

Statement for COST 342

Parking policy contributes to solving urban traffic problems

Despite the introduction of management measures, car use is generally expected to increase during the next few decades, especially with regard to the demand for access to the inner city areas generated by consumers and visitors. The current trend related to urban mobility strategies is directed at limiting car access to city centres. To achieve this goal it is necessary to increase public transport capacity greatly and, at the same time offer a higher quality service. Overall accessibility to city centres by all modes must be increased for economic prosperity and policies must recognise the need for an overall balance between all the modes.

If the intended goals of modal split are not achieved, the inevitable result will be that a growing number of cars will put cities under increasing pressure. Without integrated transport system management and adequate technical facilities to regulate traffic and parking, our city centres will suffocate. This will damage the city's overall environment and the economic viability of the city centre.

The solution to this complex issue - i.e. how to ensure that cities have the necessary degree of accessibility, in both quality and quantity, while maintaining an acceptable urban environment - lies in sustainable transport policies that include the introduction of an integrated parking policy together with a well-equipped and efficient public transport system. Parking policies are integral to this as they can have a direct effect on traffic movement and the degree of penetration by traffic into inner city areas.

Traffic measures such as giving priority to public transport and closing off sections of the city centre for non-authorized vehicles will only be successful if accompanied by adequate parking facilities in suitable locations, ideally adjacent to the pedestrian or limited access zones; if service vehicles for shops and businesses are allowed the necessary access for operational purposes; and if the alternative forms of access are sufficient in both quality and quantity.

Parking policies, like all other transport policies provide a compromise between freedom of movement, accessibility and quality of life. Parking is not an end in itself, however, and is always derived from some other need. Therefore parking should be an integral part of any city's policy on mobility and accessibility.

Integrated Mobility Policy based on Sustainable Mobility

Sustainable Mobility is the degree of balance which assures a sufficient level of service, in both quality and quantity, which, all other things being equal, can be continued into the indefinite future, and which is made up of the following different major elements all of which are interdependent:

- Parking
- Public Transport
- Road Infrastructure
- Land use changes

Parking

Parking and Parking management is an essential component and asset of urban mobility. It is a service that is a necessary complement to public transport and not a substitute.

The balance between parking availability, traffic flow and quality of life, however, varies between city and city as each has conditions of its own which influence the choice for the most appropriate

Within this, parking is a "service product" that must address the needs of different types of motorists including the following:

- Fun shoppers and run shoppers
- Visitors/Tourists
- Residents
- Commuters
- Deliveries
- Disabled parking
- Taxis

- Special permits e.g. medical assistance, craftsmen
- Hospital-, School- and University- Parking
- Airport-Parking
- Event-Parking
- Park and Ride
- Hotels and more.

The parking solutions to meet these needs are just as varied:

- On-street parking
- Off-street parking
- Multi-storey car parks
- Underground car parks

Common to these varied aspects is an integrated concept for general traffic management and infrastructure, which is based on a balance between quantity, quality and convenience.

EPA is not expert in the field of public transport but we consider public transport as an important component that contributes to an integrated solution for mobility in the city. Public transport is not, however, a stand alone solution. It is one of the alternatives that contributes to the creation of sustainable mobility.

As part of their overall management of mobility, city managers must decide on their policies towards the city centre and how to achieve them. This in turn depends on the historical development of the urban fabric and its road system, which is frequently in conflict with the needs of a modern world. Optimal utilisation of existing roads can make it necessary to replace on-street with off-street parking, to limit access to pedestrians and cyclists or to allow motor vehicles access.

Means to improve Parking and Traffic

At least 90% of a car's life is spent parked, in various places. Effective parking management, then, can reduce inner city congestion and consequently air and other environmental pollution.

Traffic searching for on-street parking places is a frequent cause on unnecessary inner city traffic and hence congestion. As long as on-street parking is unregulated, free of charge or too cheap, motorists searching for parking spaces causing "search traffic" will remain. The right level of on-street parking fee, set by the market to ensure that there are always a few spaces available (or set to achieve about 85% occupancy) will eliminate this "search traffic" without significantly affecting the number of cars parked.

The elimination of free or unregulated on-street parking and the substitution of paid on-street parking by off-street parking reduces search traffic and gives the opportunity to give road space back to pedestrians or non-motorised traffic and progressively justify public transport increase.

Considerations for on-street parking generally can be:

- Dedicate on-street parking only to „run-shoppers“ or short stay clients for limited periods, for example max. 30 min.
- Make on-street parking more expensive than off-street parking
- Encourage residents to park off-street
- Locate disabled parking facilities on-street
- Make illegal parking physically impossible (where this can be achieved)
- Strictly enforce on-street parking regulations

Parking Management

The provision of parking spaces alone does not suffice. They also need to be professionally managed otherwise controlled parking will not contribute to overall urban mobility. Parking management is a combination of different components. Each of them is necessary to achieve good parking quality and to improve inner city traffic.

The need for high quality of multi-storey car parks, underground car parks and other parking lots is taken as read. Poor quality parking facilities can never be sufficiently attractive to motorists however cheap or well located they may be. This quality is,

therefore, essential to the quality of a city. Instead, we have emphasised the policy aspects of parking space management and parking price policy. This includes, in particular:

- Pricing for on-street parking
- Pricing for off-street parking
- Fines for illegal parking
- Enforcement
- Marketing
- Communication

In view of the limited number of parking spaces in cities, parking space on public roads has to be managed. The demand for parking space is determined primarily by the character of the motorists' destinations: urban shopping centres, business and administrative areas, leisure activity centres, services, transport interchanges etc. Parking charges can influence the users' choice of the transport mode and the duration of the stay. However, they are dependent on the quality of the destination area and the relationship between the parking supply and demand. Wherever policies of reducing parking charges, with the aim of increasing retail activity, have been tried, these have been unsuccessful. Indeed, in many cases such policies have had the opposite effect of increasing "search traffic" and reducing the attractiveness of the shopping area. Employees have occupied parking spaces previously used by shoppers and retail turnover has decreased.

There have been a number of studies in various countries and cities (including the German Bundesanstalt für Straßenwesen - Federal Institute for Road Systems - published in the year 2000) on this issue. The opinion of many politicians and retailers that the decrease in the number of visitors to the inner cities is the result of high (or, indeed, any) parking fees has been disproved. The analysis concludes that the effectiveness of parking fees as an instrument in controlling parking space demand is clearly limited if the price is not right and the time restrictions are not applied. A number of case studies on this point are included in the annexe to this paper.

However, only cities with a high inner-city quality and good alternative forms of accessibility can afford to restrict accessibility by car. As overall access must be maintained, without these prerequisites, good access by car and parking is essential. Those cities which have accepted this point, should have the courage to assure the provision of the necessary infrastructures to satisfy the consequent strategy.

Off-street parking facilities can be provided in the form of car parks above ground, underground car parks or parking lots. It is not important here whether these shall be used as public or dedicated spaces. The crucial point is that economic principles are observed here. The economic return from the "parking product" offered is conditioned by the "type" of the particular parking demand.

When a parking facility is not economically viable it should not necessarily automatically be ruled out, as the lack of economic viability may be the direct result of local policies, such as on parking charges. Support to the car park through public land availability, low interest loans or subsidies are options, as are increasing fees or even deciding that the car park is not needed. Evidence shows that the motorist is prepared to pay an appropriate parking fee if in turn he receives good-quality service and it is possible for him to park the car close to his desired destination. The present technical status of the development of parking equipment permits differentiated fee structures, which makes it possible to meet the large variety of demands of the customers and of the commercial activities.

Parking in off-street car parks can be environment-friendly and city-compatible in that it contributes to urban renewal programs.

An efficient traffic and parking space policy also requires consistent monitoring and enforcement of the laws and other regulations for the control of parking and moving traffic. The primary objective of this is to ensure that proper regulations, and hence, traffic management policies are complied with. It should not be the primary objective of enforcement to increase the municipal revenues.

Operational efficiency and financial considerations in controlling parking traffic can justify contracting out some or most of this activity to private parking operators.

Fines for illegal parking combined with a high chance of being caught must be set to have a high deterrent effect. They should be so high that nobody accepts the risk and leaves it to chance whether he is caught. This is not always the case. For example, in the city of Dresden in Germany, the penalty for overstaying the parking time purchased at a parking vending machine is DM 30.00, whereas the penalty for those not purchasing a ticket at all is only DM 10.00.

Parking management finally also includes informing the motorist on:

- the location of the car parks,
- the occupancy rate,

- their accessibility and connection to important visitor destinations,
- directions signs to, in and from car parks,
- the opening hours,
- the number of parking spaces available for disabled persons,
- the parking fees for short-term parkers, long-term parkers, residents, evening and nightly rates and on daily, monthly and yearly rates,
- possibilities of payment such as by cash or cashless by credit card, debit card, transponder or mobile phone and automatic debit transfer.

Suitable media for this are parking-guide systems, visitor brochures, city maps highlighting parking opportunities, newspaper articles, ads, notices in car parks, information published via radio, TV and the internet.

Today a variety of technical equipment and tools are available for efficient parking management:

- Cashless payment
- Contactless payment
- Contactless access and exit
- On-street parking payment by mobile phone
- Parking space reservation systems
- Occupancy information via Internet
- Parking guidance systems
- Multi-use of parking facilities

The European Parking Association

The approx. 3,000 member operations of the 19 associations from 18 European countries associated under the EPA manage more than 2.7 million parking spaces in more than

8,500 car parks and underground car parks and many millions of on-street spaces. Many positive and negative examples concerning parking strategy choices and professional management policies and results are available from the EPA experience. The parking industry has grown in Europe into an important economic sector, in terms of both the industry itself and also for the economic effects in each individual city and at each place where parking management is provided. The economic value of the industry is estimated today to be approx. 5 billion Euro. Thousands of jobs are linked to the parking business, in just the private and public sector parking operators. The numbers are increased significantly if there are added those in the peripheral parking industry and in the relevant service companies such as:

- the manufacturers of car park management equipment,
- building contractors,
- planning and architectural firms,
- manufacturers of ventilation and fire protection equipment ,
- manufacturers of coin and banknote testing equipment,
- cleaning companies,
- sign manufacturers, painting companies,
- floor coating companies,
- manufacturers of video- and other monitoring systems,
- printing shops
- bailiffs and debt collectors etc.

Political decisions on questions of urban transport policy always also have economic effects which have to be taken into account by those involved in transport policy making.

Résumé:

Parking does not increase the "urban traffic problem", rather it is part of the solution. Key points in maximising the impact of parking policies are:

Parking policies should be seen as an integral part of cities' overall transport strategies

Parking charges do not have a significant effect on local economic activity – motorists would prefer to have a parking space at a high cost than no parking space at all

Overall accessibility to a city centre and the quality and range of activities in the city centre are more important for economic vitality

Parking policies should encourage off-street parking in preference to on-street parking

Good enforcement of parking regulations is essential

High quality parking facilities are essential

Different cities will require different policies

Final note:

The annexe to this paper includes a number of case studies from different European cities:

- Parking in Barcelona – The Mobility Pact
- Parking in the city – Sustainable Mobility
- Parking in the city of Rome
- On street parking regulations and enforcement in London
- Free parking on Saturdays and Sundays in Oslo
- Free Parking on Saturdays in a German city
- Parking fee reduction in Herford
- Negative effects of reduced parking fees in Germany
- Results of parking fee increase in Appeldoorn in municipal car parks
- Mobility card in Saarbrücken
- Research into the effects of parking behaviour as result of changes in parking fee policy in a medium sized Dutch city
- Experiences in creating new off-street car parking facilities in the city centre

European Parking Association

February 2001

Parking in Barcelona – The Mobility Pact

by Joan Font

Although Barcelona has a nominal population of 1,500,000 inhabitants, it is part of an urban conurbation with 3,000,000 inhabitants.

In recent years the appeal of the city as a centre for business, trade fairs, conventions and tourism has increased.

This has led to substantial changes in the characteristics and requirements of the city.

The creation of various tertiary entertainment centres in different districts of the city, and the continual fast growth of the historical city centre has led to the need for a serious rethinking of traffic management.

The Council has always considered parking to be a key element in traffic management.

Given the increased complexity of mobility management in which Barcelona has become immersed in recent years, and as a way of favouring the sustainable growth of the city in its role as a commercial and service centre, it was decided that a forum should be created to develop solutions to the problem of sustainable mobility which would involve all political, social and economic sectors of the city.

This is how "The Mobility Pact" was born in Barcelona.

“The Mobility Pact” is intended as a tool to enable the local administration, different associations and civic groups to build a mobility model for the Barcelona of today and of the future, covering all the problems and points of view in the city, with a work environment in which dialogue and mutual commitment allow agreements to be reached which offer a sufficient level of satisfaction to all parties involved.

This challenge has a very interesting underlying philosophy. In spite of this it has already led to disputes between the different parties involved as the local council has at times been accused of acting without paying sufficient attention to the different interest groups.

This is a risk that is bound to arise when projects based on participation are attempted, although when the Council uses its power to take decisions without allowing interested parties to participate, it runs the same risks. The process is slower but in the long-term it is more fruitful, produces less problems and, above all, is more effective.

The first step was to agree on the basic principles of the Pact, which in the end were as follows:

The basis of the Mobility pact is the principle of sustainability. It is necessary to ensure sustainable mobility for today and also for the future. This is a form of mobility that is less hostile to the environment and to the citizen, is better planned, more efficient, saves more resources and is more respectful of the environment.

It must be a priority to ensure that Barcelona is accessible to everyone, especially to the weakest members of society: people with reduced mobility, the elderly and children. As far as this last group is concerned it is necessary to promote the creation of city paths for schoolchildren that guarantee the safety and accessibility of the very young. Barcelona must continue to advance towards its objective of being a model of integration and cohesion and must set up mechanisms to defend everybody's right to mobility.

The quality of life of all city residents must be ensured and public transport must play a key role in achieving this objective as it provides clear savings in energy, space and resources. This must be strengthened. It is also necessary to take determined action to improve the possibilities of combined-means trips by facilitating rational use of all the different types of public transport that may be necessary on a certain trip. As for pedestrians, it is necessary to continue working for the space that corresponds to them by right. We must make progress on widening pavements, creating areas where people can mix and guarantee the right to walk both of which are fundamental aspects of more comfortable mobility. In the case of private cars, a more rational use must be sought so that the average circulation speed can at least be maintained.

It is necessary to foster a change in attitudes on the part of both the administrative bodies and members of the public by setting up systems that guarantee road discipline and thereby ensure greater safety on our streets. It is necessary to comply with and to enforce basic principles of civic behaviour in relation to mobility so as to increase the level of safety of both pedestrians and drivers. Those that have signed the Pact are demanding specific traffic regulations for cities to make the principle of local authority quicker and more effective when it comes to guaranteeing that the regulations are

respected.

It is essential that in the planning stage of any urban development the new mobility requirements that may arise be taken into account. The growth of the city and the definition in terms of town planning of the new areas of interest, be they logistical, residential, cultural, tourist attractions or with a potential for development in the future, must be accompanied by studies of future projections for and management of mobility in the area and also of the public transport services that will be necessary and of the new spaces (for walking, parking, distribution of goods, etc.) that the area will require.

Above and beyond the agreed criteria in the signing of this Pact, the signatories express their wish:

That the Mobility Pact be constituted as an agreement that is open to everyone, and with the premise that it should be subscribed to by other groups, associations or bodies that are in favour of its principles and actions. At the same time the intention is not only to ensure sustainable mobility in the city of Barcelona. It would be desirable and encouraging if the Barcelona initiative were extended to cover the metropolitan area and if it were adopted by the political bodies, managers or administrators in this area and in the country as a whole.

That the Mobility Pact should not be the end of a process of reflection and consensus but rather the beginning of a shared project that results in a plan of action. To this end the intention is to create specific working parties to deal with each of the ten principles on which the pact is based. All the signatories of the Pact will be invited to participate in the working parties so that the bodies and associations that are directly interested in each case are represented.

The different plans of action will have their own objectives, schedule and, when convenient, their own general budget and finance with the participation of the different bodies. In addition, both the general progress of the pact and the advances in the different working parties will be debated and brought up to date on at least an annual basis. The Barcelona Traffic Council (Consejo de Circulación de Barcelona) would be the ideal place for this.

The Pact is the result of participation, an open attitude, dialogue, and the will of the members of the Barcelona Traffic Council to listen and make themselves heard. This Council was created in 1983 to debate and inform about the different aspects of mobility in the city.

The principles that inspired the Mobility pact and the commitment that it should be the beginning of a shared project that will have tangible effects on mobility in Barcelona are in themselves a success. This pact is not the sum of its individual parts, rather it is the fruit of the people that subscribe to it and above all it is a leap forward for the city, for the mobility that everyone wants for Barcelona.

The Plan has the following OBJECTIVES:

1. An integrated high quality public transport service.
2. Maintain route speeds and improve the speed of surface public transport.
3. Increase the area and the quality of the street space given over to pedestrians.
4. Increase the number of parking spaces and improve their quality.
5. Improve public information and education and signposting on roads and streets.
6. Establish a set of legal regulations suited to the needs of mobility in the city of Barcelona.
7. Improve road safety and respect among the users of the different means of transport.
8. Promote the use of fuels that produce less pollution and control the pollution and the noise caused by the traffic.
9. Promote the use of the bicycle as the usual means of transport
10. A quick, ordered system of distribution of goods in the city.

For the implementation of each one of these principles committees will be set up in which all the bodies that express an interest in contributing may participate. The Council will pilot all committees and works and will be responsible for carrying out all necessary technical work.

In the appendix there is a list of all the bodies that have signed the Barcelona Mobility Pact.

As may be expected, this pact does not include all the aspirations of the Barcelona Garage and Car Parks Association, (also a member of AEGA) but this association participated in the pact and accepts it, as a means of improving the previous situation and to allow it to be present in the forum in which decisions relating to mobility in the city will be taken, as these decisions have far-reaching effects on the car park and garage business sector.

The ten point plan that the Barcelona Garage and Car Parks Association proposed to the City Council was as follows:

1. Provide the city with a modern public transport service that is clean, offers a suitable frequency of service and covers all districts of the city and surrounding areas.

Expand the Underground network in particular. Extend the hours of service of public transport. Pay special attention to the elderly and the disabled.

2. Increase motorcycle patrols by clearly identifiable Local Police Officers in order to dissuade, and as a last resort impose penalties on drivers that infringe parking or traffic regulations especially on the main city routes.
3. End or reduce on-street parking and loading and unloading areas on roads with a lot of traffic and situate them instead in nearby streets with little or less traffic.
4. Increase the number of spaces for loading and unloading and set a time limit.
5. Increase substantially the fight against illegal parking, especially double parking, with a sufficient force of local police officers and tow-away trucks working in the streets.
6. Take firm action against those passing the end of authorised parking time in areas where parking is only permitted at certain times.
7. Take firm action against the parking of vehicles in entrances and exits to car parks and garages. Regulate and authorise the use of protective devices for entrances that physically prevent people from parking their vehicles there.
8. Increase traffic and parking control during weekends and public holidays by putting more local police on the streets.
9. Do not install cycle lanes on roads or pavements and remove existing ones as there is a danger of accidents. Cycle lanes must be completely separate and should be situated in isolated areas for enjoyment as a sporting or leisure activity.
10. Put a stop to the indiscriminate reduction of the streets that can be used by vehicles, and the creation of large pedestrian areas that may obstruct the traffic and destroy the traditional commercial network.

The Association proposed that various other aspects be considered by specialists and local politicians to demonstrate that private cars only produced a small fraction of the pollutant gases discharged into the atmosphere.

They insist that the private vehicle must not be systematically attacked when environmental damage caused by gas emission is discussed. A study carried out by the Barcelona Garage and Car Parks Association demonstrated that it is not the private car that produces most pollution.

EMISSIONS

NATURAL.....23%

Associations and Public Bodies participating in the Mobility Pact

Ajuntament de Barcelona (Barcelona City Council)

AGBAR-ITV, S.A. (AGBAR-Vehicle Inspection Company)

ACET Associació Catalana d'Empreses de Transports de Mercaderies (Catalan Association of Goods Transport Companies)

AGTC Associació General de Transportistes de Catalunya (General Association of Transport Companies of Catalonia)

Amics de la Bici, agrupació d'usuaris i usuàries de la bicicleta (Friends of the Bike, bicycle users group)

ANESDOR Asociación Nacional de Empresas del Sector de Dos Ruedas (National Association of Companies in the Two-Wheel Sector)

Associació de Familiars i Víctimes del Trànsit (Road Accident Victims and Relatives Association)

Associació Pla Estratègic de Barcelona (Barcelona Strategic Plan Association)

ASOLIGAS Associació Catalana de Transports de Líquids i Gasos Líquats (Catalan Association for the Transport of Liquids and Liquid Gases)

AUDICA Associació d'Empresaris de Transport Discrecional de Catalunya (Association of Directors of Private-Hire Coach Companies of Catalonia)

Barcelona Camina (Association of pedestrians)

Cambra de Comerç de Barcelona (Barcelona Chamber of Commerce)

Col·legi Oficial de Psicòlegs de Catalunya (Official Association of Psychologists of Catalonia).

Consell de Gremis de Comerç i Serveis de Barcelona (Barcelona Retail and Services Council).

FAVB Federació d'Associacions de Veïns i Veïnes de Barcelona (Federation of Residents' Associations of Barcelona)

FECAV Federació Empresarial Catalana d'Autotransport de Viatgers (Catalan Business Federation for Automobile Transport of Passengers)

Federació Provincial d'Autoescoles de Barcelona (Barcelona Driving-School Association)

Federación Transportes, Comunicación y Mar UGT (General Workers Union) Cataluña

Foment del Treball Nacional (National Employment Promotion Agency)

Fundació RACC (Royal Automobile Club of Catalonia Foundation)

Gremi de Garatges (Garages Association)

Gremi de Missatgeria de Catalunya (Association of Courier Services of Catalonia)

Gremi Provincial de Tallers de Reparació de Vehicles (Provincial Association of Vehicle-
Repair Workshops)

Gremi Provincial de Transport i Maquinària Construcció i Obres Públiques de Barcelona
(Barcelona Association of Transport and Machinery in Construction and Public Works)

Institut Català de Logística (Catalan Logistics Institute)

Institut Metropolità del Taxi (Metropolitan Taxi Institute)

Montepio de Conductors de Sant Cristòfol (Drivers Association)

Organització de Consumidors i Usuaris de Catalunya (Catalan Consumers Organisation)

P(A)T Prevenció d'Accidents de Trànsit (Road Accident Prevention)

Pacte Industrial per a la Regió Metropolitana (Industrial Pact for the Metropolitan Region)

PTP Associació per a la Promoció del Transport Públic (Association for the Promotion of
Public Transport)

Reial Moto Club de Catalunya (Catalonia Royal Motorbike Club)

STAC Sindicat del Taxi de Catalunya (Taxi Union of Catalonia)

TRANSCALIT Federació Catalana de Transports de Barcelona (Barcelona branch of the
Catalan Federation of Transport)

TRANSPRIME

UNESCA-UCEAC Unió Catalana d'Entitats Asseguradores i Reasseguradores (Catalan
Union of Insurance and Reinsurance Companies)

USCOB Unió Sindical CCOO (Comissions Obreres) del Barcelonès (Barcelona Branch of
the CCOO Trade Union).

Parking in the City – Sustainable Mobility

by Joan Font

A key factor in urban mobility systems

Nowadays different aspects of urban mobility cannot be discussed without taking the importance of parking into account as a key factor for the balance and sustainability of the whole mobility system.

It is necessary to accept the fact that:

- the private car exists in ever growing numbers as an essential and desired good both for the individual and for society as a whole because of its positive contribution, both directly and indirectly to the world economy and society.
- The increasingly necessary use of commercial vehicles for the distribution of small goods to both private individuals and shops.
- The need to permit access and parking of private cars as close as possible to historical and commercial areas in city centres, so as to avoid running the risk of them becoming deserted.

It is necessary to work towards an equilibrium: Sustainable mobility

To this end:

- Solutions to any possible traffic gridlock must not be sought by prohibiting the use of the car.
- It is necessary to work towards permanent improvements to the public transport service so that at any given time a city resident may choose the means of transport that best suits him.
- Provide high quality off-street car parking.
- Locate car parks as close to destinations as possible.
- Complement the supply of parking facilities with a good system of static and dynamic approach signposting (location and current situation), which would help to reduce unnecessary driving due to misleading information.
- Situate car parks and their entrances in places that are easily accessible from the road network, a solution which will also lead to a reduction in unnecessary driving.
- Ensure that the supply, in other words the number of spaces, equals the needs of the tertiary sector in the area.

- When necessary, use parking charges as a way of regulating demand.
- Set up pedestrian areas of a reasonable size (sustainable journeys on foot) in areas of tertiary services with an accumulation of visitors from outside the area, and provide an adequate supply of off-street car parking spaces.

It is necessary to begin to move away from attacking the private car for environmental reasons. Manufacturers ensure that cars cause less and less pollution and this will continue to improve in the future. In addition there are many other vehicles that occupy city streets everyday.

It will therefore be necessary to play skilfully and carefully with all available elements for the management of mobility in which parking is a key instrument.

So cities will have to develop their own plans on the basis of a rational distribution of the urban space provided for the mobility of people and goods and manage traffic effectively. City Councils will have to equip themselves with all the necessary human and technical resources to guarantee the highest possible levels of satisfaction.

Use of urban space provided for mobility.

Urban space is a scarce and expensive public asset and so must be distributed in a highly rational way and to the benefit of all city residents.

Fundamental principles

- Pavements and other areas set aside for walking must be reserved exclusively for the use of pedestrians and public authorities must be responsible for guaranteeing this right to the people.
- Streets and Roads must be used exclusively by vehicles in circulation (public or private transport).
- Vehicles must be parked in off-street car parks.
- Loading and Unloading should take place in designated areas on the street that do not obstruct traffic circulation.

Parking and the Road

It is important to develop the idea that the roadway is a scarce good which must provide the best possible service to traffic mobility and therefore must not be used for any other purpose, especially parking, as this requirement can be met perfectly well by off-street parking.

City Councils must therefore promote the required amount of off-street parking, in accordance with their own needs.

Off-street parking both at point of origin (residential) and at point of destination is a definite reducer of traffic. At the point of origin it can reduce the need to move the vehicle. At the destination point, when there is no on-street parking alternative, it may be either a dissuasive factor (price), or a traffic facilitator (the driver has no other choice and goes straight to the car park. In this way unnecessary driving, and therefore traffic, in search of an on-street parking space is avoided).

On-street parking should only exist in extreme circumstances, in areas with a lack of off-street parking (and whenever possible this should only be temporary while off-street parking is being developed), or in streets where the flow of traffic will not be affected. A charge should always be levied and this should be higher than the charge for off-street parking, so allowing these areas to be set aside for short stay parking.

As well as taking up space, on-street parking also produces traffic (especially during the search for a space), and short stay on-street parking puts the adjacent lane out of circulation as it must be used for parking manoeuvres.

Payment for parking is a principle that is also valid for residents.

The already significant level of traffic generated by transport of light goods using small vehicles will increase in the next few years, and special attention needs and will need to be given to the organisation of this question in cities through the allocation of regulated on-street parking spaces for loading and unloading that do not interrupt the flow of traffic, with time limits and charges for use.

In the end it will be necessary to study alternative logistical systems with sub-centres for temporary storage and redistribution.

These principles are especially applicable to city centres, which as well as being historical centres are also areas with a strong tertiary sector that attracts visitors from outside the area.

Management of Mobility

Besides distributing urban space rationally it is also necessary to manage it as effectively as possible in order to obtain the maximum return in terms of the comfort of the individual. All necessary human and technical resources must be used to this end.

Factors affecting mobility:

The agents that use and have an effect on public space must be effectively managed, and must coexist in peace. They are as follows:

- The pedestrian.
- The private vehicle (car, motorcycle, bicycle)
- Public transport vehicles (bus, tram, metro, taxi).
- Goods Transport vehicles (vans, trucks, motorcycles...).

Elements working for mobility:

The elements that contain mobility in the city are:

- Streets (pavements, roadways).
- Other pedestrian areas.
- Underground areas.

The instruments that provide support for mobility management and must be used extensively and correctly are as follows:

- Signposting (horizontal and vertical. Fixed and moving).
- Traffic Lights.
- Watch and control systems. On the spot (police) and remote (CCTV, capacity limits...)
- Imposition of penalties (fines, tow-away trucks, clamps...).
- Parking (space to park, which must always be paid for and must be off-street except in exceptional cases).
- A suitable legislative framework particularly for quick and effective action against undisciplined drivers.

Procedure

The different needs of a city and its particular characteristics demand a certain specific model of mobility for each case.

For planning purposes it is necessary to have as much information as possible and the consensus of all those involved that use the space and instruments of mobility.

It is therefore advisable that local politicians and experts promote forums in which representatives of all sectors involved may participate, in addition to carrying out the relevant analysis and technical studies in order to be able to discover all needs and points of view and reach a maximum level of consensus in the taking of decisions.

Barcelona, 01/01/2001

Parking in the city of Rome
by Laurence A. Bannerman

Almost all Italian cities have an urban fabric that is both historical and has a mixed land usage where residential, tertiary and commercial activities coexist. The historical component is not to be underestimated. What is not seen on the surface of the historical fabric is underground in an archaeological layer that varies in depth from 10 to 15 metres. Furthermore, in the case of Rome, large scale war damage did not take place which means that the historical fabric, built before the advent of the motor car remained

intact and obviously there was no provision for parking. The historical structure of the city, in parts still visible today dating back to Roman times, in urban design terms was built considering everything but a modern day motorised society.

The traffic and parking situation in the city of Rome up until the beginning of 1996.

The situation had arrived at the point of being considered an emergency. The commercial speed was down to an all time low, the air and sound pollution levels were far above the legal limits, the majority of city-centre roads were completely blocked by parked cars in one, two and sometimes three rows, the public transport was an unreliable service also because the transport arteries did not enable an acceptable traffic flow. The average speed of the traffic in and around the centre was down to 10-12 km/hour. The traffic pollution often caused up to twice weekly the implementation of a total traffic block within Rome's ring road. Rome is a city where there is a mix of land use in the central area where residential dwellings share the same street or public space with government institutions, commercial activities, public and private offices, restaurants, cinemas, historical buildings etc. What's more the parking market was jeopardised if not almost completely paralysed by the fact that private investors did not see any possibility in the market due to the uncontrolled context of the sector. The total failure of past parking operations was mainly due to the fact that the investors had no guaranty on the returns of their investments. The alternative to paid parking was free illegal parking with a hardly existent risk of being fined. The on-street parking in the commercial areas that should have served the short term parkers was indiscriminately occupied by other categories making commercial activity access more difficult than necessary. This factor has certainly contributed to the enormous success the peripheral shopping centres are having. Residents were leaving the inner parts of the city and moving to the outskirts. Parking, amongst other amenities was not easily available.

Summarising the parking situation in Rome up until the beginning of 1996 one can essentially assert that there was no parking strategy within a systems approach and subsequently:

- public paid parking was not controlled by the local administration;
- the lack of rules together with the continuous increase in car ownership and use was rapidly suffocating the city;
- a strange institution existed in the city – areas of on street parking were assigned to individuals by local constituencies who exploited the parking activity not by applying an official parking fee but by offering a kind of surveillance service in return of a sum that was “offered” by the car owner. These parking attendants to all extents and purposes in this ungoverned situation offered a service. They created a circle of clients who paid some kind of fee. The services offered included finding a parking space even where one did not exist. This was achieved by taking into custody the clients cars who actually handed over their car keys to the parking attendants. The parking attendants then personally manoeuvred the cars in the parking area. For up to twenty years this has been a common activity that solved only individual problems;
- fines were applied to cars that were parked only if they were an evident obstacle to the traffic. Double or triple parking was common practice. The overall situation was so

chaotic that parking control on behalf of the local traffic police was objectively almost impossible;

- within this context everybody used their cars to go anywhere and everywhere.

The main considerations introduced for the parking management plan at the beginning of 1996;

1. make available parking spaces for residents and short term parkers;
2. reduce the long term passive parking of the blue and white collar workers;
3. get control of the parking revenues;
4. implement a system that could induce a change in the modal split;
5. improve the urban quality of one of the world's beautiful cities uncovering one of the richest historical environments by reducing the sea of cars, and returning the pavements to the pedestrians.

Who were the different categories of "parkers" that needed catering for so as to be able to offer the possibility to use the private car for an "intelligent" access to the city.

- Short term parkers who are important "clients" of the parking activity. The local councils however stated that the driving force behind the parking management programme was to control traffic. Short term parkers are those who use parking (on or off street) so as to be able to carry out personal errands and activities efficiently (shopping, business activities, tourism, leisure activities etc). In this context the managed parking programme was necessary also to sustain commercial and business activities.

- Long term parkers, the "clients" who need a parking service that is fundamental to promote the use of public transport. A low financial return was foreseen due to the nature of the clients, but a high social/political return was programmed using part of the profits from the on street parking activity to finance the setting up and management of the park and ride areas. These areas were organised so as to induce their usage together with that of the public transport system. The main aim being to reduce many daily car trips to the centre and to avoid the occupation of parking spaces in the inner city area for 10 to 12 hours a day limiting the short term turn over demand.

- Residential parkers as a result of the conditions dictated by the existing urban fabric of the city. Residents are part of the category of long term parkers, but because of their nature ought to have the possibility of parking within their delimited residential zones.

What was done.

1. The limitation of traffic in the "Blue Centre" of the city.

- The "Blue Centre" is the historical heart of Rome and it is where the present parking policy had its initial application.
- It all began late in 1995 when severe control measures were applied restricting car access to the area that set in motion the process of dealing with passive long term parking.
- Special access and parking permits were issued by the mobility department to residents, doctors, journalists, politicians and companies with headquarters in the centre.
- The access times for public vehicular traffic are:

Monday to Friday from 18.00 to 06.00 with paid parking from 06.00 to 23.00 and
Saturday from 06.30 to 14.00 and 18.00 to 23.00.

2. The inevitable process to introduce paid on-street parking in the area surrounding the "Blue Centre" was phase two of the plan.

3. The introduction of two time periods and a flat parking rate of 2000 lire/hour. Parking is paid for from 08.00 to 19.00 in areas where the urban mix is residential, office and commercial, and from 08.00 to 23.00 where there is a recreational component in addition to the above mix.

4. The introduction and development of managed park and ride structures on the outskirts of the city and in certain strategic points.

5. The development of a system to ensure communication with the public.

There are however two aspects that greatly contributed to ease the pressure of the introduction of the new parking plan.

- The first and most important was the introduction of special parking permits for various categories of residents. This ensured them a parking place that they no longer had mainly near their homes.
- The second by introducing the concept that the closer you got to the centre the more you paid for parking.
- Managed Park and Ride parking areas were introduced as an alternative for commuters.

How did it work.

- By creating more than 50.000 on street parking places in the central part of the city surrounding the "Blue Centre" quickly.
- Establishing mobile information and permit distribution points in the different areas or sub zones as the parking management process was progressively introduced.
- Doing door to door mailing, informing about what was happening.
- Introducing an answering service to reply to queries.
- Distributing parking permits to all those who satisfied the necessary requirements.
- Introducing traffic (parking) wardens for enforcement of the rules.

Another aspect that had to be dealt with was to limit the difficulty in paying for parking.

Parking is always difficult to pay for, but with the Italian coins and their relative values it does become complicated. In Italy coins that ranged in value from 0.05 Euro to 0.50 Euro. When an hour of parking costs 1 Euro you need an awful lot of coins.

A varied system was developed and there are now four ways to pay for on street parking:

- cash coins at more than 1.300 on street pay and display machines;
- parking vouchers - each one costs 1 Euro and enables you to park for 1 hour. This is the most commonly used form of payment. You buy a batch, keep them in your car and avoid having to walk backwards and forwards to the pay and display machines;
- the third combination is the disposable magnetic chip card, which is preloaded and you can use it to pay at the pay and display machine allowing for a minimum of 10 minute intervals;
- the fourth combination is the "autopark", which is a personal on board pay and display machine. You hang it on the rear view mirror when you start parking, set the parking fee in terms of the fee in the area, and off you go. When you get back to your

car you switch it off and this way parking is paid for by the minute. It can be programmed to start and stop at intervals to enable the respect of the periods in which one has to pay and is sufficiently user friendly.

All these items are sold at 2000 outlet points that are newspaper stands, tobacconists, and coffee bars.

What are the results.

1. There are more than 50.000 on street managed parking spaces.
2. People who look for or need a parking place are able to find one. Long term parasite parking in the centre of the city has been virtually eliminated.
3. The introduction of a varied system for the paying of parking fees that has offered possibilities and have met with the favour of the citizens.
4. 22 Park & Ride areas with a surveillance service 16 hours a day are managed. Holders of. Public transport monthly season ticket holders have free daily parking in these areas.
5. More than one million parking fines are issued annually by the "new" traffic wardens to those who don't respect the parking rules in the on street managed areas.
6. The parking market is underway and there are 80 building sites in the city for small parking garages for private residential parking.

ROME

A brief overview of the principal characteristics of the city today.

Population	2.800.000
Registered private cars	1.800.000

Ratio inhabitants/car	1.5
Registered motorbikes	600.000
Length of road network 7000 km of secondary roads	700 km of main roads,
Length of underground subway	40 km
Length of surface rail transport	50 km
Length of bus lines	2074 km
Surface area of metropolitan Rome within the ring road 344 sq. km	1.300 sq. Km – area
Surface area of historical centre	6 sq. km
Off-street parking spaces	5.000
Number of managed on street parking spaces	50.500
Number of P&R parking spaces	10.000

Rome

February 2001

On street parking regulation and enforcement in London
by Nick Lester

London is the largest city in western Europe with a commensurate parking problem. The city overall has a population of more than 7m, and growing (with an overall conurbation

population of 19m) and it has a very strong central area. More than 1m people work in the centre and the centre also provides the biggest and richest regional shopping centre in the UK (measured in terms of gross turnover and turnover per square metre of retail space). Around the centre there are a number of suburban retail and employment centres which are relatively large in their own right, servicing populations of 200,000-400,000. These suburban centres strongly compete with one another.

Central London

For more than 25 years the policy towards the central area has been to encourage public transport and to restrain car traffic. Of those who enter central London during the morning peak only 15% arrive by car with 75% arriving by rail or underground and 10% arriving by bus. Accordingly, policies towards parking have been restrictive for the whole of this period.

From 1976 policies which previously had required a minimum amount of parking spaces to be provided with new developments were changed to stipulating maximum limits. These have steadily been reduced so that a maximum of 1 space per 1500 square meters for commercial development may now be provided. Similarly there are restrictions on building new off street public car parks so that only one new public off street car park has been built in central London over the last 20 years.

On street parking places have also been regulated and there are now no long stay parking spaces on street in central London. The maximum stay permitted is now 4 hours and more usually 2 hours.

Off street car parks are partly municipally owned and partly privately owned. The municipalities have no say on charges in privately owned car parks. As a result, charges have been driven by the market and all day parking in central London now costs about £25 (€42). Charges for on street parking are also market driven with advice from central government that charges should be set so as to achieve about 85% occupancy. This has driven charges to £4 (€7) an hour in the heart of central London and £3 (€5) per hour elsewhere in the centre. This approach is based on research which shows conclusively that drivers would prefer to find a space available at a higher cost than to have difficulty in finding a parking space, even if parking is cheap.

Enforcement of parking regulations is strict, with the responsibility for almost all parking enforcement (including 'no parking areas') transferred from the police to the municipalities in 1994. Penalties are set at £80 (€135) - with a discount of 50% for prompt payment. Nearly 1.5m parking tickets were issued in central London during 1999-2000. Vehicles which contravene parking regulations may also be clamped or removed with release fees of £45 (€75) and £125 (€200) respectively.

Strict enforcement has enabled regulations banning parking in certain areas (including footways) to be observed with benefits for safety, through traffic on main roads, bus, cycle and pedestrian priority schemes to be introduced, and also to allow effective rationing of the parking spaces available on an increasingly sophisticated basis.

Despite these strict limitations on parking availability and high costs, there has been no significant impact on the economy of central London. Indicators such as retail turnover per square meter of retail space and office rentals still show that central London is amongst the wealthiest areas in Europe. What evidence there is shows that lowering parking charges would produce more congestion without increasing economic activity as current parking spaces are already largely full. This is because reducing charges would increase demand leading to extra traffic hunting down very few free spaces. Indeed, recent reports from the central London retailers indicate that quality of the rail service is a far more important influence on retail activity than parking.

Given that public sector surpluses on parking accounts are legally ring fenced for public transport and highway improvements - and currently provide more than £60m (€100m) a year for this investment - lowering parking charges would result in reduced investment in public transport in the capital.

Increasing the supply of parking spaces in central London is also unlikely to be effective in enhancing economic activity because the road network is currently saturated throughout the working day. Thus the network cannot supply traffic at a level to fill any significant growth in parking provision. Evidence when large emergency car parks have been opened during public transport strikes is that congestion on the road network increased but the emergency car parks were rarely more than 10% filled.

Outside the centre

Conditions outside central London are different from the centre, but not dramatically so. Limits to parking provision in new developments have come in more slowly and at a less draconian level because of fears of competition from neighbouring centres, including those outside the boundaries of Greater London. These have, however, spread from the centre to the edge of London and are now firmly in place with maximum standards for commercial development at greatest 1 space per 200 square metres of floor space.

Controls on on-street parking have also spread so that while all roads in central London are regulated, a majority in inner London (outside the centre) are regulated and a minority in outer London are regulated. Regulations tend to be based on one of three causes: suburban town centres with pressures on retail spaces; residential areas around rail heads with competition between residents and commuters; main road corridors where priority is given to through traffic. These drivers for controls frequently overlap.

In town centres, priority is given to short stay parking by shoppers and to delivery vehicles; limits of two hours are the norm with some short stay free parking but the majority charged using meters or pay and display.

In residential areas around railheads, parking is normally limited to holders of residents permits – those living in the immediate group of 6-10 streets. There is an annual charge for a permit (of up to £100 (€170)) and some short stay visitors' spaces are normally available, either free of charge or on a pay and display system.

On main roads, priority is given to the needs of through traffic with some allowance where there are residential or delivery needs.

Charges for parking outside the centre are lower, at between 50p (€0.8) and £1 (€1.70) an hour.

Enforcement is still rigorous with penalties between £60 (€100) and 80 (€135) for parking contraventions. More than 4m parking tickets a year are issued throughout London.

Argument is most intense about the introduction of parking controls and charges in shopping areas. A majority of traders firmly oppose both new controls and increased charges where these are proposed. The result is fewer regulations and lower charges than might otherwise have happened.

The evidence of the economic impact is limited but there are some clear signs.

Research where parking controls and charges have been introduced for the first time in small shopping centres is that there has been no significant detrimental impact on trade. There has also been clear evidence that the best parking spaces, immediately outside shops, had mainly been occupied by shop workers parking all day before controls were introduced and these spaces were released for shoppers after controls were introduced.

In the suburban shopping centres there is also no evidence that increasing parking charges has been negative for retail. A study into the economic well being of 50 major suburban town centres in London found no correlation whatsoever between the volume of parking supply, parking charges and economic well being. Some centres had large volumes of cheap or free parking but a poor level of economic activity while nearby

would be a centre with less parking, more expensive parking and better economic viability.

Increasing parking supply and reducing charges appears to have little general economic impact, except where overall access is limited and where parking charges, if set on a market basis, are relatively high compared to similar centres in the vicinity. If these two conditions are met then increasing parking supply and thus reducing charges may have a positive economic impact, but so may improving access by other modes such as public transport. It is unlikely that a general rule can be made about which is better.

The key factors for economic well-being in London's suburban town centres appear to be:

- the attractiveness of the town centre environment
- the range and quality of the shops in the centre
- the wealth of the immediate surrounding area
- overall accessibility by all modes
- the availability of a parking space, at whatever price, for those who do drive.

Conclusion

Limitations on parking supply, high parking charges and rigorous parking enforcement appear to have had no detrimental effect on the economy of London and, in particular, the retail economy. Studies indicate that there is no correlation between parking supply and economic well being.

Higher parking charges and strict enforcement have ensured that parking spaces are always available for those who wish to drive, at a price, and have enabled sophisticated parking and traffic regulations to be introduced for the overall benefit of the community.

Surpluses on parking activities have provided large annual investment programmes for public transport in London.

Parking supply and charges plays a very small role in the relative economic success of some parts of London compared to others. The more important factors are the quality of the environment, the range of goods and services on offer and the overall accessibility.

Nick Lester
January 2001

Free parking on Saturdays and Sundays in Oslo, Norway.

by Jon Fodstad

On June 26th, 1996, the City Council of Oslo decided that it should be free to park in public spaces in the centre of the city on Saturdays and Sundays. On December 19th, 1996, this decision was extended to all public parking spaces in Oslo, which has about 510.000 inhabitants, in the effort to strengthen commercial activity. During October, 1997, the firm Asplan Viak AS evaluated the system of free parking and its effect on commercial activities. The firm interviewed car owners and shop owners and examined 750 parking spaces, mostly situated in the city centre. During opening hours on weekdays, the rate of parked cars was more than 90 %. On Saturdays, the rate was almost 100 % and at 11 a.m. all public spaces were filled up. On Saturdays, average parking time in the city centre was 30 % longer than on weekdays. In addition there was less circulation. The reason for this was probably that people working in the commercial and service activities parked their cars before the shops opened. In the areas close to the city centre the pressure on the parking places was even larger. In contrast with the city centre there are considerable residential parking. Free parking on Saturdays had no visible effect on the extent of retail trade. The majority of the shop keepers were negative to free parking, because their customers could not find any free spots to park. The Maritime Museum, which is located close to the shore, experienced that the parking spaces outside the museum were filled with the cars of the boat owners during the week ends in the summer half - year . People visiting the museum had no place to park. In the city centre 50 %, and outside the city centre 40 %, of the car owners came to town in order to trade. People parking 1 - 3 hours spent more money than people parking less than 1 hour and more than 3 hours. Free parking on Saturdays and Sundays has not been a success. Therefore the arrangement was abolished by the City Council of Oslo April 5th, 2000. During the period of free parking on Saturdays and Sundays The Municipality of Oslo received a total loss of income of ca. 40 million NOK (4.9 million EURO). On the other hand illegal parking increased. This was due to the fact that people drove to town in order to park for free, but found all spaces occupied and chose to park illegally instead of paying at private car parks. Additional parking fines amounted to ca. 15 million NOK (1.9 million EURO). Jon Fodstad Managing Director City of Oslo Traffic Authority

Free Parking on Saturdays in a German City

by Jürgen Brixner

In a city where we operate several car parks, the municipal council decided to stop collecting fees at the parking meters on public roads on Saturdays.

The consequence of this measure was that the retailers' employees usually commuting to work on public transport brought along their vehicles on Saturdays and thus occupied most of the parking spaces.

The expected reduction in car park turnover did not take place. On the contrary, sales increased as the visitors were forced to switch to the car parks due to the occupancy of the spaces in the road area by long-term parkers.

Meanwhile, the retail trade association is discussing whether it makes sense to file a claim to cancel this measure.

Grossbettlingen 16.11.00

Parking Fee Reduction in Herford
by Rainer-Michael Rudolph

Once again, the German inner cities have become the experimental field for politicians and authorities. Those having observed the publications issued in the past 1 ½ to 2 years, will have noticed that there is a change in trends regarding parking fees. For years, after having been branded as the main polluter of the environment, the motorist had also been treated accordingly. Frequent petrol price increases - of course, not for balancing empty cash registers, but with an ecological background - led to petrol prices which comprise more than 2/3 taxes and levies. Decisions on further increases are already finalised.

With the reduction of the existing parking areas in our cities and an increase in the number of registered vehicles at the same time, the parking fees on public roads and in car parks are also on the increase. The fact that peak fees to the order of DM 4.00 and DM 5.00 per hour in inner cities were charged here, of course, had the same ecological background as the petrol price increases. It was intended to drive the motorist out of the inner cities and at the same time make changing to public transport appealing to him.

The fact that public transport in metropolitan areas is a very good means to provide high volumes of transport is beyond all question. However, even under optimum conditions, it does not break even. As soon as it has to serve a larger commuter belt, public transport becomes increasingly expensive and inefficient.

When it became clear that motorists are successfully prevented by revitalisation measures and inflated parking fees not only from visiting a city but at the same time also from spending money there, the pendulum starts swinging back again today vigorously.

The very same politicians and authorities who only four or five years ago spent millions on reports and traffic-reduction (and obstruction) measures accompanying them, today advocate to drastically reduce parking fees or do away with them completely. They are inspired and supported by tradespeople and retailers.

These permanent claims show an effect. A publication from the city of Krefeld shows that the city decreased the parking fees from DM 2.00 or 3.00 per hour to DM 1.00 per hour. The expected revenue losses to the order of DM 1.0 million were not reached. The city treasury has to fork out "a mere" DM 400,000.00 DM to balance the losses. At the same time, more shoppers have come into the inner city and also have stayed there for longer periods.

Also our company is confronted more and more with the demand to lower the parking fees or even to eliminate them altogether. For example, we agreed with the city of Herford (East Westphalia, 66,000 inhabitants) last year that our car parks would be made free of charge in the first half hour for one year. The standard rate was a flat DM 1.50 per hour. For the first half hour, the city pays a contribution of DM 0.50 per parking vehicle, we contribute DM 0.25.

Since nearly one year has passed now, I can take stock of the first ten months of this year. The parking operations in two analysed car parks increased by almost 15 % which after all is equivalent to nearly 54,000 vehicles parking. The revenues in the same period increased by 10.5 %. This is equivalent to TDM 104; at a first glance a tremendous success.

Now, retail trade ought to have increased by at least approx. 15 % as this was the growth rate for the parking operations (customers).

However, it was striking that our revenues did not increase to the same extent.

What is the reason for this ?

In the Neustadt car park in Herford which has the corresponding technology, we drew statistics on the distribution of the parking operations in half-hour cycles over a period of nine months of this year (February - October). It shows that in the compared period 5,070 more parking customers entered the car park.

When looking at the figures more closely, it shows that in 1998 under the old system 11,780 motorists left the car park again before expiry of the first half hour. This represents approx. 18 % of all payments. In the same period of this year, 18,076 vehicles left during the first half hour which is now free of charge; consequently 6,298 more customers. This means that we have "won" more than 1,200 more customers. The share of customers leaving the car park again in the first 30 minutes increased by 53,5 % to 25,5 %.

The same picture also in the Altstadt carpark. Unfortunately, the equipment's technology is not capable of reporting a period spent in half-hour cycles; however, the change rates of the parking operations and the revenues helped us. The number of parking operations increased by 17 %, the revenues, however, by only 11.5 %. Apparently, the customers here also made good use of the "free parking time".

The graph showing parking times for 1998 and 1999 clearly shows that the share of the parking operations in the first half hour increased by leaps and bounds, however, the parking time following it decreased.

In particular, the parking operations in the first 30 minutes also provide for the impressive increase in revenue. We assume that approx. 25.5 % of all customers - after all representing a number of 105,000, made use of the charge-free parking time. The "additional revenue" resulting from this amount to approx. TDM 80 (DM 0.75 per parking vehicle).

Further revenue increases are also not based on genuine increases but develop due to "excess substitution". Instead of DM 0.75 DM per parking operation, a genuine requirement of just DM 0.66 DM per parking vehicle developed.

Conclusion:

Thus, the question remains whether it makes sense to speak of additional revenues - in our case TDM 104 - if it is bought with TDM 310 in the same period. It is more correct to speak of costs: with TDM 206 we generated 54,000 additional parking operations.

This means we have "paid for" each "new" customer with DM 3.80.

At the same time, we also supported behaviour detrimental to the environment..

This, indeed, cannot be the new traffic and parking policy of the inner cities to overcome their problems.

It remains to note that the trade contributed a total of TDM 40 to the costs incurred to date.

Survey of negative Effects of Reduced Parking Fees in Germany

by Gerhard Trost-Heutmekers

As always, the daily press contains many articles informing us as to how city parliaments and administrations are thinking about reviving the inner cities, feeding customers to the retail trade and increasing the attractiveness of the cities as a whole.

Unfortunately, and we are saying this not only from the standpoint of the car park operating companies, politicians and also many retailers frequently have no better ideas than to fiddle with the parking fees. They do so in the hope - at least they pretend to do so - that city life is boosted by parking price reductions or their abolition. Particularly within the background of municipal election campaigns, promises to lower parking fees or even to abolish them completely are current topics. Especially this context in our opinion clearly shows that populist thinking rather than expertise in the area is of essence when the issue is the revitalisation of the inner cities.

As an association, we are observing this development very closely. Due to the clippings from the daily nationwide press regularly available to us, we get a detailed idea of the situation in the individual cities in our country.

In doing so, it is not so very interesting to determine where politicians and retailers call for a reduction or abolition of the parking fee which, of course, find a clear echo in the local press. There no difference is made between and remuneration and parking fees, leading often to misunderstandings. Parking fees are paid for street parking at parking meters and parking ticket machines. These are fees for the authorities. Remuneration is paid for parking in carparks, underground garages or economically run parking lots. According to their legal status, they are private contractual payments for the rental of a parking space which has nothing to do with regulatory decisions from the local authorities.

The demands of the politicians to reduce or ban parking fees are therefore not yet relevant. In order to be realised, they must be changed in each local parliament as changes in statutes as changes in parking fees normally have to be decided via statutory changes. Generally speaking, during this phase the discussions begin regarding the income losses the towns would suffer in this case. These losses are put into the balance from the start and "happily" accepted. It is reckoned that the inner cities and the shopping precincts will be revitalised and turnover increases for the retail trade will result. Apart from the fact that there are no examinations at all that verify this basic assumption from local politicians, it appears questionable whether stable authority income should be resigned in a single-sided manner to the benefit of an economic grouping as this has a direct effect on the rest of the local population.

Concepts for town marketing must take different points of view into account. We have pointed this out in our theories. A simple medicine called "sinking the parking fees" is not the correct remedy. This result is by no means new. It is also not unique and it is not merely our association's opinion. Many experts plead not to view measures to revitalise inner cities only from the point of view of the parking fees. However it is not popular to demand differentiated thinking, to put oneself into question or to admit one's own longstanding mistakes. Everybody who shouts just for the ban or reduction of parking fees should look into the mirror and check where they have made mistakes have been made in the past..

If such town marketing strategists as the CIMA-Gesellschaft für gewerbliches und kommunales Marketing mbH (Company for business and communal marketing) come to the conclusion that the renunciation or reduction of parking fees as a strategic universal solution is not viable, this must be well-founded. Their local experience plays the role that they recognise that free or highly reduced parking will lead to these spaces being permanently occupied and cause search traffic. The effect caused is unproductive with regard to revitalising cities. In a letter from the local traffic authority from the town

Herrenberg where as an experiment no parking fees were taken until December 2000 on Saturdays, the following was noted: "The consequences feared by the authorities which in the meantime has been proven is: inhabitants of the town centre already park their cars in the parking spaces on Friday evening and employees in the early hours of the Saturday and block them for all customer traffic on Saturday morning so that their intended use for quick parking is not viable. We hope to convince you that ... the nonsense of this solution by the year end by research and return to the old ruling" (Source: The Local Authority 10/00. Editor's note: the old ruling was paying fees since 1991 for the parking lots.).

In Cologne's surroundings, that is to say the close periphery, parking ticket machines were abolished or discussions regarding this are taking place. As a test, it is planned to introduce free parking in a small part of the Cologne town area. In the surrounding towns free parking is planned on the Saturdays before Christmas. An editorial in the Kölner Stadt-Anzeiger (local paper) written by an editor dated 14th November 2000 is interesting. We quote excerpts: „In fact all of this“ (15 minutes free parking) „just has a symbolic character. Anybody just going to the post office for a moment never puts any money into the ticket machines anyway unless they see a traffic warden. And in Cologne, where parking space is rare, fees are the only fair means to spread the seldom "good" parking space. Imagine what would happen if all Cologne's salespeople and office workers who work in town would forget their job ticket and happily park their cars free in the car parks and shopping streets... No thanks! The world looks somewhat different in Hürth. We'll see how long the free parking stays. At the very latest when all the roads are blocked as everybody comes and hopes to find a parking space, new protests will come. Maybe from the retail trade again ...“.

So much for the commentary that was published on the title page of the Kölner Stadt-Anzeiger.

Exciting developments appeared to take place in Pforzheim. There, too, free parking was introduced experimentally on Saturdays, which already cost the town 350 TDM from November 1999 to June 2000. The "Gründe Liste" (ecologists) wanted even more. They had the opinion that it was not good to favour the car drivers and demanded also that users of local public transport should also be granted free use. The question comes as to whether pedestrians and cyclists will also demand financial advantages as they wish to be local treated fairly. How about the solution "free shopping"? In the meantime, the town of Pforzheim has decided against including local transport as the losses could not be financed. Free parking is still available on Saturdays; the town still has high losses in this area.

In Gelsenkirchen no parking fees are taken. There it is reckoned that 1.5 million DM losses per year will be made. In Münster, where the parking fees were reduced, the yearly income loss amounts to 700 TDM.

All measures taken to reduce the parking fees are associated with high financial losses. With regard to the financial problems within the towns which they lament in a loud manner, it is strange that they happily give up such certain and useful income.

The ruling with parking discs re-introduced in several towns as a replacement for the parking fees will not rescue the situation. And controls will be made in a "generous" manner. We read again and again in the newspapers that the supporters of free parking e.g. on Saturdays also criticise the "distribution of parking fines" as they cheat the customers. Or we don't bother even to make use of the parking disc. As an experienced professional carpark manager we can say that the parking disc has not proved itself as a steering and forming element for parked vehicles when compared with justified parking fees.

The developments in the coming months will show that several towns that have introduced free parking at certain times will reverse these decisions as neither the retail trade nor the population will effectively reap profits from this.

(The author is MD of the Bundesverband der Park- u. Garagenhäuser e.V.) [German federal association for car parks and garages]

Cologne, November 2000

Results of Parking Fee Increase in Appeldoorn in the municipal Car Parks

by Nico Klein Beernink

Apeldoorn is a fast growing city of approximately 150.000 inhabitants in the centre of the Netherlands.

The traffic policy of the City Council is aimed at a substantial use of public transport and frequent use of the bicycle to come to the inner city shopping centre.

For that reason a number of measures have been taken, such as:

- planning of a net of cycle paths through the city (right of way for cyclists). Construction of this net (which includes crossings on different levels) will take several years
- decreasing the tariff for public transport as from 1992, when it started in Apeldoorn as a national experiment, to Dfl 1,00 per round trip on Thursday evening, Saturday and special shopping Sundays (12 times a year). Costs for the City Dfl.300.000 a year (Euro 136.134).
- increasing the prices for monthly parking from 1 January 2000 with approximately 15% up to Dfl.125,00 p.m. for street-parking and Dfl.165,00 p.m. in garages
- increase the price for hourly parking from Dfl.2,50 à Dfl.3,30 on weekdays and on Saturdays from 10.00-16.00 hrs. to Dfl.4.25 per hour.

These measures have caused a significant increase in the use of public transport but were absolutely insignificant with concern the use of the inner cities parking accommodations.

As from May 2001 a round trip with public transport will cost Dfl.1,00 (Euro 45 cent) on every day of the week. This tariff will be valid until January 2002, when the Euro will be introduced. The price will then go up to Euro 1,00 for a round trip. Costs for the City will take an average of approximately Dfl.3.500.000 a year (Euro 1.588.230).

The price for hourly parking may increase from Dfl.3,30 à Dfl.3,75 per hour on weekly days on street as well as in the city owned car parks, and from Dfl.4,25 à Dfl.5,00 on Saturdays which are firm prices for a city of that size.

The Apeldoorn shop keepers in general do react rather cool to this situation.

Their adage is :

the customers choose on grounds of quality and not on grounds of parking fees.

Mobility Card in Saarbrücken
by Nico Klein Beenink

The public transport system in Saarbrücken, including bus transport, regional tramline and regional railway stations, together with the municipal car park operating company (± 5000 parking spaces in multi-storey, underground and surface car parks plus ± 2000 parking spaces on-street) have developed in 1998 the Mobility Card Saarbrücken.

The Mobility Card was a monthly ticket that for the price of DM.60.00 per month entitled the buyer free use of all the means of public transport in the Saarbrücker area plus 8 hours per month free parking in one of the city car parks.

The car park operator received DM.7.00 from every sold mobility card.

Another "compensation" for the car park operator was found by letting the 1600 monthly parking ticket holders use the new regional tramway (Saarbahn) and busses free of charge for the time of one year. For this reason a special validation sticker was developed to be put on the parking ticket.

This action was widely and intensively promoted by free publications, advertisements and leaflets with the help of an adequate promotion budget.

Result

± 30 mobility cards have been sold.

After 1½ years the project has died silently. Very few inquiries have been made afterwards.

Conclusion

Great project, no public acceptance at all.

Research into the effects of parking behaviour as result of changes in parking fee policy in a medium sized Dutch city.

by Nico Klein Beernink

A number of measures have been taken in order to attract more visitors to the city centre. The effects of these measures have been analysed in relation to the occupancy of two multi-storey car parks in the city centre.

In the car parks the following measures were taken:

- Relocation of the pay machines.
- Adding extra pay machines
- Reduction from the hourly parking fee from Dfl.2,50 to Dfl.1,00 for the first hour, except on Saturdays and late-night shopping.

- Improvement of the entrance for handicapped people.

Outside of the car parks the following changes took place:

- Re-installing of the weekly market in the square in front of the car parks.
- Opening of several new shops
- Relocation of the food sector.

The questions to be answered were:

- What is the effect of the parking fee reduction on the number of visitors in the car parks
- What other changes have occurred and can these be appointed to a certain measure.
- Can a ratio be defined between the visitors of the shopping centre and the customers of the car parks.

Results.

Due to the fact that several measures were taken at the same time it is nearly impossible to acquire reliable results for each individual measure.

The total number of customers in the car parks have increased 19% in the first 38 weeks of 2000 in relation to same period in 1999. In the whole year 2000 an increase of 20% (± 182.500 parking acts) could be expected.

On first sight it seems that the decrease of the parking fee brought a considerable increase in parking customers. However, in comparison to other parking projects in the city that opened in the same period, it shows that this growth lays slightly behind the average grow in the other city centre parking accommodations, that were taking the normal fee of Dfl.2,50 in the first hour.

The number of payment handling has increased on one side of the car park and has decreased on the other side.

It appeared impossible to match the research results from parking with results of the counting of the visitors in the city centre. A ratio could therefore not be established.

Beforehand it was supposed that the lower parking fee would attract more customers on weekly days, which it did in one of the two car parks, and that this would result in shorter stays in the car parks, which it did not.

The duration of the stay in the car park has not changed as a result of the change in parking fee. This also brings the conclusion that the composition of the visitors of the city centre in terms of shopping behaviour has not been changed. A shifting from "shopping " to "run-shopping" has not occurred.

The number of customers in the car parks has increased by $\pm 20\%$, the turnover has decreased by 10% in relation to 1999. On the basis of the same increase in customers and the original parking fee of Dfl.2,50, the turnover would have increased by 30% in comparison with the to-day situation.

Financial losses on the basis of this calculation mount up to \pm Dfl. 1.000.000,00 (excl. VAT) yearly (not including the costs for the extra measures)

Experiences in creating new off-street car parking facilities in the city centre

by Joan Font, SABA Group, 2001

Would the creation of off-street parking space for vehicles bring with it more traffic to the historic city centre or would it serve as a regulator of traffic? This is the dilemma.

In the SABA GROUP there are, amongst others, three specific examples in three very different cities in terms of features and size of population.

We are referring here to the city of Barcelona with around one million five hundred thousand inhabitants, the city of Sabadell, which has a population of approximately one hundred and eighty five thousand, and the city of Mataró inhabited by one hundred two thousand people.

Before the construction of underground car parks in their historic centres (575 parking spaces in Barcelona, 300 in Sabadell and 300 in Mataró), the three cities all had similar problems in their city centres such as narrow streets, a confusing road network and only one main access road, causing near permanent collapse in the traffic system.

In all three cases the construction of off-street parking satisfied the need for further parking prior to the construction of a car park when the large availability of on-street parking produced hyper-mobility mainly due to drivers looking for parking spaces. This caused traffic collapse and was unattractive to pedestrians. The consequence was fewer people and less commercial activity in the area.

The construction of this sort of infrastructure designed from a balanced study of present and future needs, meant, in all three cases, the implementation of a large pedestrian area at the expense of traffic and on-street parking. The consequence of this was an important growth in commercial and other activity as well as an improvement in comfort for the neighbours, shopkeepers and visitors.

In the Cathedral Square of Barcelona and its surrounding area, twelve months after inaugurating the new car park, the number of visitors increased by 20%, 15% of the stores renovated their equipment and 24 new shops were opened, 10 of them from big chains.

In the City Hall Square of Sabadell and its surrounding area, the results after the first twelve months were a growth in visitors of 24%, an increase in the level of renovating equipment of 10%, and 10 new shops were set up.

And in the main central square of the city of Mataró and its environs area, the number of visitors increased by 29%, 13% of its stores improved their equipment, and 12 new commercial activities started in the area.

During the last few years the availability of off-street facilities in these kind of commercial areas has offset the increasing number of peripheral shopping centres and avoided the commercial death of historic centres, improving the quality of present stores and even attracting new operators.

In all these cases, as a consequence of the construction of the new underground car parks, the availability of on-street parking was eliminated in all areas in favour of the pedestrians, further more the traffic on the access roads did not increase and traffic in the surrounding area improved due to the disappearance of vehicles searching for a parking space.

