



Management Committee COST 342

Parking Policy Measures and their Effects on Mobility and the Economy

Subject: Case studies - the Czech Republic

Three cases of towns were chosen for application of the parking policy: two from them are historical towns situated in the east part of the Czech Republic (in Moravia). The first town is the town with 100 thousand inhabitants - Olomouc, the second town with 30 thousand inhabitants - Kroměříž. The third town is Liberec, the industrial town with 100 thousand inhabitants in the northern Bohemia.

1. Study of Olomouc

The city of Olomouc is situated in the middle of Moravia (in the eastern part of the Czech Republic) in the lowlands on the river of Morava (the altitude about sea level 219 m). It is the ancient historic town of the extraordinary historic significance, with the great university, religious, cultural and military tradition, historical important commercial and transport crossing, which was till the 17th century the capital of the country of Moravia.

At present, Olomouc is the 5th greatest town in the Czech Republic, the important industrial, university and cultural centre and also the centre of the new-created region of Olomouc, covering up the area of central Moravia. Historical centre of Olomouc with the numerous complex of historical monuments is surrounded by the ring of parks and medieval town walls. This centre was till the 2nd half of the 19th century as the fortress (what obstructed for a long time to the next development). Now it has after Praha the statute of the second greatest and most ancient town monument reservation in the Czech Republic.

The city of Olomouc is created by the historical centre (Town monument reservation area) with the area of 84,50 ha (1 ha = 100 m²), with 5 502 inhabitants living here, surrounded by the strip of parks 47 ha, around them external town circle, suburbs and housing estates extend. The total town area is 11 661 ha, from this 675,45 ha is build-up area, 759,37 ha roads, 50,9 ha parks.

(The whole district of Olomouc, covering up the town surroundings, has 145 139 ha.)

The number of inhabitants, similarly in the whole Czech Republic, decreases gradually: 100 560 inhabitants in 1978, than 105 138 in 1996, 103 372 in 1998)

The age structure of inhabitants: below 14 years - 17 %, 15-59 years - 65 %, above 60 years - 18 %. The average age of inhabitants of Olomouc is 41 years.

(The whole district of Olomouc has 225 665 inhabitants (1998) - from that the city of Olomouc 46 %.)

Housing structure in the city: 8 750 houses, 38 300 flats. The average number of persons living in one flat is 2,7.

Economic

The city of Olomouc has 52 963 economical active persons, 5 714 unemployed.

In Olomouc is registered 20 434 economical subjects (1999), from this about 300 employers with more than 20 employees.

The most of employees are local (from the town). The share of employees commuting into / out the town is low, the most of commuting into the town are inhabitants of the near villages.

There are 116 200 persons economic active in the district of Olomouc, it is 51,5 % from the total number of the district inhabitants and 93 % from the number of inhabitants in the production age; from this are 14 077 unemployed (1999), it is 12,1 % inhabitants in the production age.

From the total number of 76 312 employees of the district of Olomouc most of them are engaged in industry (26 021) and in trade (6 166).

In the district of Olomouc the average monthly income is 11 409 Kč = Czech Crowns (it is about 325 Euro); in the Czech Republic 12 063 Kč (about 345 Euro) in 1999.

Accommodation possibilities

There is at present 45 accommodation facilities with total capacity 4 225 beds in Olomouc. The most often stay reasons are work and business travels and relatives visits. Most of foreign visitors are from Germany, Slovakia, Italy and Poland.

Number of accommodated (1998): 103 371, from this 33 608 foreign, it is 32,5 %.

Number of nights (1998): 177 748, from this 63 051 foreign, it is 35,5 % - average stay length 1,72 days.

Trade

There is more than 1000 shops with the sale area about 85 000 m² in Olomouc.

Education

Elementary: 32 elementary schools, 3 elementary artistic schools, number of pupils 10 349.

Secondary: 12 secondary schools (from this 4 grammar schools and 8 technical schools), 8 technical education establishments. On secondary schools in Olomouc studied 12 021 students.

University: There is the second oldest university of the Czech Republic in Olomouc - Palacký University, with 7 faculties. It is the biggest school institution in the town and in the region, which affects its life in many directions. On the university study 11 500 students.

Culture and art

Olomouc is the seat of many cultural institutions (Moravian philharmony, Moravian theatre, Museum of art, Regional homeland museum and further the place of organising e.g. International organ festival.

Exhibition grounds FLORA

They are situated in the group of parks around the city centre. They represent the place of taking of the most important exhibition from the gardening in the Czech Republic. The exhibition programme includes besides gardening and various small exhibitions also fairs from the area of civil engineering, real estates, services and trade include book fair. The whole year attendance rate: 178 395 visitors (from this the key exposition FLORA: spring part - 74 388, summer part - 26 806 visitors), in the whole 15 actions in a year.

Transportation

Olomouc is the important junction of road and rail transport, as gravity town of the region it is the point of departure of the regional public transport.

Road transport

Olomouc is situated on the line of international route E 462 ensuring North-South connection of Poland with Moravia and Austria. By the connection with motorways D1 a D2 in Brno a good joining to Praha and Bratislava is assured. Important national routes pass through this area. The intensive preparation of the speeding route R 35 - city bypass as part of E 462 is in course (construction beginning in 1998).

Public transport

Public transport is realised by the form of integrated transport system (IDOS). There are two operators at present:

DPMO a.s., ČSAD BUS Ostrava a.s. The length of two-track tramway net is 13,7 km.

DPMO operates on 6 tramway lines with following lengths: line No. 1 - 4,88 km, No. 2 - 5,12 km, No. 3 - 5,09 km, No. 4 - 8,55 km, No. 5 - 7, 66 km, No. 6 - 5,86 km (in the whole 37,16 km).

30 bus lines with total length 384,46 km are operated (from this 8 suburban - IDOS, operated by ČSAD, the rest by DPMO). There are 31 tramway and 271 bus stops. In 1999 were in the whole 49,576 mill. persons transferred by the public transport, from this 23,824 mill. by buses, 25,752 mill. by tramways. Traffic performances in 1999: total - 5,598 mill. vehkm, 546,761 mill. placekm, from this: buses - 3,339 mill. vehkm, 293,243 mill. placekm; tramways - 2,259 mill. vehkm, 253,518 mill. placekm. With regard to the night buses the operation is all-24-hours.

Traffic performances and utilisation of urban transport in Olomouc:

	tramway	bus	total
mill. persons	25,752	23,824	49,576
mill. placekm	253,518	293,243	546,761
mill. vehkm	2,259	3,339	5,598
km/travel	9,8	12,3	11,0
travels/person, year	250,0	231,3	481,3
km/person year	2461,0	2846,6	5307,6
travels/person, day	0,7	0,6	1,3
km/person, day	6,7	7,8	14,5
places/vehicle	112,2	87,8	97,7

Rail transport

Olomouc is the important rail junction, the intersection of 6 rail tracks (the most important are connections with Praha, Ostrava and Brno), with the main station near to the city centre. It is the departure station for 76 trains, the end station for 80 trains and transit station for 64 trains in the course of 24 hours. Further there are 6 rail stops in the town district.

Bus transport

Olomouc has central bus station with total number 48 stands, from which 65 bus lines leave. From this 30 lines are suburban (8 lines are operated in the frame of IDOS system) and the rest are long-distance and international lines.

Individual automobile transport

In the city of Olomouc automatic traffic counters (Marksmann) are located on the three places. On the most burdened section on the throughpass I/35 in the Velkomoravská street the both directional traffic intensity in 2000 was 48 918 vehicles in 24 hours.

There are 268 personal cars on 1000 inhabitants in the district of Olomouc (1997).

Cyclist transport

In the parks round the centre and on some roads cyclist path are established. Total paths length is 8,7 km. In 2000 on the exposed places 40 bicycle stands from the town financial means were installed. Next stands are located at single shops, restaurants, recreation objects etc. There is no bicycle shelter in the town.

Pedestrians

There is pedestrian zone in the city centre with the area 38 960 m².

Inhabitants mobility

Modal split according to the traffic mode (public, individual, cyclist, pedestrian) - data are available only from 1993 (into/from the work):

	summer (%)	winter (%)
urban public transport	68,4	74,8
individual transport	4,8	4,9
by foot	17,9	17,4
bicycle	8,8	3,0

These data, however, have been probably dramatically changed with the extreme increase of individual transport in the last 8 years.

Static traffic - parking

In 1993 regulation measures have arisen, by which the charged parking zone was established, and in the part of its area the pedestrian zone was specified. The target of this measure was gradually pressure amplification toward the centre by the principle of economic restriction utilisation. The suggest of both measures was accompanied by information campaign.

Before the use of the regulation measures about 200 - 400 vehicles above zone capacity parked there in the morning hours and it was mostly in the contradiction with the valid regulations. On this marked exceeding of parking capacities from more than one half vehicles commuting to the work shared. It was the classic problem of long-term parking on the attractive city areas.

The target of regulation was to prevent the overfilling of the historical city centre by the parking vehicles and in the same time to enable its traffic attendance. From this intention follows the necessity of intentional unsatisfying of parking needs by the regulation of demand, to reach the targeted unequilibrium between offer and demand in the centre. These principles were subsequently assured by the municipal legislative.

Following measures were applied in the solution:

- one-way street change for higher needs capacity of static traffic
- revaluation of parking areas organisation with the same purpose
- assuring of the residents and activities parking
- time restriction of the short-time parking
- time restriction of the traffic attendance of the pedestrian zone

The area of the regulation zone is nearly corresponding with the town monument reservation area. The rules of the zone are defined by the generally obligatory municipality regulation include price list. Parking documents are short-term and long-term parking cards and parking tickets from automatic parking machines, which are located in a number of 13 pieces in the places of the highest pressure of static traffic. The zone administration inclusive automatic parking machines is performed by the Municipal police, which assures also a

control of regulation following. A driver's information on the zone existence and its rules is assured by the standard traffic marking.

Results of the restricting regulations:

- *giving a priority of the short-term parking and residents needs*
- *prevention of the long-term parking in the commuting to the work*
- *exchange of parking vehicles and more optimal use of the parking areas*
- *developing of pressure to the transfer of individual automobile transport toward means of public transport*
- *consequential time segregation of pedestrian traffic and traffic attendance in the pedestrian zone*

Results of inquiry surveys targeted to the performed restricting regulations:

95 % inquired respondents were informed about the existence of the charged parking zone, 68 % considered the scope of information as sufficient. 83 % respondents park in the charged parking zone no more than 10 times in the month, 12 % more often than 20 times. Main reason for parking is shopping - 38 %, it is followed by offices dealing - 28 % and further culture - 20 %. 37 % respondents stated, that they always found some parking place. 75 % consider as faster and easier way of parking charge in the automatic parking machines than parking card.

Problems connected with the zone activity:

- *mechanical damages of automatic parking machines*
- *violation of traffic regulation*
- *non-respecting of charge duty for parking*

These problems can be subsequently manifested by traffic conflicts, decrease of the traffic safety for all traffic participants, reduction of road passage ability, decrease of regulation effectivity, enhanced number of destination trips, higher occupancy rates and sales losses. Prior in these connections is consequential check and subsequent recourse.

In the charged parking zone 2400 parking places are situated, from them 1750 are on the public roads, 180 on the parking areas and 470 in the parking garages. All these places are charged. From this number 200 stands are on the ground and 470 parking places in the parking garages operated by private subjects. Other places are operated by the city of Olomouc, represented by the Municipal police. Total parking zone capacity serves commonly to residents, entrepreneurial subjects and visitors.

The utilisation rate of the total zone parking capacity by all users expressed by the average occupancy is 82 % (maximum saturation between 9.30 - 11.30 hours) in the day and 44 % in the night time, average parking time is 2,12 hours. The share of short-term parking of visitors on the total occupancy rate reaches 25 %.

The utilisation of disposable capacity for single types of parking is: 77 % for short-term parking (0-2 hours), 17 % for middle-term parking (3-6 hours) and 6 % for long-term parking (over 6 hours). According to parking capacity utilisation in percents from the real occupancy rate 11 % vehicles park without motion and 89 % rotate. The rate of respecting of zone mode is 53 %. Shares of parking vehicles local and other are: 73,1 % vehicles from Olomouc, 24,3 % other inland and 2,6 % foreign.

One overhead parking object operated by the private subject, which capacity is 475 places, mostly for short-term parking of visitors, is realised in the zone. Other parking objects are projected in the regulation plan documentation of the Town monument reservation, which assumes their localisation along the external zone border. Total projected parking capacity of these objects is about 2800 places.

Assuring of the operation of charged parking zone by the automatic parking machines required investments in the level of 3 500 000 Kč. Annual operation expenses for the zone operation are about 150 000 Kč (but probably these are only expenses of consumption, other expenses are not evidently included). Incomes from automatic parking machines in the zone charges were 3 130 000 Kč (in 1999), to this still incomes from parking cards 1 470 000 Kč. Total incomes were then 4 600 000 Kč.

Parking on marked areas is charged in Monday - Friday in period 9.00 - 18.00 hours, with a parking ticket or with a short-term parking card for the time maximum 2 hours.

Charge for parking ticket or short-term parking card in Kč (according to the area):

	1 hod.	2 hod.
reduced rate	5	10
full rate	10	20

Charge for long-term parking card in Kč (according to the type of user):

	3 months	6 months	12 months
unportable, reduced rate	200	300	500
unportable, full rate	2 100	3 150	5 250
unportable, enhanced rate	4 200	6 300	10 500
portable, full rate	4 200	6 300	10 500
portable, enhanced rate	8 400	12 600	21 000

City administration - local legislative

Local administration is represented by the Municipal Authority of the City of Olomouc. Affairs related to transport are controlled by the Traffic Department and Conception and Development Department of the Municipal Authority.

Valid public notices of the Municipal Authority of the City of Olomouc related to the parking and land use:

Public notice No. 4/99 from the day 24.04.1999 on obligatory part of territorial plan of the resident body of City of Olomouc

Public notice No. 9/99 from the day 18.12.1999 on obligatory part of regulation plan of the Town monument reservation Olomouc

Public notice No. 14/97 from the day 27.10.1997 on charged parking in Olomouc - see later.

Extract from the public notice No. 14/97 from the day 27.10.1997 on charged parking in Olomouc

The zone of charged parking in the inner city (historical centre) on chosen local roads of the city and 2 parking areas of charged parking are constituted. The beginning and the end of the zone are marked by vertical traffic signs. In this zone some localities designated as areas with reduced rate were chosen.

For utilisation of local roads or their sections in the zone, or for utilisation of specified parking areas the price is determined. A document of payment is a parking ticket, or a parking card of the City of Olomouc. A driver, who parks with a vehicle in the zone or on specified parking areas is obliged in the time of charged parking to use correctly a valid parking card and to locate it behind the head window of the vehicle on the visible place, or by the same way to locate a valid parking ticket. On the parking card the information on month, day, hour and minute of parking beginning is indicated.

A driver can to buy a short-term parking card in the advance booking, or at policeman of the Municipal police, or a parking card in the automatic parking machine.

A long-term parking card can be given as unportable, it is with bringing up of the vehicle numberplate, or as portable. The long-term parking card enables to the driver to park in the zone or on specified parking areas according to the level charge for the term of 3, 6 or 12 month from the day of the parking card emission.

The City of Olomouc emits by means of the Municipal policy of the City of Olomouc a long-term parking card to the persons, fulfilling subsequent conditions:

- a) physical person permanently registered to the residence in the zone or in the direct neighbourhood of the specified parking area (further only resident) owning a vehicle, which is no material investment property for entrepreneurial activity,*
- b) resident owning a car, which is a material investment property for entrepreneurial activity, or using a car entrusted him by his employer, which has it arranged in a material investment property,*
- c) juridical or physical person, using in the zone or in the direct neighbourhood of the specified parking area a real estate for its entrepreneurial activity owning a car used to the entrepreneurial activity.*

Persons fulfilling conditions of letter a) have a claim for issuing of one long-term unportable parking card for reduced rate.

Persons fulfilling conditions of letter b), c) have a claim for issuing of two long-term unportable parking cards for full rate.

Municipal police of Olomouc can in the cases of special regard to permit for a person fulfilled conditions of letter b), c) issuing of three long-term unportable parking cards, when the third parking card will be make out for enhanced rate.

The Council of the City of Olomouc can decide about uncharged assigning of parking card from the reason of public interest.

From total number of stands in the zone or on specified parking areas may be determined not more than 10 % for reserved permanent parking places.

For the purpose of the supply ensuring can be established in the zone an adequate number of reserved permanent parking places, in the best conjuncted for more users and restricted by the time. Supplying vehicle can stop on this reserved permanent parking place for the time essentially necessary for loading or unloading of the load, when a driver of the vehicle is not obligated to use a parking card.

From the obligation to signify the vehicles standing in the zone or on specified parking areas by the parking ticket or by the parking card are exempted:

- a) users of motor vehicles with special marking, which can prove with respective certificate,*

- b) *users of vehicles of Police of the Czech Republic, Military police and Municipal police of the City of Olomouc in a service performance,*
- c) *users of vehicles of emergency or breakdown services in a service performance.*

Supervision over the following of the provisions of this public notice perform policemen of the Municipal police of Olomouc, which solve offences, made by the driver of the vehicle standing in the zone or on specified parking areas:

- a) *without parking ticket or respective parking card entitled to parking in the zone or on specified parking area,*
- b) *at incorrect utilisation of the parking card,*
- c) *at utilisation of the depreciated parking card,*
- d) *at getting over parking time, to which entitles parking ticket or used parking card,*
- e) *at unauthorised standing on the permanent reserved parking place.*

2. Study of Kroměříž

The city of Kroměříž is situated in the middle of Moravia (in the eastern part of the Czech Republic) in the lowlands on the river of Morava. It is the city of historical monuments, schools, art and culture. The city of Kroměříž was declared as the most beautiful historic country in the Czech Republic for 1997. Its complex of historical gardens and Archbishop castle was in December 1998 registered to the list of the world cultural heritage of the UNESCO. The town is the scenery of annual music festivals, exhibitions, professional conferences, symposiums and congresses. Comprehensive, technical, pedagogic and artist schools follow in traditions of education in Kroměříž.

The city of Kroměříž is created by the historical centre and surrounding build-up area of 1 770 ha, around it suburb parts of town extend. The total town area is 5 561 ha (1 ha = 100 m²), from this 610 ha is build-up area. The important share of the town area belongs to town verdure, above all to well-known parks.

(The whole district of Kroměříž, covering up the town surroundings, has 79 947 ha.)

The number of inhabitants, similarly in the whole Czech Republic, decreases gradually: 29 812 (1998).

The age structure of inhabitants: below 14 years - 16 %, 15 - 59 years - 66 %, above 60 years - 18 %.

(The whole district of Kroměříž has 108 731 inhabitants (1998) - from that the city of Kroměříž 27 %.)

Housing structure in the city: 4 100 houses, 11 000 flats (from this 3 700 flats in family houses).

Economic

In Kroměříž are registered about 5 000 economical subjects.

There is 4 578 unemployed, it is 8,6 % inhabitants in the production age (1998) in the district of Kroměříž.

In the district of Kroměříž the average monthly income was 10 011 Kč = Czech Crowns (it is about 285 Euro); in the Czech Republic 11 709 Kč (about 325 Euro) in 1998.

Accommodation possibilities

There is at present 19 accommodation facilities in Kroměříž

Transportation

Road transport

Network length 186 km, traffic performance 12 000 vehicles/day on the most loaded sectors. Roads are relatively on a good level, although in the future a project of the joining to the motorway network will help to solve the problem of overloading of the road network.

Public transport

Number of the bus lines: 6, length 24 km; they are operated by ČSAD Kroměříž, a.s. 86 stops, average attendance distance 6 min., average journey interval in the peak 30 min., otherwise 1 - 3 hours. Traffic performance in a day: in workdays 1050 km, on Saturdays 200 km, on Sundays 250 km.

Rail transport

Kroměříž is situated on the rail track Kojetín - Hulín, having a contact in these places with the main tracks. With Kroměříž is connected still one local track. Total day frequency is about 55 trains.

Bus transport

It is assured by ČSAD Kroměříž, a.s., which operates a connection on 27 lines passing through city of Kroměříž (besides still 6 lines of urban transport).

Individual automobile transport

There are 271 personal cars on 1000 inhabitants in the district of Kroměříž (1997).

61 % households has a car, average year driving distance is 14 650 km.

Inhabitants mobility

Modal split according to the most often used traffic mode (public, individual, cyclist, pedestrian) - data are from the survey from 1999.

type	(%)
urban public transport	30
individual transport	30
by foot	25,6
bicycle	14,4

Static transport - parking

About 720 parking places in the city centre, 380 in surrounding areas.

Parking times in the city centre:

- within 15 min.: 26,2 % vehicles
- 15 - 30 min.: 18,1 % vehicles
- 30 min. - 2 hours: 36,3 % vehicles
- over 2 hours: 19,4 % vehicles

Parking times in surrounding areas:

within 30 min.: 44,8 % vehicles
 30 min. - 2 hours: 30,3 % vehicles
 over 2 hours: 24,9 % vehicles

The average vehicle turn-over in the city centre was 5,58 on 1 parking place, in surrounding areas 3,08 on 1 parking place in the course of 8.00 - 18.00 in one day. Utilisation of parking areas was in the peak hours mostly between 90 - 110 %, but in some cases even till 150 % of planned capacity.

These dates are on the bases of the survey from May 1999 (CDV).

Technical services of the City of Kroměříž are entrusted by the operation and administration of charged parking areas and by the emitting of parking cards. The Municipal policy of Kroměříž is entrusted by the control of following of parking regulation.

Charge for parking ticket in Kč:

	30 min.	1 hour	further 6 min.
Central Square	5		1
other areas		5	1

Charge for parking card in Kč (according to the type of user):

	price	period (months)
persons with permanent residence	300	12
other	600	1
~	1 700	3
~	3 200	6
~	4 500	9
~	6 000	12

City administration - local legislative

Local administration is represented by the Municipal Authority of the City of Kroměříž. Affairs related to transport are controlled by the construction office and environment department.

Valid public notices of the Municipal Authority of the City of Kroměříž related to the parking:

Regulation No. 1/2000 on charged standing of vehicles in the City of Kroměříž

Public notice No.4/1995 on vehicles standing and entry to the chosen places and parts of the City of Kroměříž

Extract from regulation of the City of Kroměříž No. 1/2000 from the day 19. 12. 2000 on charged standing of vehicles in the City of Kroměříž

Specified local roads in the city centre (Town monument reservation) are possible to be used for standing of motor road vehicles for the limited time, but maximum 24 hours, for the price agreed in accordance with price regulation.

A charged parking area is marked with respective traffic sign and information on parking price and operation time of the parking area.

A refundment for parking on the charged parking area is documented by the parking ticket or by the parking card. Parking ticket or parking card must be located on the visible place.

Technical services of the City of Kroměříž are entrusted by the operation and administration of charged parking areas.

Price for parking time within 1 hour on the specified roads, except the Central Square: 5 Kč, for ever further 6 min. 1 Kč. Price for parking time on the Central Square: within 30 min. 5 Kč, for every further 6 min. 1 Kč. Persons, who have permanent or transient residence, workshop or seat in the city centre, can buy parking card in following prices:

a) persons with permanent or transient residence in the city centre: 300 Kč/year

b) other persons, being interesting in buying of parking card: for 1 month 600 Kč, for 3 months 1700 Kč, for 6 months 3200 Kč, for 9 months 4500 Kč, for 12 months 6000 Kč.

Parking cards are emitted by Technical services of the City of Kroměříž.

From the payment for parking are exempted for the necessary time:

vehicles of the City of Kroměříž and its organisations, vehicles of the integrated rescue system, breakdown vehicles and other emergency service at breakdown or other extraordinary event removal, vehicles of handicapped persons, one-track vehicles without numberplate, vehicles of physicians and employees of attendance service, visiting sick persons.

Vehicle standing on the specified local roads is regulated by the operation order. Operation order, approved by the City Council of Kroměříž, includes:

the name of the operator, operation time of the parking area, parking price, the way of its refundment and documentation of this refundment, rights and duties of the parking area operator.

The Municipal policy of Kroměříž is entrusted by the control of following of this regulation.

Breaking of this regulation can be punished according to the special regulations (the law No. 200/1990 on offences, and the law No. 128/2000 on communities).

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Extract from public notice No.4/1995 from the day 20.04.1995 on vehicles standing and entry to the chosen places and parts of the city of Kroměříž

Vehicles can move only through the roads determined to this activity. It is forbidden to drive to footpath and public areas, if it not by the traffic marking otherwise determined. The exception can be given only through the Department of services of the Municipal Authority of the City of Kroměříž and this only for the purpose of essentially necessary work performance.

On the roads and other public areas on the territory of the city of Kroměříž determined to this purpose is allowed to stand for all vehicles from 6 to 22 hours, if it is not excluded by other regulations and traffic marking. In the period from 22 to 6 hours is allowed to stand only for passenger cars, included their trailers.

On the footpaths and other public areas, which are not determined for vehicle standing and are not marked by related traffic marking, it is forbidden to stand for all vehicle types and theirs trailers and semi-trailers.

All operators of motor vehicles, for which it is forbidden to stand here according to this public notice, are obligated to assure the standing in own object or area.

For motor vehicle standing serves these public areas.

a) public parking areas

-without organised operation

- with organised operation

b) reserved parking areas

c) roads, if a vehicle stands in accord with the Public notice on road traffic.

An operation on the parking areas with organised operation is regulated by the operation rules, which are with accord of the Municipal Council of the City of Kroměříž issued by the operator of the parking area.

On parking areas and local roads can be reservation of a parking place extraordinary allowed by the Department of services of the Municipal Authority of the City of Kroměříž.

Buses standing are allowed only on the reserved parking areas, where it is allowed by the traffic marking.

On reserved parking areas it is allowed to stand only for holders of the valid permission, which must be during standing located visibly in the vehicle, or to stop the vehicle in accord with valid Public notice on road traffic.

Reserved parking place must be marked by the related traffic marking, which will be carried out by the authorised juridical person on the costs of the user.

For reservation of the permanent parking place on the local roads is taken a charge for the utilisation of the public area according to the public notice of the city of Kroměříž on local charges.

For the reason of permanent reservation of the parking place it is considered with the area of 12 m².

Conditions for the reservation of the parking place according to this public notice related only to personal cars, include connected trailer.

Chosen places and parts of the city of Kroměříž with reduced road traffic are determined in the centre of the city as a pedestrian zone.

3. Study of Liberec

North Bohemian city of Liberec is situated in the valley between Ještěd back and Jizera mountains. In the middle ages it was a market settlement. From the beginning of the 19th century intensive development of the textile industry and metal industry initiates. Liberec was in that time the second greatest city in the Bohemia (after Praha). It became the district seat and in the present from 2000 it is the region seat. At present, Liberec is the 6th greatest town in the Czech Republic, the important industrial, university and cultural centre and also the centre of the new-created region of Liberec. The great importance have Liberec exposition markets.

The total town area is 10 611,5 ha, from this 611,9 ha is build-up area, roads about 350 ha, parks 821,6 ha. Historical centre has the area 621,5 ha, territory with parking regulation is about 635 ha.

(The whole district of Liberec, covering up the town surroundings, has 92 792 ha.)

Number of inhabitants: 99 832 (from this in the productive age 66 101).

The age structure of inhabitants: below 14 years - 15,81 %, 15-59 years - 66,37 %, above 60 years - 17,81 %. The average age of inhabitants of Liberec is 38,8 years.

(The whole district of Liberec has 159 446 inhabitants (1998))

Housing structure in the city: 10 151 houses, 40 755 flats. The average number of persons living in one flat is 2,45.

Economic

The city of Liberec has 50 068 economical active persons, 6 175 unemployed.

In Liberec is registered 22 681 economical subjects (1999).

There is 6 605 unemployed in the district of Liberec(1998), it is 8,4 % inhabitants in the production age.

In the district of Liberec the average monthly income is 12 695 Kč = Czech Crowns (it is about 360 Euro) in 1999.

Accommodation possibilities

There is at present 101 accommodation facilities with total capacity 7 229 beds in Liberec.

Trade

There is 1208 shops with the sale area 105 023 m² in Liberec.

Education

Elementary: 32 elementary schools with 12 494 pupils.

Secondary: 23 secondary schools with 7 546 students.

University: 1 university (Technical University of Liberec) with 6 009 students.

Exhibition grounds (Liberec exhibition markets)

About 10 selling, exhibition and cultural action takes place here in a year with 189 000 visitors.

Transportation

Road transport

Network length 499 km, traffic intensity 26 000 vehicles in 24 hours on the most burdened sections.

Public transport

The operator is DPML, a.s. There are 3 tramway and 22 bus lines with 198 stops together in operation (40 for tramways, 158 for buses). Total network length is 216 km (tramways 27,3 km, buses 189 km). In 1999 were in the whole 56,040 mill. persons transferred by the public transport, from this 34,185 mill. by buses, 21,855 mill. by tramways. Traffic performances in 1999: total - 6,96 mill. vehkm, 569 mill. placekm, from this: buses - 4,96 mill. vehkm, 347 mill. placekm; tramways - 2,00 mill. vehkm, 222 mill. placekm.

Traffic performances and utilisation of urban transport in Liberec

	tramway	bus	total
mill. persons	21,855	34,185	56,040
mill. placekm	222	347	569
mill. vehkm	2,00	4,96	6,96
km/travel	10,2	10,2	10,2
travels/pers., year	219,5	343,3	562,7
km/pers., year	2229,2	3484,4	5713,5
travels/pers., day	0,6	0,9	1,5
km/pers., day	6,1	9,5	15,7
places/vehicle	111,00	70,00	81,75

Rail transport

Liberec is the intersection of 5 rail tracks (3 main and 2 secondary). Daily frequency is 135,6 trains of personal transport, 6532 passengers. Except the main station there are 2 rail stops in the town area.

Individual automobile transport

There are 31 586 personal cars in the district of Liberec (316,4 on 1000 inhabitants).

Cyclist transport

Total cyclist paths length is 3 km.

Pedestrians

Pedestrian zone has the area 28 000 m².

Inhabitants mobility

Modal split according according to the traffic mode:

type	(%)
urban public transport	35,9
individual transport	53,4
by foot	10,5
bicycle	0,3

Static traffic - parking

The first realised measure of parking regulation was the system of scraping cards covering the great part of the city centre. This system, however, turned up to be inoperative.

On the base of the analysis of the actual state of static traffic (from July 1999) followed, that the load of some localities is far over the limit of maximum capacity. Also functionality of actual system of scraping cards is very low and regulation effect almost none. This state has unfavourable influence above all on citizens, who live in these localities or have a workshop here. The second very consequential fact is a rotation of vehicles searching any place for parking.

From the new system was thus expected:

reduction of the number of automobiles traversing and searching any place for parking,

limitation of the automobile movement in the city centre, reduction of the occupancy rate under 80 %.

Tariff structure was proposed so, that citizens living in the zone pay minimum price for parking of its car (1000 Kč/year), in contrary vehicles of visitors group pay market prices (up to 20 Kč/hour).

One of the basic contributions is a traffic calming in the centre. The whole system is proposed so, that in morning hours a change of parking vehicles in resident - abonent localities occurs, which would be instead of residents filled by abonents. The load of these localities by the destination traffic during the day was relatively reduced.

Visitors entering in the city centre use localities with automatic parking machines. Occupancy of these localities attained earlier up to 140 %. After introduction of this system was expected reduction under 80 %. Visitor localities are concentrated above all in the commercial attractive localities so, that the attendance of commercial places would be secured.

The project of the charged standing zone with exactly specified localities for abonent and resident standing places (resident - person living, abonent - person with a workshop in the zone) and visitor standing places was elaborated. This system was put in the operation from the beginning of 2000. Its target was the traffic optimisation in the exposed parts, above all in the city centre, and enhancing of attraction of the public transport with the link on the public parking areas.

23 automatic parking machines were installed. The charged zone included in the 1st stage 692 parking places, in addition 49 parking places for handicapped persons vehicles were delimited. The zone was divided on 3 types of charged standing localities, namely for middle-term parking, short-term parking and short-term parking with the higher regulation rate.

In the 2nd stage, in half of 2000, small modifications of the zone scope, which in the whole 1100 parking places, from that 725 for visitors and 375 for residents and abonents, were carried out.

On the base of the statistic evaluation of the static traffic in the course of one-year zone operation, a necessity of the zone enlargement with the areas, which as escaping from the actual zone served and where capacity overfilling often occurred, turned up. Also the locality type division and respective charges were rearranged. These regulations are valid from the March 2001.

A number of parking places in the zone increased by 400 for visitors and 200 for residents and abonents, so that a total number of the places are now 1125 for visitors and 575 for residents and abonents. 21 new automatic parking machines were installed

In the end of 2000 also 2 parking houses with capacities of 414 and 82 places, with the acceptable prices for users, were put in the operation. The scope of their utilisation was connected with enlargement of the charged standing zone (in the 3rd stage). Parking houses are determined both for short-term, long-term and for night parking. They are located on two advantageous places right in the centre of the city of Liberec. Non-stop operation is secured by automate parking machines with non-stop service.

The administrator of the parking system (it is charged standing zone and parking houses) is the enterprise Technical services of the City of Liberec, a.s. in a cooperation with the firm Activ s.r.o. The Municipal police of Liberec carries out a control. Automatic parking machines are in workdays from 8 to 13 hours in the operation; outside this time the standing is free of charge.

The final target of the global parking regulation is a gradual parking places restriction on the roads, by the vehicles delimitation to the new constructed public parking areas and parking houses constructed on the central area perimeter, which would enable simultaneous application of the system Park & Ride / Park & Go, with the short attendance distance to terminals, public urban transport stops and targets in the centre.

2 further private parking houses with a capacity of 520 and 104 are in operation. A construction of further surface parking capacities and parking house with 500 places is in perspective.

All projected parking capacities would have a close connection with public urban transport or be situated in the acceptable attendance distance from the historic city centre. One of the planned localities is also the neighbourhood of the projected change terminal for regional and urban public transport.

A joining of covered parking areas and charged parking zone to Integrated transport system by the means a payment in the automatic parking machines through contactless chip cards is presumed, which will be applied in the public transport system too. In the frame of this system it will be able to offer, together with parking services, also other advantageous services connected with this (visits of cultural establishments etc.). In the present time also the project of City integrated system is elaborated, which part will be the introduction of information guidance system for drivers, which will lead them to the free parking capacities in the parking houses.

Also a solution of the parking situation on the housing estates is in the plan, partly by the means of capacity increase with new parking areas, include parking garages, partly by the means of creation of effective regulation system to reach the equilibrium between offer and demand.

Further parking capacities are disposable in surface great capacity parking areas at market centres on the city periphery, and that both actual, and planned.

Localities type division:

A - short-term parking with higher regulation rate

B - short-term parking

C - middle-term parking

D - long-term parking

R - resident-abonent parking

Charges in the parking zone in Kč (according to locality type):

	<i>30 min.</i>	<i>1 hour</i>	<i>further hour</i>	<i>max./day</i>
<i>locality A</i>	<i>10</i>	<i>20</i>	<i>40</i>	
<i>locality B</i>	<i>5</i>	<i>10</i>	<i>10</i>	
<i>locality C</i>		<i>5</i>		
<i>locality D</i>		<i>5</i>		<i>20</i>
<i>locality D (bus)</i>		<i>40</i>		<i>200</i>

Charges for parking card in Kč (according to user type):

	<i>year</i>
<i>resident, 1st vehicle</i>	<i>1 000</i>
<i>resident, 2nd vehicle</i>	<i>5 000</i>
<i>resident, 3rd vehicle</i>	<i>10 000</i>
<i>abonent, 1st vehicle</i>	<i>10 000</i>
<i>abonent, 2nd vehicle</i>	<i>15 000</i>
<i>abonent, 3rd vehicle</i>	<i>20 000</i>

Abonent cards will be sold also for the shorter period: 3, 6 or 12 month. These parking cards are emitted either as unportable for concrete vehicle, or as portable for the name of the card holder.

Charges in parking houses in Kč:

	<i>within 2 hours</i>	<i>further hours</i>	<i>max. for 12 hours</i>
<i>workdays (in the day)</i>	<i>5/hod.</i>	<i>10 - 20/hour</i>	<i>100</i>
<i>workdays (in the night), weekends</i>	<i>5/hod.</i>		<i>50</i>

<i>monthly all-day</i>	<i>1500</i>
<i>monthly night</i>	<i>1000</i>

Parking zone utilisation rate is 61,8 %.

City administration - local legislative

Local administration is represented by the Municipal Authority of the City of Liberec. Affairs related to transport are controlled by the Department of Development and Land Planning of the Municipal Authority.

Valid public notices of the Municipal Authority of the City of Liberec related to parking:

Regulation of statute City of Liberec No. 1/2001 on road motor vehicles standing on the specified local roads in the City of Liberec

Extract from regulation of statute City of Liberec No. 1/2001 on road motor vehicles standing on the specified local roads in the City of Liberec

It establishes the charged parking zone in the inner city on chosen local roads of the city, which can be used to road motor vehicles standing for a limited time, but for the maximum time of 24 hours, or for motor vehicles standing only for persons with the residence, workshop or seat in the delimited area, and determines prices for their utilisation.

Specified roads for road motor vehicles standing for a limited time are marked by traffic sign with supplement table specified charged standing time.

Specified roads for road motor vehicles standing in a holding of persons with the seat, workshop or residence in the specified area are marked by traffic sign with supplement table "For valid parking card holders".

It is permitted to stand on specified roads for all road motor vehicles after payment of parking price in the automatic parking machine for all standing time and location of the parking ticket on the visible place behind the head window for all standing time; motorcycle driver deposits the parking ticket with him and is obligated to submit it for the check. Outside the operation time of the automatic parking machine the standing is free of charge.

On the specified roads for road motor vehicles standing in a holding of persons with the seat, workshop or residence in the specified area road motor vehicles standing is permitted on this conditions:

a) this road motor vehicle is in holding or other authorised utilisation of the person, which has permanent residence, workshop or seat in the specified area,

b) holder of road motor vehicle has valid document on its technical condition and emission measuring,

c) for the time of road motor vehicles standing the parking card is located on the visible place (motorcycle driver deposits the parking card with him and is obligated to submit it for the check), which must content serial number and information of the card validity term, designation of specified road, for which the card is valid, name and surname, possibly name of holder or numberplate of vehicle, for which the card was assigned.

For everybody, who will fulfil these conditions, one parking card bound with the concrete holder or numberplate of the vehicle and specified road can be given. An emission of the second and further parking card is qualified by the sufficient parking capacity of the respective specified road.

The operator of parking areas on the specified roads is the statute City of Liberec. Parking cards are emitted, functionality of automatic parking machines and administration of parking areas is performed by the Technical services of the City of Liberec, a.s.

Control over the following of this regulation is performed by the Municipal police of Liberec.