THE MEASURE IS MODELLED AND ASSUMPTIONS
A Infrastructure measures	
1 New road construction	increase in area (zone) road capacity
2 Parking supply, off-street	changes in the number of parking places
3 Rail services	area rail capacity changes; frequency changes
4 Light rail	new (separate) mode
5 Bus (tram) lanes	area bus capacity changes
7 Park and ride	increased parking supply and public transport capacity
9 Traffic calming, e.g. speed humps, wide pavement	reduction in area road capacity
10 Cycle routes, lanes, paths	decreased travel costs for cyclists
11 Pedestrian areas, pedestrianisation	reduction in area road capacity
B Management measures	
3 Traffic calming in residental areas	reduction in area road capacity
4 Traffic calming on radials	reduction in area road capacity
6 Regulatory restrictions on car use	reduction in area road capacity
7 Reduce on-street parking	increase in area road capacity
8 Parking controls	increase in area road capacity
11 Bus (tram) priorities	increased bus "free flow" speed
12 Bus lanes	increased bus "free flow" speed
14 Modified service levels of bus and rail services	public transport frequency changes
15 Improve the reliability of bus services	
D Pricing measures	
2 Fuel taxes	changes in cost of car trips
4 Parking charges	changes in cost of car trips
6 Public transport fare levels	changes in cost of public transport trips
8 Road pricing	changes in cost of car trips
E Land use measures	
2 Densities of population and employment	OD matrix changes
3 Development within transport corridors	OD matrix changes
4 Development mix	OD matrix changes

CITY: *Vienna, Eisenstadt*	DESCRIPTION OF HOW THE MEASURE IS MODELLED AND ASSUMPTIONS
A Infrastructure measures	
1 New road construction	new (additional) road network; time, distance, and capacity changes
2 Parking supply, off-street	changes in the number of parking places; travel time (parking search time) changes; cost changes
3 Rail services	new (additional) network; new stops (and hence reduce acess/egress time)
4 Light rail	--- not included in the tests ---
5 Bus (tram) lanes	separated network; travel time changes
7 Park and ride	changes in the number of parking places; change in the modal split
9 Traffic calming, e.g. speed humps, wide pavement	speed changes for all modes
10 Cycle routes, lanes, paths	speed changes for all modes (less sensitive)
11 Pedestrian areas, pedestrianisation	speed changes for all modes; distance change for pedestrian
B Management measures	
3 Traffic calming in residental areas	speed changes for cars
4 Traffic calming on radials	speed changes for cars
6 Regulatory restrictions on car use	changes in the modal split (though mode "attractivity" changes)
7 Reduce on-street parking	changes in the number of parking places; travel time (parking search time) changes
8 Parking controls	changes in the modal split (though mode "attractivity" changes); cost changes
11 Bus (tram) priorities	changes in the modal split (though mode "attractivity", e.g. travel time changes)
12 Bus lanes	changes in the modal split (though mode "attractivity", e.g. travel time changes); capacity reduction on car traffic
14 Modified service levels of bus and rail services	waiting time changes (i.e. reduction); scheduling
15 Improve the reliability of bus services	waiting time changes (i.e. reduction); scheduling
D Pricing measures	
2 Fuel taxes	changes in the utility function and/or with assumptions
4 Parking charges	changes in the utility function and/or with assumptions
6 Public transport fare levels	changes in the utility function and/or with assumptions
8 Road pricing	changes in the utility function and/or with assumptions
E Land use measures	
2 Densities of population and employment	OD matrix changes
3 Development within transport corridors	OD matrix changes
4 Development mix	OD matrix changes

CITY: *Helsinki*	DESCRIPTION OF HOW THE MEASURE IS MODELLED AND ASSUMPTIONS
A Infrastructure measures	
1 New road construction	change in road network; affects modal split, destination and route choice
2 Parking supply, off-street	change in number of parking places; affects modal split
3 Rail services	change in rail network
4 Light rail	change in rail network
5 Bus (tram) lanes	reduction in car lanes & change in bus (tram) speed
7 Park and ride	new access/egress mode for rail for car-users
9 Traffic calming, e.g. speed humps, wide pavements	change in VD-function (Volume-Delay); affects modal split, destination and route choice
10 Cycle routes, lanes, paths	change in cycle network; affects modal split, destination and route choice
11 Pedestrian areas, pedestrianisation	change in walking distance and time & change in road network
B Management measures	
3 Traffic calming in residental areas	change in VD-function
4 Traffic calming on radials	change in VD-function, reduction in car lanes
6 Regulatory restrictions on car use	explicit changes in OD-matrices during time period concerned
7 Reduce on-street parking	no
8 Parking controls	
11 Bus (tram) priorities	penalty for car in crossings & change in bus (tram) speed
12 Bus lanes	reduction in car lanes & change in bus (tram) speed
14 Modified service levels of bus and rail services	PT frequency changes for individual lines
15 Improve the reliability of bus services	reduction in waiting times
D Pricing measures	
2 Fuel taxes	change in cost of car trips
4 Parking charges	change in cost of car trips
6 Public transport fare levels	change in cost of PT trips
8 Road pricing	change in cost of car trips
E Land use measures	
2 Densities of population and employment	affects OD-matrices
3 Development within transport corridors	
4 Development mix	

CITY: *Torino, Salerno*	DESCRIPTION OF HOW THE MEASURE IS MODELLED AND ASSUMPTIONS
A Infrastructure measures	
1 New road construction	Supply data in private and public assignment models and O/D matrices in split model
2 Parking supply, off-street	
3 Rail services	Supply data in public assignment model and O/D matrices in split model
4 Light rail	Supply data in public assignment model and O/D matrices in split model
5 Bus (tram) lanes	Supply data in public assignment model and O/D matrices in split model
7 Park and ride	Supply data in private assignment model and O/D matrices in split model
9 Traffic calming, e.g. speed humps, wide pavements	
10 Cycle routes, lanes, paths	
11 Pedestrian areas, pedestrianisation	Supply data in private and public assignment models and O/D matrices in split model
B Management measures	
3 Traffic calming in residental areas	
4 Traffic calming on radials	
6 Regulatory restrictions on car use	
7 Reduce on-street parking	
8 Parking controls	
11 Bus (tram) priorities	
12 Bus lanes	Supply data in public assignment model and O/D matrices in split model
14 Modified service levels of bus and rail services	
15 Improve the reliability of bus services	
D Pricing measures	
2 Fuel taxes	
4 Parking charges	Costs data in split model
6 Public transport fare levels	Costs data in split model
8 Road pricing	
E Land use measures	
2 Densities of population and employment	O/D matrices in private and public assignment models and in split model
3 Development within transport corridors	
4 Development mix	

CITY: *Oslo*	DESCRIPTION OF HOW THE MEASURE IS MODELLED AND ASSUMPTIONS
A Infrastructure measures	
1 New road construction	Official national road plans modelled as new links and increase in road capasity
2 Parking supply, off-street	No changes in parking access, only in charging
3 Rail services	A3,4,5 and B11,12, 13 are formed into a PT investment package. Increased PT speed and access
4 Light rail	
5 Bus (tram) lanes	Changes in access to PT, walk time, waiting time, number off boardings and in vehicle time
7 Park and ride	
9 Traffic calming, e.g. speed humps, wide pavements	Reduced max speed and capacity/speed ratio in the vd functions
10 Cycle routes, lanes, paths	
11 Pedestrian areas, pedestrianisation	Removed car links from the area
B Management measures	
3 Traffic calming in residental areas	A9 and B3 are modelled together, mainly as slower car speed.
4 Traffic calming on radials	
6 Regulatory restrictions on car use	Reduction in area road capasity
7 Reduce on-street parking	B7 and 8 are modelled together,
8 Parking controls	Increased parking "penalty" for car trips ending in the actual zone
11 Bus (tram) priorities	Increased peak hour route speed
12 Bus lanes	Increased peak hour route speed
14 Modified service levels of bus and rail services	Increased bus line frequencies and decreased walk distance
15 Improve the reliability of bus services	Decreased waiting time
D Pricing measures	
2 Fuel taxes	Input to the mode choice step of the model
4 Parking charges	As B7
6 Public transport fare levels	As B2
8 Road pricing	Changes in cost of car trips heading into the city
E Land use measures	
2 Densities of population and employment	A land use scenario consisting of a dense city affects OD-matrices
3 Development within transport corridors	The new airport give increased number of inhabitants at Fornebu and workplaces at Gardemoen
4 Development mix	