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**TECHNICAL ASSISTANCE FOR
PARKING MANAGEMENT INITIATIVE IN KYIV**

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Final Report

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CALL TO ACTION: HOW TO IMPROVE THE PARKING SITUATION IN KYIV

The Kyiv City State Administration (KCSA) identified on-street parking mismanagement in Kyiv as a major issue for the city's quality of life, public budget and overall transport functions. In response to KCSA's request for assistance in parking reform, the United States Agency for International Development (USAID) commissioned this assignment and appointed a team of consultants who analyzed the current parking environment and prepared this assessment paper with short-, medium- and long-term recommendations on how improve the payment infrastructure, operations and relevant legislation.

The work was conducted over a four month period from July until October 2015 over 87 person days. The consultant team was comprised of three organizations including a Paris-based parking consultant; a New York based international transport and urban development specialist; and a Kyiv-based Ukrainian legal expert. By gathering foundational information in one place, this paper serves as an important first step in reforming parking in Kyiv.

While the consultant team's counterparts seemed to focus on legal matters, it turns out that **a lot can be done starting immediately to improve the current situation**. Given the legal obstacles preventing robust enforcement that would allow issuing fines for non-payment of fees in municipal parking places, no *significant* financial improvement to the existing parking situation can be expected in the short-term. While it appears there is no money in the municipal budget to invest in modern parking infrastructure, attracting a private investor is not feasible until essential components of the existing parking program are improved. International operators would only respond to a tender once the enforcement issue is resolved. Enforcement of traffic law violations must occur in conjunction with non-payment violations. Hence attracting investors to manage the municipal parking assets in the short run is unlikely.

The short-term recommendations serve as action steps that the Kyiv municipality can take to improve the system within the next year to increase the prospect of finding an international investor. The seven (7) steps outlined below form an action plan for improving the system now, including lobbying that can be done to pass the laws needed to enable enforcement:

1. Create a project unit

The first important step is to **create a working group** that would **convene all relevant city stakeholders until the on-street parking situation is improved**. The role of the group would be to review how the on-street parking situation is evolving.

2. Update the general parking policy

- **Update the Zonal Map**
- **Unify working hours within each zone** to simplify the system and make it more understandable to the public
- **Stimulate car turnover at parking lots** to improve access to the city for short-term users and increase revenue from the Parking Fee
 - * **Introduce a legal limit on the maximum period of use of day parking lots** – for example 3 or 4 hours maximum in Zone I, 24h in Zone II and III;
 - * **Differentiate monthly subscription tickets for residents** and other potential subscribers (such as commuters);
 - * Cancel the discount offered by daily subscription tickets;
- Draft a long-term parking policy in coordination with the long-term land use and transport plans for the city.

3. Improve parking information and clarify rules

- **Improve back-end information**
 - * A full inventory of public parking supply should be carried out (by another body than KTPS to avoid underreporting)
 - * GIS maps would be needed for planning purposes
- **Improve general information to the public** about how parking works through a website, map, leaflets and other communication channels (e.g. social media interaction with public)
- **Clarify on-site rules**
 - * **Improve signage** by indicating working hours and the payment Zone, at the very least. Include signage about off-street parking facilities nearby
 - * **Improve markings:** clear demarcation of individual parking spaces
 - * **Use physical obstacles such as bollards,** barriers and planters more comprehensively to contain illegal parking, , starting with Zone I
 - * **Make some unofficial parking places along the curb part of the official municipal parking supply** as long as they do not impede traffic

4. Improve administration of KTPS

Parking attendants seem to be the only solution to encourage drivers to pay in a situation where the legal tools to enforce the laws are insufficient. Their mere presence assures payment is made by at least some drivers.

To improve the revenue collection and reporting process, it is advised to:

- **Rotate attendants to different streets** on a regular basis to prevent them from becoming too familiar with drivers, resulting in evasion of their duty to encourage parking payment
- **Clarify system of payment**
 - * Payment should be allowed ONLY at parking meters when they exist
 - * Elsewhere, each attendant should have his/her own cash machine
- **Train attendants :**
 - * To ask for payment systematically, by sensitizing them to the stakes of on-street parking payment (such as stimulating car turnover and improving access to the city center);
 - * Not to take money and direct car users to use parking meters when they exist;
 - * Manage potential situations of conflict with car users refusing to pay;
- **Change agents that collect money from parking meters on a regular basis:** this is meant to avoid potential misappropriation of the parking fees by a pair of collecting agents;
- **Involve staff from the City Administration in revenue collection process:** this could be done occasionally, a few days per year on a random basis, or systematically;
- **Lease NIGHT parking assets systematically** instead of operating some directly, since it is more profitable.

5. Improve transparency

To improve transparency and reduce potential areas of corruption, the Kyiv City State Administration should also consider to:

- **Conduct an annual audit**
 - * **Financial:** check the books, the expenses, etc. It could be envisaged to replace a few parking attendants for a day to check fee collection
 - * **Physical:** random check of parking lots (e.g., number of parking places reported, occupancy rate, etc.)

During the first years, it may be preferable to resort to an external audit rather than the audit department of the KCSA.

- **Investigate into lease agreements** (financial and legal audit): estimation of the profitability of a few lease contracts, rate of renewal of those contracts, etc.
- **Investigate further** topics that could not be assessed in depth during the present assignment: organizational chart and revenue collection / reporting process in particular
- **Ask/oblige KTPS to systematize tenders for new lease agreements**
- **Ask KTPS to provide more complete information in annual reports** – concerning revenue in particular.

6. Improve communication to the general public

Beyond improving information to the public, the city may consider to:

- **Launch a PR campaign:**
 - * "Why pay", to sensitize the public to the Parking Fee and rules; and
 - * "Ask for a receipt", so that parking attendants may be incited to report the fees collected more systematically;
- **Consider organizing volunteers.**

7. Lobby in favor of legal changes

a. Transition to performance-based parking service

People's willingness to pay for parking may be encouraged by more services targeting local residents and businesses and providing various means of payment too.

There is also a clear need to stimulate car turnover at parking lots to increase revenues from the Parking Fee. This can be done by introducing a legal limit on the maximum period of use of parking lots during the day.

Lobbying measure: Amend the Kyiv City Council Decision on Municipal Parking Areas Development Concept dated 22.01.2015 No. 22/887

b. Ensuring effective sanctions

Law enforcement measures are very poor. More specifically, the Ukrainian law distinguishes clearly between violations of traffic rules and a failure to pay for parking, whereby the latter violation is punishable only by the administrative fine which is relatively low and the administration commission imposing them is understaffed. Furthermore, according to several court decisions, in case of a failure

to pay the Parking Fee, it is no longer possible to tow away cars and impose fines without the physical presence of the car owner.

In principle, recently adopted July laws will contribute to a greater use of municipal parking infrastructure by those drivers who previously preferred to park in breach of the traffic rules. At the same time, since the July law does not increase and improve sanctions for the failure to pay for parking, they will likely have no impact on compliance with parking rules.

Lobbying measure: Re-start lobbying of the draft law n°2228 to facility private investment in parking

c. Decentralization of parking regulatory framework and policy making

Parking legislation is extremely centralized. Ukraine's central government, the Cabinet of Ministers, plays too important a role in regulation of allocated parking lots and parking fees. It is not clear from the policy viewpoint why the competence of the national government should extend to regulation of parking space owned entirely by municipalities. The parking regulatory framework requires cardinal decentralization to make the applicable rules closer tailored to unique needs of parking users in Kyiv. At the same time, operation of car parks is less dependent on the government's will.

More specifically, the Parking Fee formula provided by the Cabinet of Ministers of Ukraine is inconsistent with how on-street parking is actually used. The potential Parking Fee levels and potential driver willingness to pay seem much greater. Hence the formula is an obstacle to increase the fees and does not comply with international best practice, in which fees are based on curbside occupancy levels. The lobbying effort can be coordinated with other Ukrainian cities.

Lobbying measures:

- Exclusion of the Kyiv parking from the Rules of Parking of Transport Vehicles adopted by the Resolution of the Cabinet of Ministers of Ukraine dated 03.12.2009 No. 1342.
- Exclusion of the Kyiv parking from the Procedure of Pricing for Services on Use of Paid Parking Lots adopted by the Resolution of the Cabinet of Ministers of Ukraine dated 02.03.2010 No. 258 (this may require amendment of the Law on Ukraine on Traffic).

d. Parking Charge reform

Although the Parking Charge exists, its rates and potential amounts do not seem to add significant revenue to the municipal budget yet. Moreover, the Parking Charge's amounts cannot be used to finance capital expenses of the city relating to the mobility infrastructure's development. There are no visible attempts to prioritize the fiscal effect of parking services in general. The actual public importance of the

Parking Charge is not high at the moment. The Parking Charge needs to be reformed by making it performance-based and target-oriented (i.e. accumulated specifically to finance mobility infrastructure development). The revenue generated by the Parking Charge could vary according to the actual revenue got from operators. This would particularly make sense if control is performed by an agent appointed by the Kyiv City Council.

Lobbying measures:

- Amend Article 268-1.2 of the Tax Code of Ukraine in order to link the amount of the Parking Charge to the car turnover on the parking lot, rather than its physical size
- Lifting up for Kyiv of the Clause 20-1 of Article 64 of the Budget Code of Ukraine requesting to use the Parking Charge to finance general fund of the Kyiv city budget, rather than the special fund aimed at capital expenditures.

e. Straightening legal basis for private operators / role of KTPS

KTPS, the municipal operator, is granted with exclusive status as the only appointed operator in Kyiv. It is not explained on the policy level why the Kyiv City Council or the Kyiv City State Administration are not in position to appoint other private operators to offer parking services independently from KTPS.

Stiffer competition in parking services will make them more performance-based. In case of a privately run parking scenario KTPS should be transformed into a vehicle specifically responsible for selection on behalf of the Kyiv City State Administration and control over performance by private operators and/or investment under municipally-funded parking development programs.

Furthermore, planning would best be handled by an entity which has a macro-level overview of the overall transport network functions beyond just parking. Functions of supervision and control may be delegated to a special parking project implementation unit created within the Kyiv City State Administration with participation of KTPS and municipal operators responsible for streets maintenance, public transport etc.

Lobbying measures:

- Suppressing of Clause 3 of the Kyiv City Council Decision on Improvement of Parking Lots in Kyiv dated 26.06.2007 No. 930/1591, establishing exclusivity of KTPS as the only parking operator in Kyiv;
- Adopting competitive tendering on selection of private operators to operate and maintain parking infrastructure in Kyiv

Success in implementing these seven action steps will ready the city to pursue the medium-term recommendations to establish:

- A modern parking pilot starting with 2,000 DAY parking places in the city center; and

- A long-term investment strategy in which the pilot is extended to a larger area of the city.

More specifically, DAY parking operation should rely on a functional automated system including updated parking meters and modern, digital means of payment such as mobile phone, SMS, credit card and internet.

The operator should be appointed through a transparent international tender. Two main legal frameworks could be envisaged: public procurement or investment tender.

KTPS may be restructured to oversee selection of a private operator, on behalf of the Kyiv City State Administration, and evaluate the performance of private operators and/or investments under municipally-funded parking development programs. The current parking attendants may be trained to become enforcement agents.

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INTRODUCTION

Objectives of the assignment

The Kyiv City State Administration (KCSA) identified on-street parking mismanagement as a major issue for the city's quality of life, public budget and overall transport functions. The elements most impacting these issues fall into four main categories:

- perceived (by the public) or real elements of corruption related to collection of payment,
- insufficient information available to the public for predictability in using the system
- lack of strong enforcement protocols (e.g., cars parked in legally demarcated spaces can be found over the lines),
- inefficient enabling laws and procedures (e.g., allowing sidewalk parking as long as there is a two meter clearance for pedestrians is in conflict with the intentions of the demarcated spaces on the sidewalks).

In response to KCSA's request for assistance in parking reform, the United States Agency for International Development (USAID) sought technical assistance to improve the parking management situation. It commissioned this assignment and appointed a team of consultants who analyzed the current parking environment and prepared this assessment paper with short-, medium- and long-term recommendations on how improve the payment infrastructure, operations and relevant legislation.

Presentation of the consultant team

The consultant team dedicated 87 total person days to the project and consists of:

- SARECO, a Paris-based parking consultancy;
- Institute for Transportation and Development Policy (ITDP), an international sustainable transport and urban development NGO headquartered in New York with offices worldwide; and
- GIDE, an international legal firm with a local office and Ukrainian legal experts based in Kyiv.

SARECO is a research and development bureau created in 1976 and based in Paris, specialized in the field of parking policies and facilities. Its activity concentrates on the study and the solving of parking issues. Its scope of interventions includes:

- Definition of parking policies in city centers: diagnosis of the current situation through various types of surveys, observations and analyses, parking planning, definition of the organization needed to control and run the parking facilities;

- Review of parking policies: control of the enforcement policy, re-orientation of objectives according to changing circumstances, reorganization of the way in which existing facilities are run;
- Studies for private parking companies: technical and economic feasibility, definition of the operating plan;
- Study and theoretical research.

SARECO was represented by **Christophe Bégon**, project manager and parking expert.

ITDP is a non-governmental non-profit organization that seeks to reduce greenhouse gas emissions and improve the quality of urban life by advancing sustainable transportation in cities around the world.

ITDP provides technical assistance to cities and local advocacy groups on a range of sustainable transportation and development issues. ITDP focuses primarily on developing bus rapid transit (BRT) systems, promoting biking, walking, and non-motorized transport, and improving urban development platforms. Other programs include parking reform, traffic demand management, and global climate and transport policy. ITDP is committed to promoting sustainable and equitable transportation worldwide.

For this assignment, ITDP was represented by **Michael Kodransky**, director of the parking and mobility management program.

GIDE is a premier international law firm and the first to have originated in France. Founded in Paris in 1920, the Firm now operates from 17 offices in 14 countries. Our 600 lawyers, including some 96 partners, drawn from 35 different nationalities and representing 41 of the world's bar associations, are recognized as being among the most talented specialists in all fields of national and international corporate law. We offer legal advice and assistance across a broad spectrum of disciplines to businesses, public and private sector institutions, investment funds and governments.

Established in Ukraine in 2006, Gide Kyiv successfully advises foreign investors, banks, international institutions, public authorities, individuals and leading local business groups on a broad range of legal issues related to investments and business activities in Ukraine. Our local team of lawyers provides first-rate legal services to clients in challenging legal and regulatory environments while promoting the Firm's best international practices.

More specifically, two people from Gide Kyiv worked on this assignment:

- **Bertrand Barrier**, a partner at Gide Kyiv and head of the Kyiv office.
- **Oleksiy Soloviov**, associate with Gide Kyiv since 2011, who is a member of the Ukrainian National Bar Association.

Methodology

Evaluation of the parking situation in Kyiv involved several components which are described further.

Analysis of Relevant Documents

The consultant team reviewed all parking documents, to the extent that they exist and were made available to the team, which had relevant information and data concerning the parking strategy, transport plans for long-term growth, annual reports, car ownership figures, transport patterns, financial figures from the KyivTransParkService (the municipal company that oversees collection of paid parking fees for DAY and NIGHT parking). A full list of documents reviewed can be found in the References Section (Annex I).

Field Observations

DAY parking was observed in the City Center and NIGHT parking was observed in residential districts such as Obolon. Conditions were noted through informal interviews with locals and parking attendants. Photos were used to identify the nature of parking problems.

Survey

The consultant team conducted a sample occupancy and duration survey around the Golden Gate during one weekday in September, after people returned from summer holidays and school was back in session.

NGO Stakeholder Engagement

In an effort to get a better understanding from civil society stakeholders on the parking problem as well as possible solutions, the consultant team organized a convening with local NGOs. Notes from the meeting can be found in Annex II.

Benchmarking

The consultant team compiled indicators and information from other European and global cities to compare Kyiv with some reference points. The consultant team also prepared a few case studies, presented in Annex VII, with more detailed descriptions of how challenges and particularly the parking problem was overcome.

Legislative Analysis

Legal experts on the consultant team conducted a thorough review of all national, sub-national and municipal laws that apply to parking.

Report Structure

The report is organized into three chapters:

- Chapter I provides background information and an evaluation of the on-street parking management scheme in Kyiv, including a financial and legislative assessment;
- Chapter II summarizes the various issues and conclusions identified, explains how they connect and includes discussions of the previous attempts to improve the situation in Kyiv;
- Chapter III is a discussion of the short, medium and long-term recommendations for improving the on-street parking system.

Chapter I

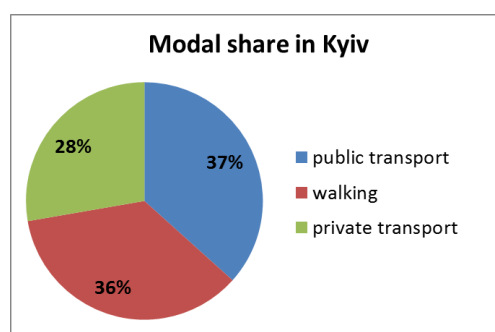
ASSESSMENTS, FINDINGS AND CONCLUSIONS

1. BACKGROUND

1.1. General information about mobility in Kyiv

Kyiv consists of 10 major administrative city districts with the highest concentration of jobs located in the City Center as well as in the Solomianskyi district, just slightly South.

It seems during weekdays that the City Center is overrun by private cars. Meanwhile, **private transport in Kyiv comprises just 28% of all trips.** Public transport and walking comprise a larger mode share, 37% and 36% respectively (World Bank, July 2015).



Compared to other major European cities, Kyiv has lower car ownership (based on household data collected in 2015 by the consulting group A+S). The table below illustrates car ownership in Kyiv compared to other cities in the region¹.

Cars per 1000 people	
Kyiv	213
Moscow	276
Mexico City	360
Barcelona	361
Stockholm	370
Amsterdam	395
Warsaw	593
Prague	688

If the administration's goal is to be a sustainable city, as other European capitals are striving to be, then retaining the mode share of non-motorized trips at existing levels while shifting motorized single-passenger car trips to alternative transport should be a long-term goal. Single passenger trips can be discouraged through on-street parking reform, in the way of more rational service delivery, and additional travel demand management measures—such as carpool lanes on roads leading to the City Center, low-emission zones and peak hour entry charges. Driving disincentives along with

¹ The shortcomings of this particular benchmarking is that it gives no indication of how access to destinations, particularly the employment core, is managed overall.

improved access to transportation alternatives (e.g., carsharing, bikesharing, carpool clubs) form a package of policy carrots and sticks.

Even while 90% of residents live within an hour of the city's main street Kreschatyk, some of the residential areas, such as Troieshyna in the northeastern part of the city, do not have comfortable public transport access to the City Center. The main mode of public transport to the City Center is by mini-bus (*marshrutka*) and the main roads during peak hours are significantly congested with suburban buses. This makes it less comfortable to reach the City Center for those without direct metro access. Furthermore, the metro stations in the City Center are spread far apart and transport access within the City Center is underdeveloped.

To date, no comprehensive plan looks at parking along with the transport network plans. In 2010, a working group in the Kyiv Urban Planning Department collaborated with Finnish experts on how to create parking transfer hubs, known as Park-and-Rides, at metro stations so that commuters would not drive into the City Center. The resulting report even indicated where signage should be placed so that drivers can notice it and be nudged into a car park at a terminal metro station. As of this writing, **only one Park-and-Ride has been developed** at Glushkova av.5

1.2. Description of the parking zonal map

On-street parking can be divided into two types of parking lots:

- **DAY parking** is mainly regulated during weekdays. The working hours vary from one parking lot to another. An hourly fee applies or valid subscription ticket (daily, monthly).
- **NIGHT parking** is intended for residents who can pay a flat fee per day/night. Monthly tickets also exist. These parking spaces are found in residential neighborhoods with high overnight parking demand.

The Park-and-Ride at Glushkova av.5 has its own special tariffs.

The map below shows that the regulated area is comprised of **three parking zones**: Zone I, Zone II and Zone III. Each zone has a different fee level. The parking fees for one hour are 10 UAH, 7 UAH and 5 UAH respectively.

Zones II and III include both DAY and NIGHT parking, whereas there is only DAY parking in Zone I.

The highest concentration of jobs in Kyiv corresponds to the zone with the highest parking fees (Zone I). The zonal map was created by the Transport Department based on the historical contours of the city. However, **these boundaries do not correspond well to current land uses and the actual demand for parking during the weekday**. Parts of Zone II in Kyiv have an equally high concentration of jobs as Zone I, thereby exhibiting similar parking patterns.



According to the KTPS 2014 annual report, about 18,500 on-street parking places were operated that year, as shown in the table below. During the summer of 2015, KTPS added 14,000 more NIGHT paid parking spaces (mainly in Zone III).

	DAY parking	NIGHT parking	TOTAL
Zone I	1,200	0	1,200
Zone II	2,400	400	2,800
Zone III	3,500	11,000	14,500
Total	7,100	11,400	18,500

Figures for **2014** rounded to one hundred

1.3. Level of fees

Below is a table that shows how the most expensive fee in the City Center of Kyiv in Zone I compares to other cities in the world.

Cost of First Hour in City Center, USD (2015)	
Kyiv	0.46
Warsaw	0.81
Moscow	1.18
Vienna	1.36
Budapest	1.60
Tel Aviv	1.63
Prague	1.80
Lyon	2.23
Barcelona	2.80
New York	3.50
Amsterdam	5.70

In an attempt to further put this in perspective, below is a cost comparison of the hourly parking fee in these cities in relation to other commodities. It underscores that **the current parking fee is rather low in Kyiv.**

Cost Comparison of One Parking Hour with other Commodities (USD)

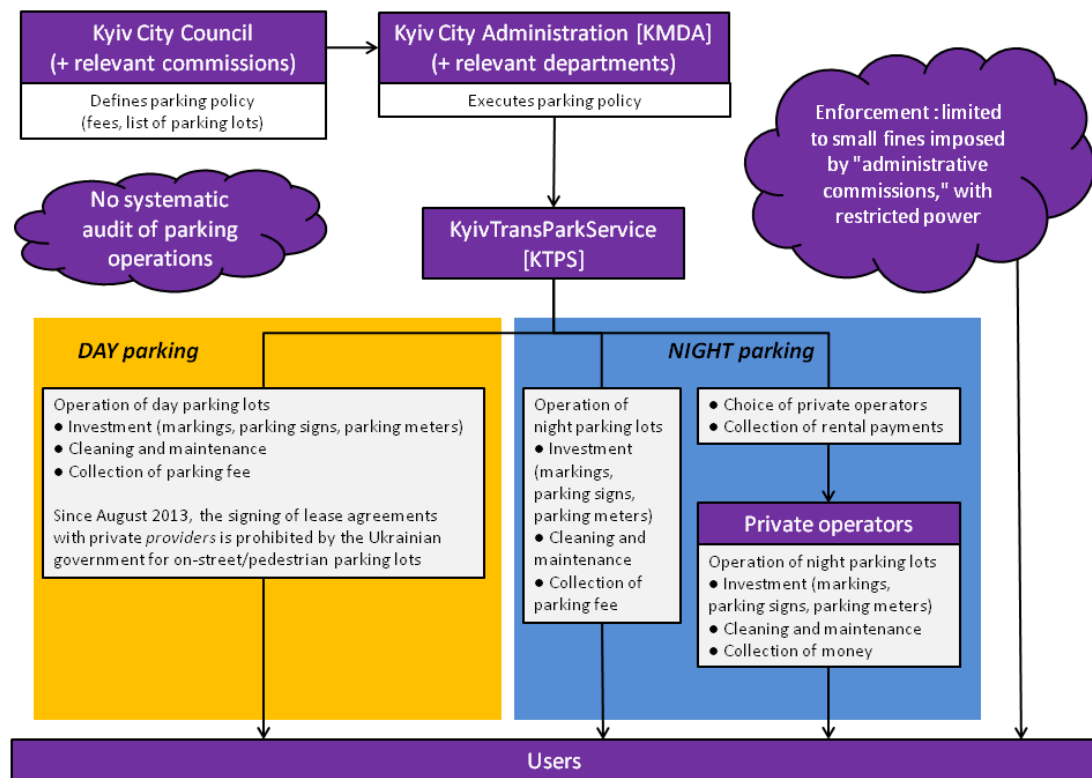
City	Cost of One Parking Hour in City Center	Liter of Regular Milk	Dozen Eggs	Kilo of Potatoes
Kyiv	0.46	0.63	1.03	0.32
Warsaw	0.81	0.71	1.76	0.43
Moscow	1.18	1.03	1.38	0.71
Vienna	1.36	1.21	3.45	1.75
Budapest	1.60	0.82	1.73	0.66
Tel Aviv	1.63	1.59	3.35	1.15
Prague	1.80	0.80	1.51	0.65
Lyon	2.23	0.95	3.35	1.83
Barcelona	2.80	0.92	2.02	1.06
New York	3.50	1.15	3.28	2.92
Amsterdam	5.70	1.03	2.65	1.56

Analysis carried out on September 23rd 2015 from figures given on the www.numbeo.com website. Red indicates commodity is more expensive than an hour of parking.

2. LEGAL AND INSTITUTIONAL FRAMEWORK

2.1. On-street parking governance in Kyiv

The organigram below illustrates how on-street parking in Kyiv is governed.



KyivTransParkService (KTPS), a municipal enterprise, exclusively manages both paid DAY and NIGHT Parking. Private operators are granted leases by KTPS to operate some NIGHT parking lots for a flat fee.

More information about parking policymakers can be found in Annex VI.

2.2. On-street parking operation

2.2.1. Municipal operator: KyivTransParkServis (KTPS)

Article 28-1 of the *Law of Ukraine on Urban Landscaping* imposes an obligation to maintain streets network and parking lots on owners (i.e. municipalities and regions) or companies holding these objects on their balance sheets (the so-called “balance-holders”). A similar provision is set out in the Law of Ukraine on Road Traffic.

In Kyiv, paid parking lots were operated by a municipal operator Kyiv Park Servis – a predecessor of KTPS. For some period of time in the 2000s, operation of paid parking lots was delegated to district operators controlled by city district administrations, as an attempt to increase its efficiency².

However, **in 2007 KTPS was appointed to be the exclusive operator of parking lots**, tax agent and issuer of subscription tickets, in accordance with the decision on Improvement of Parking in Kyiv.

In accordance with its by-laws, KTPS is granted with the following rights relating to operation and maintenance of parking lots:

- To receive its own revenues, budget subventions, and loans;
- To perform commercial activities independently;
- To use municipal assets and lease them out subject to approvals by the Kyiv municipality;
- To take part in investment programs;
- To appoint third persons to act as operators of the parking infrastructure.

The financial plan of KTPS is subject to approval by the Kyiv City Administration on an annual basis.

KTPS is also tasked with planning new parking places but does not have an overview of how that fits with overall transport network plans. While KTPS has approximately 556 employees, the Transport Department has capacity constraints with only 36 people on staff.

Given this responsibility for creating new parking places, KTPS has the authority to acquire municipal land without tender or cost.

² <http://gpu.com.ua/content/kievskaya-parkovka>

2.2.2. Private operators

In accordance with the National Parking Rules, third companies, other than operators, are prohibited from the use of on-street parking lots and parking lots in pedestrian area, that is to say most of the **DAY parking** supply. At the same time, in accordance with the Kyiv Parking Rules, a private company may be an appointed operator of parking lots under a respective agreement with KTPS. **KTPS is allowed to subcontract certain parts of operation and maintenance of on-street parking lots to third private companies, remaining the exclusive operator.** A prior tender is required in this case.

KTPS is also allowed to grant contracts to private operators for the operation of NIGHT parking (mainly). In 2014, among the 11,400 NIGHT parking places operated throughout the City, KTPS managed only 400 of them with the 11,000 remaining ones being operated by subleasees.

2.3. Parking CHARGE and Parking FEE

2.3.1. Parking CHARGE

A. Historical background

Since 1990s and until the 2010 tax reform, a parking charge was imposed on users of parking lots (a collection of several parking places). In line with similar concepts existing in other cities, the parking charge amount depended on parking demand rather than the number of square meters of the parking lot. However, the parking charge was constantly underpaid and the cost of its administration was too high due to a lack of effective enforcement mechanisms (which is quite typical for the Ukrainian tax system).

Due to the tax reform of 2010, the above parking charge was substituted by a **parking charge proportional to the number of square meters of the parking lot and payable directly by parking operators without any connection to parking demand.**

B. Payers of the Parking Charge

The Parking Charge is one of local taxes regulated by the Tax Code of Ukraine and the Kyiv City's Regulation on Local Taxes. By nature (as it follows from Article 268-1 of the Tax Code), it is a charge paid in connection with the use of municipal parking lots or parking lots built with municipal funds. It must be

calculated and paid to the Kyiv City budget only by those parking operators specifically appointed by the Kyiv City Council, that is to say only KTPS currently.

C. Rates and calculation mechanism

The Parking Charge rates vary from 0.03 to 0.15% of the statutory minimum wage in Ukraine depending on the applicable city zone.

The Parking Charge is calculated on the basis of the above-mentioned rates and the size of the land plot in square meters in use by KTPS. The list with addresses of the relevant land plots is defined by the Kyiv City council.

D. Beneficiaries of the Parking Charge

The Tax Code of Ukraine defines the Parking Charge as a local charge, which is collected for and credited to the Kyiv City budget.

Ukrainian legislation does not impose an obligation on the Kyiv City Council to spend the revenue from the Parking Charge for financing development of the parking or mobility infrastructure.

Currently, the Kyiv City Council is prevented from using the Parking Charge to finance capital development of parking infrastructure. More specifically, in accordance with the Budget Code amendment introduced in January 2015, **the Parking Charge must go to the general fund of the municipal budget**, rather than a special fund used for capital expenditures.

At the same time, the Budget Code of Ukraine explicitly prohibits creation of any out-of-budget funds. It would, therefore, not be possible to create a special parking fund to accumulate the Parking Charge amounts there.

To a certain extent the above budget law restraint may be compensated by attracting municipal subsidies. However, the Ukrainian legislation does not authorize municipalities to grant direct loans to any legal entities. Rather than giving loans, municipalities are allowed to co-finance investment projects in case such projects receive necessary approvals by the Ministry of Economy of Ukraine (Articles 3 and 12-1 of the Law of Ukraine on Investments Activity). A list of investment projects should be in the draft municipal budget (Clause 2 of Article 76 of the Budget Code of Ukraine), whereas capital expenditures in connection with investments projects comprise a part of the "development budget" – a special fund of the municipal budget (Clause 2 of Article 71 of the Budget Code). From the practical viewpoint, the co-financing may involve KTPS as a direct recipient of budget funds. Therefore, the co-financing option is practically limited to such operations as compensation of interest rates under loans concluded by KTPS or financing of public procurement by KTPS.

E. Drawback of the current legal model of the Parking Charge

As the Parking Charge is not performance-based, any improvement to parking turnover at parking lots has no effect on the operator's tax obligations.

No draft law currently exists to reform the Parking Charge based on how parking demand is managed. For example, Draft Law No. 2635 slightly changes the Parking Charge rate, but not how it is calculated. It can be concluded that the Ukrainian Parliament currently is not interested to prioritize the fiscal effects of paid parking.

Furthermore, the Kyiv Parking Infrastructure Development Concept (see Chapter II4.3) explains the inefficiency of the Parking Charge with a "hidden conflict of interests", further to which the operator is not interested in creating official parking spaces, as it will create the obligation to pay additional fixed payments to the budget regardless of their actual utilization rate and revenue.

2.3.2. Parking FEE

The Parking Fee is charged on an hourly basis to users of parking services, depending on the parking zone.

Payment for parking can be performed through cash payments, purchasing of parking cards and mobile payment procedures.

The Kyiv Parking Rules provide for various types of subscription tickets, including hourly, monthly and long-term parking cards.

A. Historical background

In the 2000s, the Parking Fee was collected from users of parking lots simultaneously with the Parking Charge. It seems that both the national government and municipalities were reluctant to control the formation and use of collected Parking Fees, at least until the end of the 2000s. Operators were given discretion to define the amount of the Parking Fee.

In 2007, the Parking Fee in Kyiv reached 30 UAH per hour, which is three times as high as the maximum Parking Fee existing today (2015).

The above approach began to change in 2007, when the Antimonopoly Committee of Ukraine (the "AMC") imposed fines on parking operators in Kyiv, because it considered their parking fees as abuse of the dominant position on the market. As reported by the AMC, the fees for parking services were not economically justified and approved by the City Council. This was found to constitute a direct violation of Ukrainian law.

In 2010, the Cabinet of Ministers of Ukraine introduced a unified procedure for calculation of the Parking Fee which is mandatory for all municipalities of Ukraine. The validity of this extremely centralized approach was then re-confirmed by the Ukrainian Parliament in 2012 through amendment to the *Law of Ukraine on Urban Landscaping*.

B. Parking Fee regulation

The calculation of the Parking Fee is regulated by the Procedure of Pricing for Services on Use of Paid Parking Lots adopted by the Resolution of the Cabinet of Ministers of Ukraine dated 02.03.2010 No. 258 and thus cannot be changed by the operator.

Article 52-2 of the *Law of Ukraine on Road Traffic* obliges persons, who park their cars on paid parking lots, to pay for parking on an hourly basis in accordance with tariffs established in line with the tariff regulation of the Cabinet of Ministers of Ukraine.

Further, Clause 3 of Article 28-1 of the *Law of Ukraine on Urban Landscaping* requires municipalities to adopt the Parking Fee strictly on the basis of a calculation formula provided by the Cabinet of Ministers of Ukraine.

We may, therefore, conclude that the Parking Fee's amount is currently under control of the Ukrainian government. More specifically, **the Kyiv City Council may not use a different formula when establishing the amount of the Parking Fee in Kyiv, other than the unified formula set out by the Cabinet of Ministers of Ukraine for the entire territory of Ukraine.**

In terms of social consent, the law does not provide for any specific mechanism of approval of the Parking Fee's amount directly by local communities (e.g. through a local plebiscite and the like). However, in the opinion of the Higher Administrative Court of Ukraine (Ruling dated August 16, 2012 on the case of a private person v. Odessa City Council), the municipality must study various regulatory impacts of the Parking Fee before taking the decision to introduce it.

Regulation of the Cabinet of Ministers of Ukraine on Parking Fee dated March 2, 2010, No, 258 defines the Parking Fee as a payment for maintenance and servicing of lots of paid parking, which is calculated according to a schedule of the Operator's maintenance costs.

The Parking Fee formula is quite detailed and includes the following elements:

- car turnover per each particular parking lot;
- profitability level;
- capital expenses;
- financial obligations before creditors;
- fees charged by subcontractors and consultants contracted by the operator;
- availability of free-of-charge parking places for disabled persons.

The Parking Fee must be different for allocated and specially equipped parking lots (Clause 3 of the Regulation).

Certain elements of the formula are calculated based on the valid state standards of Ukraine. Kyiv City Council cannot derogate from these standards in favor of other international standards³.

C. Other taxation aspects

Pursuant to the Ukrainian tax laws the value added tax ("VAT": 20% currently) is levied to the Parking Fee.

The received or paid sums of the Parking Fee contribute to the gross revenues or gross expenditures of the Operator or customer respectively.

D. Specific rules applicable to operation of paid parking lots

Car drivers are obliged to respect the Rules and duly pay for parking in accordance with Clause 17.12.5 of the Kyiv Parking Rules. A similar provision is provided in the National Parking Rules.

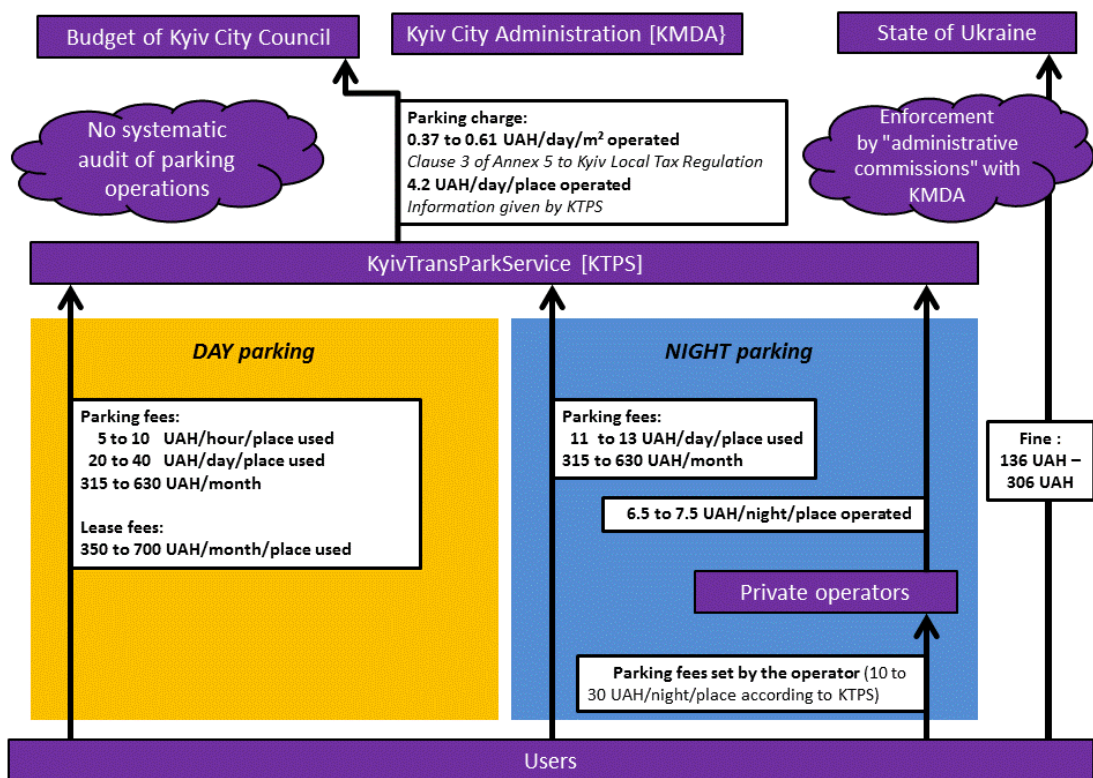
- **Paid parking lots must be allocated in line with street traffic rules subject to the approval of the State Automobile Inspectorate** (Clause 17.3.2 of the Kyiv Parking Rules).
- **Paid parking lots must be equipped with parking meters, also known as park-o-mats** (Clause 14 of the National Parking Rules).
- **It is also mandatory to indicate paid parking areas with a street sign** (Clause 17.3.2 of the Kyiv Parking Rules).
- At the same time, **neither the National Parking Rules nor the Kyiv Parking Rules limit the maximum period of use of parking lots.** More generally, we found **no law provisions prioritizing the increase of vehicle turnover at parking lots.**

³ Due to timing restraints we were not able to list here all the relevant state standards. However, as an example, the reference could be made to the following standard, which is mandatory to calculate planned fuel costs: Rules on Definition of Fuel Costs in Social Servicing Activities as adopted by the Resolution of the Cabinet of Ministers of Ukraine dated 15.07.1997 No. 786 [public access] - <http://zakon5.rada.gov.ua/laws/show/786-97-%D0%BF>

2.3.3. Financial flows

The next diagram shows where fees from users of municipal parking services travel after collection. As a summary:

- The Department of Transport, which is part of the Kyiv City Administration (KMDA), sets the parking policy.
- KTPS has the duty to collect parking fees from municipal parking places.
- KTPS must then use the revenue to pay a Parking Charge to the Kyiv City Council budget based on the number of parking places it oversees.



2.4. Enforcement

2.4.1. Administrative fines

A failure to pay the Parking Fee qualifies as a minor offence under the Ukrainian law if a car was parked at the parking lot equipped with parking meters (Article 152-1 of the *Code of Ukraine on Administrative Offences*).

A failure to pay for parking is punished with a fine of maximum UAH 204 (approx. 10 USD dollars). The amount can be lower if the violation is not a repeated offence. The amount of the fine should be finally established by the administrative commission with the Kyiv City State Administration, as required by the Code of Ukraine on Administrative Offences (see further discussion below).

2.4.2. No presumption of guilt of the car owner

Ukrainian law excludes presumption of identity between the person who drives the car and the person who owns it. In 2010 the Constitutional Court of Ukraine found that where the applicable law provides for sanctions against the person driving the car, the car's owner cannot be penalized, unless there is evidence that the latter was actually driving it. In other words, the penalty in Kyiv is issued to the driver, not the vehicle owner, and the driver must be present to accept the penalty. The owner of the car cannot be penalized, unless there is evidence that s/he was the one who parked the car.

2.4.3. Administrative commissions

The law stipulates that fines are imposed by so called "administrative commissions" of the city administration (Article 218 of the Code of Ukraine of Administrative Offences).

From our talks with the stakeholders we understood that **the administrative commission of the Kyiv City Administration is not capable of effectively overseeing fines**, partially due to lack of human resources and poor logistics.

Records on (protocol) failure to pay the parking fee are supposed to be made by the personnel authorized by a municipal administrative commission.

2.4.4. Parking operators

The Kyiv Parking Rules grant officers of the operator with rather vague and broadly formulated authority "to control payment of the Parking Fee".

In addition, Clause 17.4.1 of the Rules entitles them to appeal to the traffic police in case if a car parked without payment of the Parking Fee obstructs street traffic.

However, **parking operators are not authorized by law to specifically issue fines.**

2.4.5. July 2015 laws relating to prosecution of traffic rules violations

On July 2, 2015 the Ukrainian parliament adopted a new law on the national police⁴. Additionally, on July 14 the parliament voted for improvement of law enforcement means in case of violation of traffic rules⁵.

The July 2 law provides for a new national police, which is responsible for prosecution of violations of traffic safety rules. For this purpose the law amends specifically the Code of Ukraine of Administrative Offences (new Article 222). However, **the National Police is not authorized to prosecute and impose fines for a failure to pay for parking.**

The July 14 law recognizes **car towing and photo-capturing in case of a breach of the traffic safety rules, but not in case of a failure to pay for parking** (Article 14-2 of the law).

Remark: employees of KTPS or third private agents are not authorized to photo-capture cars parked without payment.

2.4.6. Towing Cars

Towing away of cars in Kyiv was disrupted in the last years. In accordance with Clause 56 of Article 26 of the *Law of Ukraine on Local Self-Governance*, the Kyiv City Council is empowered to regulate removal of cars parked outside of parking lots. At the same time, the Kyiv Parking Rules envisage **a possibility to tow cars only if they are parked in violation of the Traffic Safety Rules** (Clause 17.2), **excluding non-paying users.**

The tow trucks of the municipality started to actively operate in 2005. Their activity led to mass lawsuits from owners of private vehicles based on the argument that tow trucks were breaching ownership rights of the drivers. At the end of the day the City Prosecutor's Office sustained the claims of the offended parties and won in the first and second court instances in the case for invalidation of the provision of the Parking Rules allowing Public Utility Company KyivDorService to temporarily tow away transportation vehicles that were parked in violation of the Traffic and Parking Rules.

At the end of 2000s the practice of towing cars was stopped. In 2009 the Cabinet of Ministers of Ukraine tried to re-introduce the right of municipalities to tow cars away from streets in case of a failure to pay the parking fee (Clause 31 of the National Parking Rules).

However, in two resolutions – dated September 14, 2011 and March 26, 2014 – respectively the Kyiv Administrative Court and the Higher Administrative Court of Ukraine found that the government exceeded its competence, because the question must be regulated by the statutory law (an act of the parliament).

⁴ <http://zakon2.rada.gov.ua/laws/show/580-19>

⁵ <http://zakon3.rada.gov.ua/laws/show/596-19/paran7#n7>

Currently, the towing of cars must be sanctioned by officers of the national police in cases mentioned in the Code of Ukraine of Administrative Offence, which are, generally, a breach of traffic rules, rather than a failure to pay for parking (Clause 10 of the Resolution of the Cabinet of Ministers of Ukraine on State Automobile Inspectorate). In accordance with Clauses 15.1 and 15.2 of the Traffic Rules car drivers may park cars either at allocated parking lots, or if there are no such lots available - alongside of streets, save for places, where parking is explicitly prohibited in accordance with these rules. At the same time, the Ministry of Internal Affairs is entitled to tow cars in cases explicitly provided in statutory laws (Article 52-1 of the *Law of Ukraine on Traffic*).

2.5. Summary of main issues identified

The main legal issues identified are:

- Violators of Traffic Safety Rules or Parking Rules must be present for a fine to be issued since there is no presumption of guilt of the car owner;
- Employees of KTPS or third private agents are not authorized to report cars parked without payment using photo-capturing;
- Neither the National Police nor the authorized employees of KTPS have the power to issue fines, block or tow cars for fail to pay for parking;
- Administrative liability is limited only to violations that occurred at parking lots equipped with park-o-mats;
- The parking charge cannot be dedicated to a special mobility/parking fund;
- The parking charge is flat and not performance-based: it has no connection to parking demand;
- The national-wide parking rules and the parking fee formula lead to unjustified over-centralization of the paid parking area.

Remark: the July 2015 law is likely to contribute to a greater use of municipal parking infrastructure by those drivers who previously parked in breach of the traffic rules. At the same time, since the July law does not increase and improve sanctions for the failure to pay for parking, the July laws will likely have no impact on the compliance with parking rules.

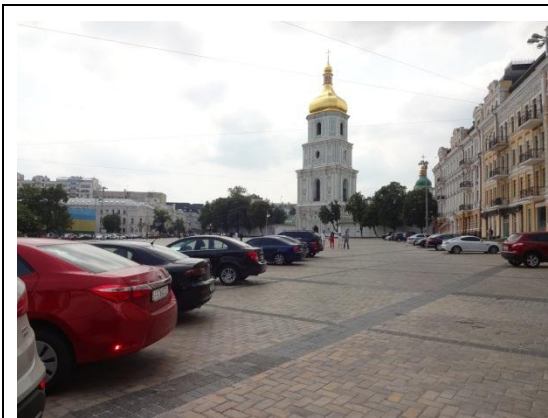
3. ON-SITE OBSERVATIONS

3.1. Parking behavior

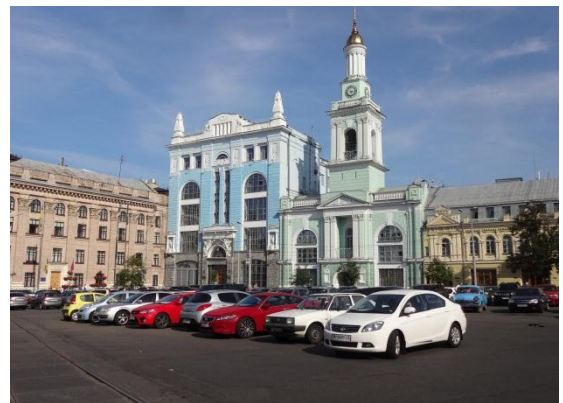
The on-street parking situation in Kyiv, and by extension the street management and transport access to the city's employment core, appears chaotic.

In particular, **public space is oversaturated by cars, which generates a nuisance for all users of the street, raises safety concerns and projects an image of urban disorder in the city center.**

The street management environment seems to prioritize transport access by private car as there is limited dedicated space allocated to alternative means of transport such as trolleybus lanes or cycling infrastructure.



The pedestrian square in front of Saint-Sophia invaded by cars

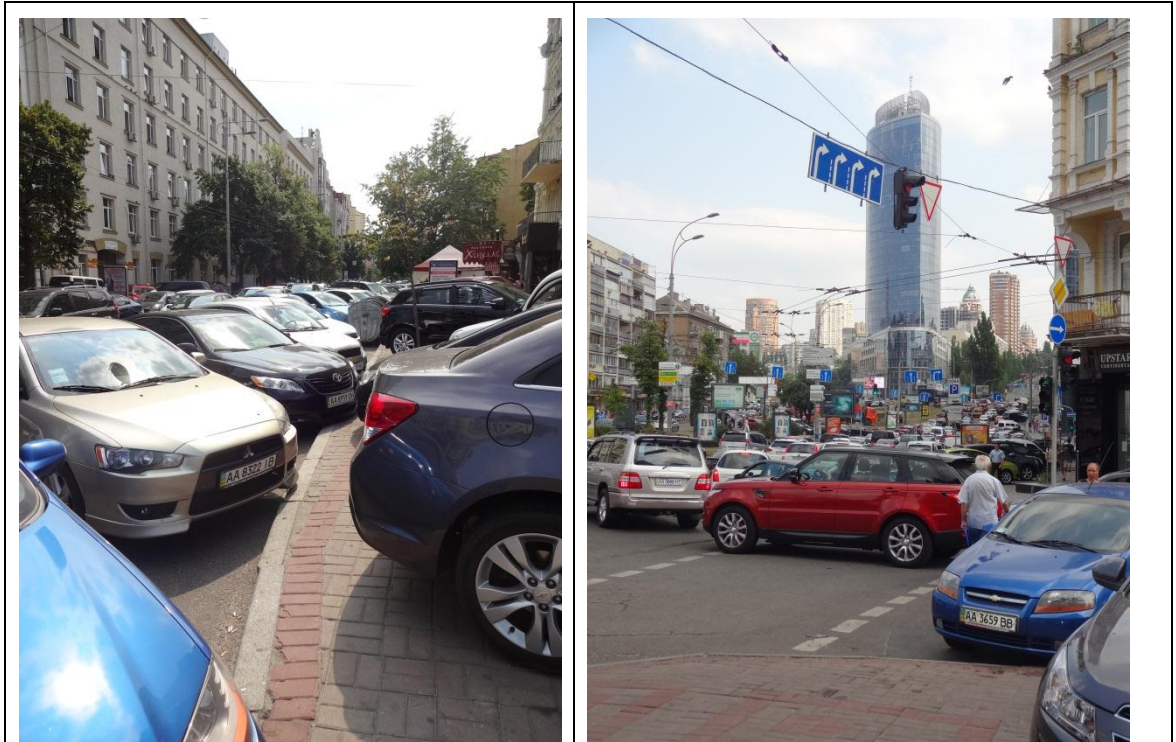


A square invaded by cars (no street markings) in Podil

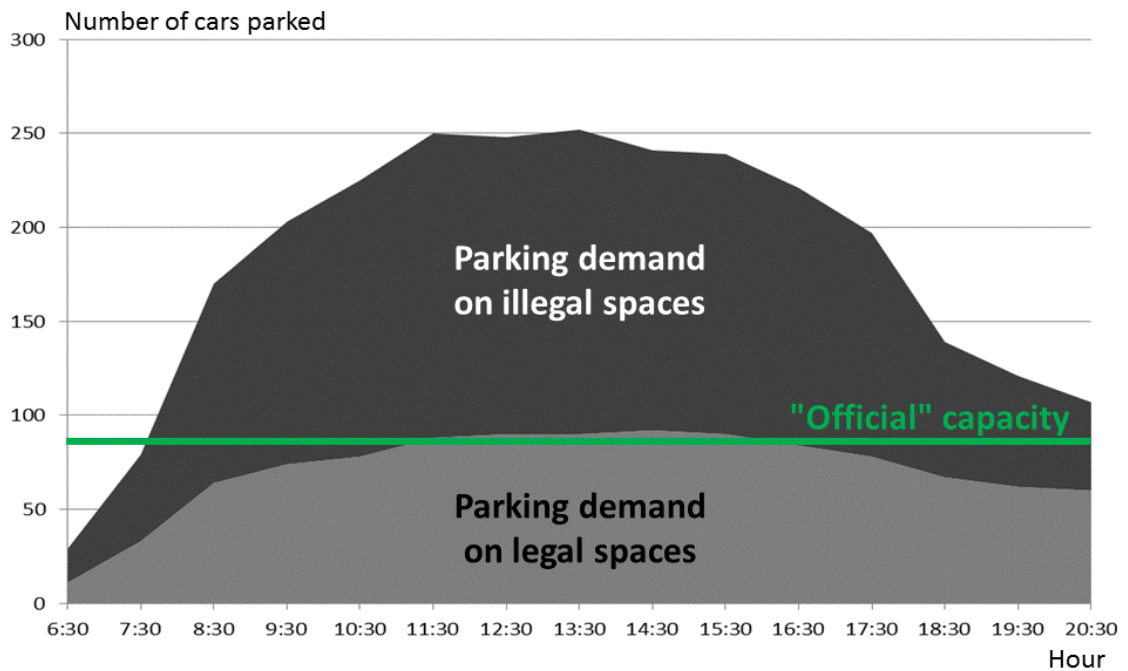


Cars parked on the sidewalk of Khreschatyk av.





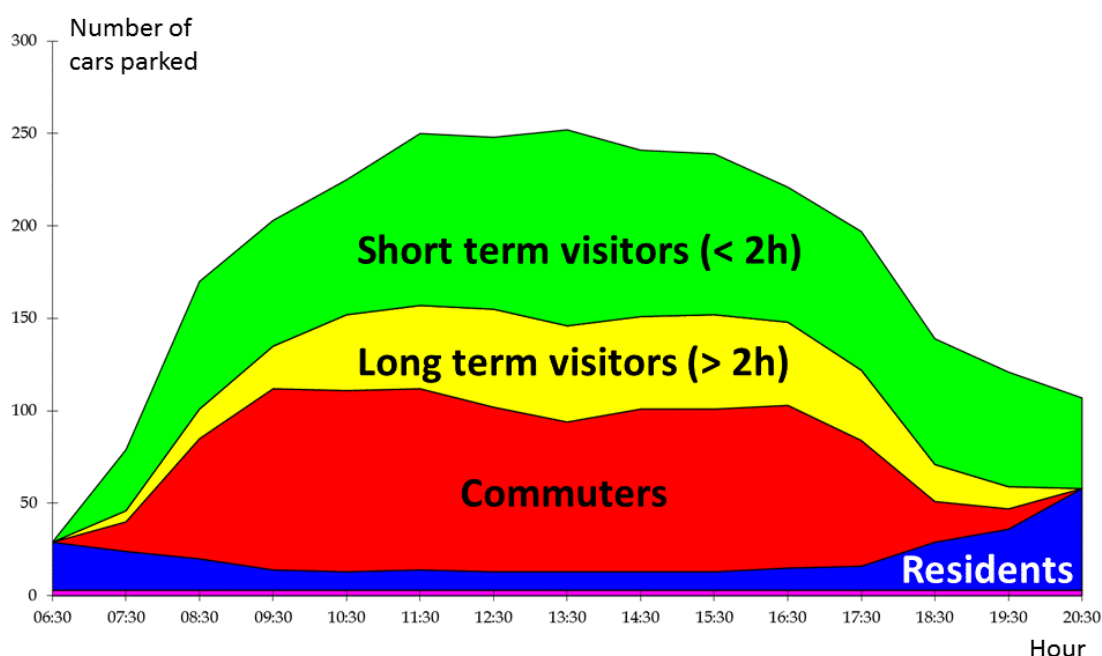
As an illustration, a survey conducted in the City Center near the Golden Gate and the National Opera showed that during the peak hours, parking demand was three times as high as the official parking supply (see more details in Annex III).



Drivers park everywhere without paying much attention to traffic rules. More specifically as regards parking users and durations, the survey conducted in the City Center showed that:

- Short-term parking demand is high in Zone I and the surrounding parts of Zone II; meanwhile,
- **Commuter demands are high at peak hours whereas the area is very central and has several metro stations;** and
- Residential demands are low: this may be explained by the existence of substantial parking supply in courtyards – sometimes public and used without any legal basis.

These results are illustrated by the graph here after. Annex III includes a more detailed analysis.



There is a general impression that the system needs to be fixed on multiple fronts. **To date, no robust analysis has been done of the demand and supply** (i.e., amount depending on various times of the day/week, user profiles, parking duration and other conditions).

3.2. Unclear rules

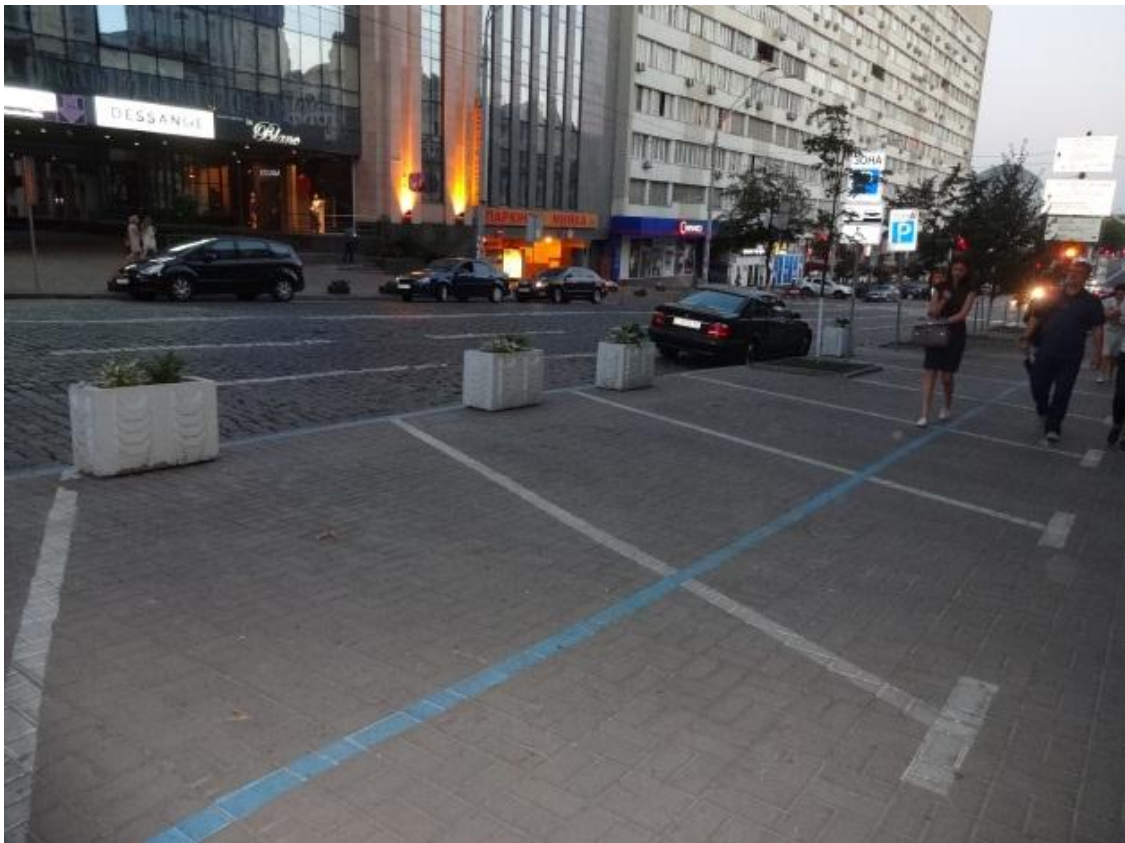
Adequate information to the general public is missing, including:

- The KTPS website (<http://parkservis.kiev.ua/>), which should be the first point of entry for most drivers seeking information about the city's parking rules, currently lacks a map on the home page, social media access points and a robust FAQ section. It is outdated.
- No indication to drivers if they are in the Zone I, Zone II or Zone III payment area. This is especially relevant to drivers who are visiting Kyiv from outside of the city and are not familiar with the local situation.
- Working hours when parking regulation apply, which usually can be found on street signs.
- Clear signage about valid payment methods. For example, the mobile phone payment service is only signaled through stickers affixed to the multi-space parking meters that are faded from sun exposure and sometimes vandalized.

Furthermore, **it is difficult to understand where parking is allowed or prohibited**:

- Painted lines on asphalt road and sidewalk are often blurred, different colors (blue, white) and exhibit numerous geometries.
- Vehicles can often be found parking over the painted lines rather than standing within them. Car drivers are sometimes guided to do so by parking attendants, who see it as a way of increasing the amount of cars that can be accommodated on public space.
- Legal basis exists that allows drivers to park on sidewalks as long as they leave 2 meter clearance for pedestrians to pass. This creates a legal grey zone for misunderstanding the parking rules.
- On-street parking spaces are often reserved by adjacent property owners.
- Orange cones are haphazardly placed in parking spaces, even though this is illegal.

All these elements contribute to unclear on-street parking rules, leading to noncompliance and hindering proper enforcement.



Unclear marking on the sidewalk of Volodymyrska street

3.3. Means of payment

The consultant team observed **several means of parking payment:**

3.3.1. Parking attendants

Parking attendants appear to be the most prevalent payment collection method, yet they are not always present when a driver parks.

Currently, they assist drivers by placing cones to reserve spaces and help them to maneuver into a parking place. **They are also supposed to encourage drivers to pay.** It is to be underscored that parking users must be provided with a valid cash receipt. **When receiving cash payments without giving a valid receipt the attendants act clearly in breach of the law. Each parking lot must be equipped by a cash machine** (sometimes the cash machines are shared between different attendants working in the same lot).

Their mere presence assures payment is made by a portion of drivers looking to park. Although the consultant team has seen some parking attendants running after

car drivers to collect the Parking Fee, **the current organization is not optimal and leaves some possibilities for car drivers to avoid payment:**

- As car users are supposed to pay when they arrive, they sometimes pay only for one hour and stay the whole day.
- As they work in the same parking lot every day, some attendants may allow residents without monthly subscription tickets in their windshield to leave their cars all day in short-term parking places (as was actually observed in Zone I).

This organization also presents areas for corruption: for example, some car users mentioned that attendants sometimes give a receipt with an indicated amount lower than the money they were actually given.

3.3.2. Multi-space parking meters

Although they **should be mandatory** according to the Law (see 2.3.2.D), multi-space parking meters are not installed everywhere in the paid parking area but only in some parking lots of the central zone. The consultant team was not provided with **any map locating the existing parking meters.**

The meters accept bank notes. The types used are an **outdated technology and sometimes out-of-order.**

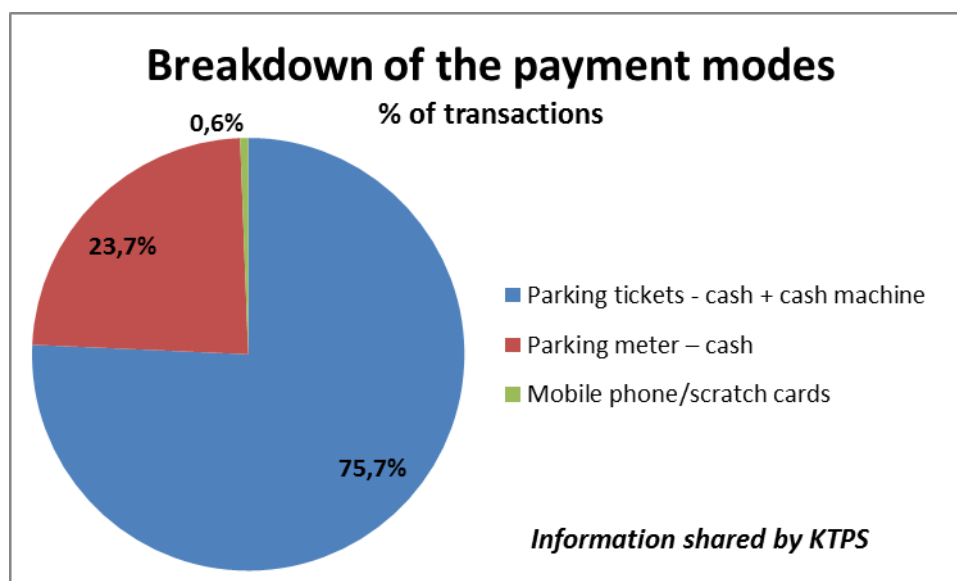


3.3.3. Others

Mobile phone payment services have been developed, but are poorly used.

The consultant team did not see any subscription tickets in windshields. Some of the people living in Kyiv expressed their surprise when they learned that subscription tickets do exist.

3.3.4. Breakdown of the payment modes



Street attendants appear to be **the payment method that drivers most often use**, based on payment collection statistics shared by KTPS.

3.4. Compliance rate

As already mentioned (cf. section 3.3.1), the current organization is not optimal and leaves some possibilities for car drivers to avoid payment. This is all the more true that there is no real enforcement (as mentioned previously – see section 2.4). **Only 30% of parked cars pay** according to KTPS estimates done through camera monitoring.

Remark: the methodology to reach this estimate is however unclear. For example, it would be indeed difficult to estimate through camera monitoring if a car driver has paid an amount corresponding to the number of hours during which his/her car was actually parked; or has paid the fee using the mobile phone service.

A pilot initiative in 2014 dismissed parking attendants on the streets with parking meters⁶. The pilot was considered a failure, since drivers did not pay when they parked. This reveals that:

- **Paying for parking is still not a cultural norm;**
- **The presence of parking attendants is currently the only guarantee that at least some portion of drivers will pay for parking.**

⁶ <http://biz.liga.net/all/transport/stati/2888462-pod-znakom-r-kak-klichko-sobiraetsya-navesti-poryadok-na-parkovkakh.htm>
<http://biz.liga.net/all/transport/stati/2930634-normalnoy-parkovki-v-kieve-ne-budet-pilotnyy-proekt-provalilsya.htm>

4. REVIEW OF KTPS

4.1. Review of the administration

4.1.1. Staff

According to the 2014 annual report, the average number of staff in the company was 464 persons, with an average monthly salary of 2022 UAH. However, the consultant team received **contradictory information concerning the number of staff and salaries**:

- The director of KTPS indicated in July 2015 that the staff number was 538;
- A job advertisement posted online in August 2015 for parking attendants offered a salary of 4,000 UAH per month. The Director of KTPS indicated that he received a salary of 1,240 UAH per month, and that the supervisors in the districts make significantly more (at 7,000-8,000 UAH).

There are 376 parking attendants⁷ for about 6,300 DAY parking places operated by KTPS, i.e. **1 attendant for 16-17 day parking places on average**. This ratio does not seem excessive to ensure appropriate operation of the current service. This organization however demands a very high number of attendants as compared with other cities equipped with automated payment schemes and where employees have a role in enforcement (see Chapter III2.3.3).

At first glance the number of administrative staff seems rather high given the limited number of parking places directly operated by KTPS (about 6,300 in 2014), but **the consultant team was never provided with any organizational chart of the company**.

Steps have been taken to reduce the staff during 2015. According to the Director of KTPS, a restructuring was in progress in July 2015 to decrease the number by around 30. This work is consistent with the information found in the press that some **"fake employees"** were discovered to receive salaries⁸.

⁷ We were also said that the number of attendants is "floating between 310 and 410".

⁸ <http://kiev.pravda.com.ua/news/55f1a2ee7c9d0/>

4.1.2. Revenue collection and reporting process

A. *Parking attendants and cash machines*

According to the Director of KTPS, the **attendants receive no job training**. One can assume that:

- They are probably poorly sensitized to the stakes and objectives of parking payment, such as stimulating car turnover.
- When asking for fees, they may face some conflicts with car users that they cannot really manage well.

Moreover, **some of them may work at the same parking lot for several years** and become familiar with the regular car drivers. Therefore, even if it is not legal, **parking attendants may in practice avoid asking for the parking fee** or grant an ad-hoc discount, just "to be nice" with some drivers, or to avoid quarrelling with recalcitrant payers, or else conceivably because they receive an upfront bribe to watch the car.

Attendants are assigned **a cash machine to register each transaction**. The cash machines are meant to provide traceability based on a GPRS connection. They can be used only for one single address / parking lot. The cash machine may be shared between different attendants working at the same parking lot.

Despite the cash machine system, parking fees collected by attendants may be underreported:

- since parking users are unlikely to ask systematically for a receipt – it is possible not to report each transaction;

The fact that the cash machine can sometimes be shared between several attendants makes it all the more unlikely that the car driver will wait for a receipt.

- if they report only one part of the amount of money given by the car driver;
- if they collect money from cars parked outside of the authorized lines;
- if they tell/encourage drivers to position cars differently from the rules indicated on traffic signs to increase the number of cars parked, as they often do.

To encourage attendants to report all transactions, their salaries are not fixed: they can take a small commission for each transaction that is withdrawn from the hourly parking revenue. In Zone I, they receive 1.18 UAH per transaction; Zone II, 1.12 UAH; and Zone III, 1.06 UAH as compensation. However, these amounts are probably not attractive enough to guarantee reporting of all transactions.

Remark: this is not mentioned in the annual reports of KTPS, unless it was included in the salaries.

At the end of each day, the cash is taken from all attendants by their supervisor. The amount of money brought by the attendants is compared to the transactions registered by the cash machine. If some money is lost or stolen, it will theoretically be deduced from the wages of the parking attendant.

The following day, the revenue collected by the supervisors is brought to KTPS.

There are therefore **several moments when the collected fees can disappear**. The consultant team has however not been provided with a very precise description of the way these successive transactions are performed. This would need to be studied in more details.

B. Multi-space parking meters

Though theoretically compulsory where paid parking is implemented on streets according to the Law (see section 2.3.2.D), **parking meters are not installed everywhere in the paid parking area**.

KTPS currently has 87 multi-space parking meter units ("park-o-mats"). They accept bank notes. The types used are an **outdated technology** and **sometimes out-of-order**. There are also some technical problems with the machines during the winter when temperatures drop below 18 degrees Celsius.

The unit price is around:

- 13,200 USD for the German model (57 units);
- 5,000 USD for the Ukrainian model (30 units)⁹.

The cost of the German model seems abnormally high – as we are aware there is no significant difference between the two models – and is likely due to an unfavorable contractual arrangement.

For the collection of money in parking meters, KTPS has two teams of two people (1 driver + 1 person for safety). Given the limited use of parking meters by the public, they currently collect limited amounts of money: typically around 10,000 UAH per day and up to 20,000 UAH according to the Director of KTPS.

Remark: the revenue collected in 2014 was about 50 million UAH. About 24% of payments are made by cash in parking meters (see section 3.3.4). With a rough number of 300 working days per year, the average amount collected per team and per day should be close to $50,000,000 \times 24\% / 300 / 2 = 20,000$ UAH. This does not align with the above information; a plausible explanation might be that

⁹ The cost of the German model seems abnormally high – as we are aware there is no significant difference between the two models – and is likely due to an unfavorable contractual arrangement.

the amounts of transactions at parking meters are lower on average, but this should be studied in more details.

The consultant team was not provided with a very precise description of the way the money gathered from parking meters is brought to KTPS afterwards. The cash reporting process might be similar to the one used for cash machines, but this would also need to be studied in more details.

C. Mobile phone payment services

These services have been developed, but are poorly used. According to KTPS only 0.6% of payments are made by this method. Therefore, it is still negligible.

The current operator applies a 20% commission on each transaction, which is very high¹⁰ even if the total amount of the payments made with mobile phone is currently low.

D. Confusing payment options

The lack of consistency about how to make a payment generates confusion and is likely a cause of non-payment and underreporting.

In streets equipped with parking meters, it is unclear from the car driver's point of view whether to pay directly at the parking meter or give the fee to the parking attendant.

Moreover, the fact that some means of payment issue a physical receipt that can be placed in the windshield (parking attendants/cash machines, parking meters) and other do not (mobile phone) makes it difficult to estimate the compliance rate.

4.1.3. Lease contracts

As mentioned previously (see section 0), KTPS is also allowed to grant leases to private operators for the operation of NIGHT parking. **There is a complete lack of transparency concerning those contracts:**

- The consultant team was provided with some templates but not the signed contracts themselves.
- It is very unclear who these operators are – the consultant team could not meet them.

¹⁰ The current ratios applied in France vary between 5% and 10%.

- As far as the consultant team is aware, **leases are granted without tender, whereas the lease payments represented more than 60% of the parking revenue in 2014** (see section 4.2.2).

4.2. Review of the finances

4.2.1. Information available

The analysis was performed on the basis of the **annual reports for years 2012, 2013 and 2014**. Those documents turn out to be **rather incomplete**:

- **They do not give enough granular information about the revenue** – in particular:
 - * They do not distinguish the revenue between the different zones (I, II, III);
 - * They do not specify the number of subscription tickets sold each year (though 100,000 was mentioned in a meeting with the KTPS Director) and the revenue generated by hourly tickets versus subscription tickets;
 - * They do not show the variation of revenue according to quarters, months or years;
 - * They do not integrate classic ratios such as the number of transactions per place and per year, the revenue per place and per year and the average amount of transactions.
- **The explanations for the revenue fluctuations are rather poor**:
 - * No reference is made to parking behavior or any surveys of any kind;
 - * No information is included concerning enforcement (e.g., number of annual fines issued);
 - * In 2014, the financial impact of the pilot program which led to a loss of revenue is not mentioned.

Additional information relative to the annual revenue collected in 2012, 2013 and 2014 in the various zones was asked to KTPS to perform our financial analysis. Only the main results are shown here below. A more detailed analysis is shown in Annex IV.

One should also mention that **the consultant team was provided with no audit documents of any kind**. The KCSA has an audit department responsible for auditing KCSA-governed companies and organizations. The website of the KCSA shows that no audit of KTPS was reportedly conducted since 2012 (neither in 2013 or 2014) whereas several municipal bodies were audited two or more times¹¹.

¹¹ <http://kyivaudit.gov.ua/vr/ka/index.nsf/>

4.2.2. Revenue

The repartition of the revenue according to the type of parking (DAY / NIGHT) and the operator (KTPS / private) in 2014 is presented in the table below:

	Operator	Number of places	Revenue (million UAH)		Revenue per place (UAH)
DAY parking	KTPS	6 287	19,4		3 085
	Private operators	835	4,6		5 497
	Total	7 122	24,0		3 368
NIGHT parking	KTPS	198	0,1		555
	Private operators	11 191	25,5		2 275
	Total	11 389	25,6		2 245
TOTAL	KTPS	6 485	19,5	39%	3 008
	Private operators	12 026	30,0	61%	2 498
	Total	18 511	49,6	100%	2 677

More than 60% of the revenue comes from lease arrangements with private operators. As already mentioned in section 4.1.3, those contracts are granted without tender.

The revenue from DAY parking places operated by KTPS (3085 UAH/place/year) is low. The table below illustrates how DAY parking revenue in Kyiv compares to other global cities.

Estimated Average Revenue Per Place Per Year (2014, USD)	
Brussels - Ixelles District	2,178
Stockholm	1,939
Amsterdam	1,432
Prague	600
Antwerp	469
Kyiv (operated by KTPS)	144

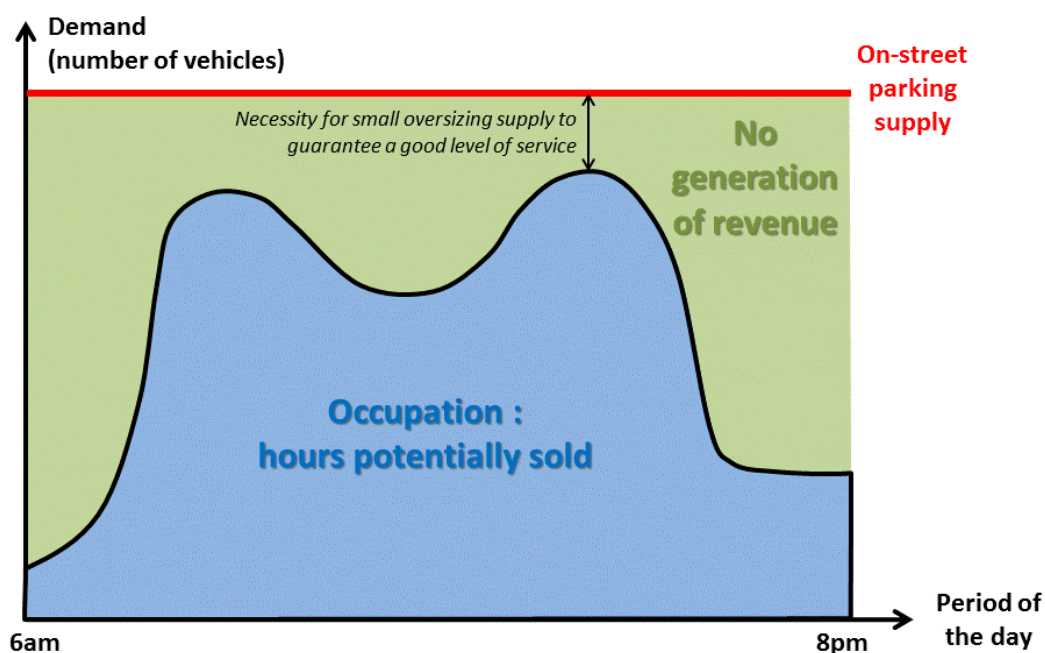
*Adjusted for inflation to all appear in 2014 figures.

Further analysis described in Annex IV shows that the number of paid hours per place and per year in 2014 was between 435 and 504 depending on the payment Zone, 467 hours per place and per year on average.

There is no general rule concerning operating hours, which vary from one parking lot to another. Considering that they are operated at least 6 days a week (except a few bank holidays) and 10 hours a day (8:00am to 6:00pm typically), this leads to a theoretical potential of more than 3000 paid hours per place and per year.

However, to come to a more realistic ratio, one should take into account the following facts:

- The compliance rate can almost never reach 100% (e.g., users having no change with them, users returning to their car later than expected, etc.): 80% can be seen as a very satisfactory result in many cities;
- Some events such as abundant snowfall can lead to suspended parking regulations, representing approximately 10 days per year;
- 10% of parking spaces are dedicated to the disabled, for whom parking is free;
- The parking places cannot be saturated 100% of time: in particular, demand can be lower early in the morning or at the end of the afternoon – see the graph below.



In the end, an objective of 1600 paid hours per place and per year seems reachable, at least in Zone I¹². In other words, in Zone I the current revenue per place and per year (463 paid hours in average) reaches only 30% of its potential (1600 hours). This result seems aligned with the compliance rate estimated by KTPS (see section 3.4). In other terms, **revenue in Zone I could be increased at least threefold without modifying the level of hourly fees.**

¹² In Zones II and III, the proportion of subscription tickets with a preferential tariff should be maintained and could represent a significant proportion of parking demand, which thus limits the profitability of parking places.

The revenue on the few NIGHT parking places operated by KTPS in 2014 was also low : the figures presented in Annex IV show that only 50 nights per place and per year were paid in night parking operated by KTPS, i.e. about 1 night out of 7. The performance is particularly low in Zone III, where the majority of these places exist, with 32 nights paid per place and per year.

The operation of parking places through lease arrangements is much more profitable, both for NIGHT parking and for DAY parking.

As an example, in 2014, the average annual revenue collected from NIGHT parking was of:

- 555 UAH per place operated by KTPS, which corresponds to gross revenue from which the various operating expenses should be deducted;
- 2275 UAH per place operated privately, which corresponds to a rent, the various operating expenses being paid by private operators.

Private operators can charge fees at a higher level than KTPS – between 15 and 20 UAH per place and per night and even up to 30 according to the Director of KTPS. Some of the leasees refused to renew their contracts alleging that they lose money.

When considering the revenue per place and per year in the different categories of places (Zones I/II/III, DAY/NIGHT parking, operation by KTPS/private operators), the situation was improved between 2013 and 2014, after a strong diminution between 2012 and 2013. However as a whole, the total revenue and the revenue per place and per year has kept decreasing since 2012, the reason being that the number of privately operated places – the most profitable ones – has diminished during this period.

4.2.3. Expenses

The table here after gives some basic information about the expenses:

	2012	2013	2014
Operating costs (million UAH)	30,3	21,2	18,0
Number of places operated by KTPS	5 746	6 388	6 485
Operating costs (UAH/place)	5 270	3 317	2 777
Administrative and other costs (million UAH)	7,6	7,2	5,6
Number of places (KTPS or leases)	21 485	21 295	18 511
Administrative and other costs (UAH/place)	354	340	304
Total costs (million UAH)	37,9	28,4	23,6

It is difficult to perform a very precise analysis of expenses given the double activity of KTPS: direct operation and lease to private operators.

The operating costs can however be computed for the operation of parking places by KTPS: the ratio for 2013 and 2014 **is roughly 3000 UAH/place/year** (not including administrative and other costs), **which is very high**.

The table below shows how the cost to manage one parking space in Kyiv compares to other cities. The calculation includes all operating and administration costs.

Cost to Manage One Parking Place Per Year (FY 2014, USD)	
City of Sydney	72
Various cities in France	67 to 90
Prague	10
Copenhagen	136
Mexico City	224
Kyiv (operated by KTPS)	160

This cost is extracted from financial documents that reflect the competence of KTPS, not including the private third party companies, in operating parking.

It is also extremely surprising that **the operating costs per place should have been divided by almost 2 between 2012 and 2014**.

4.2.4. Outcome

The table below compares the profitability of DAY parking places operated by KTPS and leased NIGHT parking places.

<i>2014</i>	DAY parking operated by KTPS	NIGHT parking leased
Number of places	6,287	11,191
Gross revenue per place (UAH)	3,085	2,275
Cost to manage one place (UAH) – parking charge excluded	-3,081	-304
Net revenue per place (UAH) – parking charge excluded	4	1,971
<i>Parking charge</i>	<i>-1,307</i>	<i>-1,307</i>
<i>Net revenue per place (UAH) – parking charge included</i>	<i>-1,303</i>	<i>664</i>

The revenue from DAY parking should be much higher than from NIGHT parking, because fees and turnover are higher. On the contrary, the table shows that Parking Charge excluded, **almost no profit is made from DAY parking, whereas a NIGHT parking place leased to a private operator generates net revenue of almost 2,000 UAH per year for KTPS.** When taking the Parking Charge into account, DAY parking represents a loss of about 1,300 UAH per place and per year (i.e. $1,303 \times 6,287 = 8.2\text{m UAH}$ per year).

Despite low revenue and high operating costs, the results of the financial activity of KTPS show that **the company managed to break-even in 2013 and 2014. The situation for 2015 is however expected to be more critical,** since KTPS is expected to finish with a loss of 5-5.5 million UAH as mentioned in the press. This can be explained by various reasons:

- The currency rate fall has further challenged the situation due to the increased price of fuel (and other materials such as uniforms for the attendants);
- The attempt to limit labor costs by firing excess staff was not immediately obvious, since it required 300,000 UAH in compensation payment in Q1;
- Agreements with third party companies (such as restaurants and other businesses) on the use of on-street parking lots were no longer permitted in 2013: it seems that KTPS started to implement it in 2015, which might have rendered these parking places less profitable;
- The extension of NIGHT parking during the summer in 2015 may have worsened the situation (revenue/place/year is lower).

The results from the Kyiv City Council point of view are the following for 2014:

	2013	2014
Number of parking places	21,300	18,500
Parking tax	29,575,000 UAH	24,202,000 UAH
Final contribution to the budget	528,000 UAH	603,000 UAH
Total	30,103,000 UAH	24,805,000 UAH
<i>Gross revenue collected by KTPS</i>	<i>59,535,000 UAH</i>	<i>49,554,000 UAH</i>
Total revenue per parking place	1,413 UAH/pl	1,341 UAH/pl

The final contribution to the budget is collected from KTPS net revenue. Fifty percent (50%) of the net revenue must go to City. The remainder must be invested to improve parking services and public works projects or go directly to the Kyiv City Council.

In the end, **on-street parking operation generated about 25 million UAH to the City budget in 2014**, that it is to say about **one half of gross revenue collected by KTPS**.

Chapter II

SUMMARY OF ISSUES IDENTIFIED AND COMMENTS ON PAST ATTEMPTS TO SOLVE THEM

1. ROOT CAUSES OF PARKING PROBLEM

The dysfunctional parking situation in Kyiv—as evidenced by parked cars acting as a nuisance to pedestrians, cyclists, public transit riders and other users of the road; can be attributed to several root causes:

- **Unclear information for the public** to understand about how to properly park, such as on street signage, road markings, which may contribute to a poor compliance rate by car users;
- **Legal obstacles exist to achieve proper enforcement of non-payment** in municipal places; lack of enforcement leads drivers to disregard on-street parking regulations as there are no punitive measures for non-compliance with the law;
- **National legislation also prevents the parking fee from being performance-based** according to local circumstances;
- **No integration of the parking strategy** exists with transport and land use plans.

The general saturation of public space makes it difficult to find a parking place. In the driver's view, **on-street payment is not associated with** improved public space and **ease of finding an available parking space**. Moreover, information provided to the public is unclear, and the various means of payment generate confusion and an impression of corruption (this topic is explained in more details in section 3). Hence **the service to the public can be considered as very poor** and the image of the municipal operator KTPS is extremely degraded.

Revenue from parking that is supposed to go to the City Council is incredibly low and below the forecasted collection amount, given that the streets look above-and-beyond full of parked cars during weekdays. This is due to:

- **Lack of enforcement** as discussed above; but also
- **Potential loopholes in administration at KTPS** (e.g., revenue collection and reporting process, lease contracts granted without tender, etc.);
- **The national parking fee formula set by the Cabinet of Ministers**, which impedes local fee changes in Kyiv.

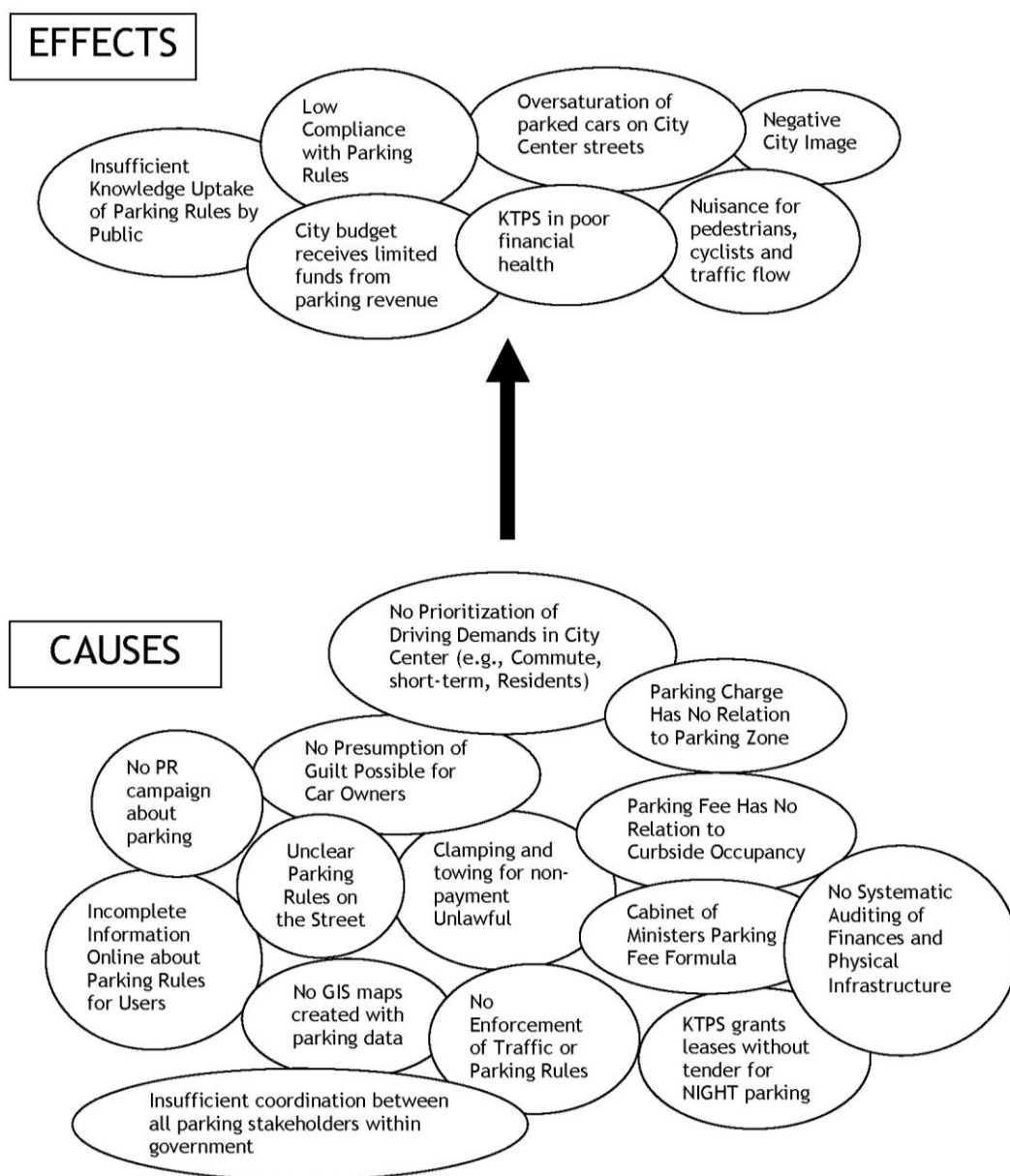
The financial health of KTPS is all the more precarious as a result of the following:

- **The parking charge paid to the City budget is not performance-based:** it has no connection to parking demand;
- The operator is required by the City to extend the number of on-street parking places operated throughout the city, regardless of the potential revenue that could be collected in these parking lots.

One could almost deduce that the Kyiv City State Administration is forcing its own municipal enterprise to go bankrupt. The parking charge is indeed a burden on KTPS at

a time when the payment system operations need so much improvement in the short-term.

Addressing the multitude of causes to the parking problem, visualized in the figure below, is needed to attract investors to help manage the municipal parking assets.



2. A LACK OF LONG-TERM STRATEGY

Beyond the numerous issues listed previously, there is also a lack of long-term parking strategy, underscored by the following factors:

- **No integration of parking topics with other related land use and transport efforts in the city:**
 - * transport policy (e.g.: there is no inclusion of a parking expert in the working group on the long-term land use and transport plans for the city)
 - * as far as the consultant team is aware, there is no particular coordination with the police
- Contrary to other cities outside Ukraine, **no distinction is made between different driving demands**. According to the current tariffs, nobody is excluded from driving to the City Center, neither long-term visitors, commuters or residents **The maximum parking duration is unlimited** and parking users can even get a discount when they park the whole day. Residents can especially benefit from a special subscription;
- The way **the Parking Charge** is defined regardless of the city location, the level of pressure on public space or even the zonal map shows that it **is seen as a mere tax rather than a tool to influence travel behavior**;
- The “parking development concept” (see section 4.3) demonstrates a **confusion between setting objectives** (e.g., “creation of conditions to decrease the load on the city’s street network during business days” or “lowering air pollution by transport vehicles”) **and tactics to reach those objectives** (e.g., “introduction of innovative payment technologies for parking services”).

As discussed further in the comments on the “parking development concept”, **the main strategy for improving transport access to and within the city seems to be based on accommodating private car infrastructure** without reference to how that supply connects to other transport and land use development plans. However, the provision of parking is linked to stimulating driving trips and is incongruent with the idea of a more sustainable city.

3. POTENTIAL AREAS FOR CORRUPTION

Based on the assessments conducted as part of this project, several potential areas of corruption have been identified:

Firstly, as parking meters are not found on all streets where fees apply, **collection of fees is conducted by parking attendants**. Although each transaction must in principle be registered by a cash machine or a parking meter, drivers do not systematically ask for or receive a receipt, leaving the possibility to misappropriate the fee by the parking attendant. Besides, insufficient information at each municipal parking lot makes it difficult for drivers to know what is the fee amount and the working hours when the fee applies. Since the parking attendants are stationed on the same street all the time, this opens up the possibility for them to get chummy with drivers and make all sorts of under-reported deals.

Secondly, there is also an obvious **lack of transparency concerning the leases granted by KTPS to private operators**. In particular, they are granted **without tender**, whereas, in 2014, those contracts represented 65% of the parking places operated in Kyiv and 61% of gross revenue collected.

Thirdly, there is **a lack of reliable information in the way KTPS is administrated**: as far as we are aware, there is no organizational chart, the revenue collection process is not known in details, the information delivered in annual reports is limited and there is **no systematic annual audit**.

Fourthly, paying the Parking Charge based on the number of parking places (calculated in m²), leads to **an obvious incentive to under-report the number of existing places**. Furthermore, the Parking Charge may be a disincentive in expanding municipal parking places which would stimulate more financial burden on KTPS (if said places are properly reported).

For example, a NIGHT parking lot in Obolon leased to a private operator was listed by KTPS as having only 20 places in 2014. In fact, the actual number of places is 40. There are at least three possible reasons for the under-reported places: the operator is not paying KTPS for all the actual number of leased places, KTPS is potentially keeping part of the lease funds for themselves or KTPS is trying to avoid paying the Parking Charge due to the financial burden it causes the enterprise. The extent to which places are under-reported is not known. It is unclear whether that is due to a lack of annual monitoring and evaluation of KTPS.

Lastly, KTPS is potentially open to exploitation in view of its power to obtain municipal land plots without a tender. There could be a land grab under the guise of creating more municipal parking places, regardless of a project's public benefit, with a developer paying off KTPS executives.

4. ATTEMPTS TO REFORM THE CURRENT SITUATION

A lot of the various issues presented previously have long been identified by the KCSA. Several steps have been taken to reform the system and improve the situation. They are presented and discussed here after.

4.1. Law reform attempts

Draft law No. 2228 was intended to improve the efficiency of law enforcement measures in the parking area. More specifically, the draft law envisaged:

- To recognize removal of cars and blocking of wheels as possible sanctions for violation of the parking rules;
- To authorize the Kyiv City Council to adopt a regulation on removal of cars parked in violation of the parking rules;
- To delegate the right to impose fines for violation of the parking rules to officers of the municipal operator;
- To extend the responsibility for violation of parking rules to the owners of cars, both companies or individuals, rather than people who drive them;
- To recognize photo and video-capturing of cars as valid evidence in administrative cases relating to violation of the payment parking rules.

However, on July 17, 2015, the Ukrainian Parliament refused to vote for draft law No. 2228.

Furthermore, one should not overlook **draft law No. 2890** relating to the establishment of the Municipal Guard. In accordance with the provisions of this draft law, the Municipal Guard shall be obliged to prosecute specifically violations of the parking rules and impose relevant fines. However, on July 2, 2015, the Ukrainian Parliament refused to vote for this draft law too.

4.2. Attempts to develop the parking infrastructure

4.2.1. Public investments into parking infrastructure

In 2007 the Kyiv City Council decided to start a publicly financed investment program "United Parking Space" aimed at a radical improvement of the parking infrastructure in Kyiv through creation of new parking lots and improvement of payment structures.

The above program envisaged public investments into the network of park-o-mats, video-cameras, ticketing system etc. It was executed by KTPS mainly through public procurements.

There were numerous visible effects of the program, including first park-o-mats, new parking tickets and cards.

The program ended in 2011 without further prolongation.

In 2013 the Kyiv City Council adopted a new parking development program. Unlike the previous program, this one did not envisage municipal budget financing, but was intended to include funds from KTPS and private investors. We are not aware of the practical results of this program. We may assume its realization was blocked by the social unrest in 2013-2014. The program ceased to exist in January 2015.

4.2.2. Attempts to involve strategic partner

In 2005, the Kyiv City Administration decided to start preparing a tender to select a strategic partner for the implementation of the parking program.

However, due to political changes the tender plan was abandoned in 2006.

We are not aware of any further similar tender efforts. The 2015 concept mentions the Kyiv municipality's intention to select private investors in parking infrastructure development (the concept is analyzed in the section below.).

4.3. Review of the “parking development concept”

4.3.1. Identification of problems which the Concept is designed to resolve

The problems described at the beginning of the “parking development concept” are:

- low level of adherence to the parking rules;
- lack of a working simple control mechanism over adherence to the parking rules and payment, as well as a mechanism of imposing fines for violation of the parking rules on paid parking sites;
- low payment discipline, which results in the city budget getting less revenue;
- non-transparency of cash payments and impossibility of factual control over receipts;
- absence of convenient and accessible cashless payment methods (mobile, payment cards, season tickets);
- sites being fitted with insufficient number of payment terminals, automatic entry/exit terminals etc.;
- parking infrastructure not meeting modern requirements;
- insufficient number of parking spaces on allocated, specially fitted parking sites and lots;
- absence of incentive parking sites;
- low level of services related to parking of cars;
- ineffective information and technical support of parking activity.

Most of the issues listed are aligned with the consultant team’s analyses.

The assertion that “on the basis of the European experience Kyiv needs about 500,000 car spaces” is however questionable. It assumes that **the main strategy for improving transport access in the city is by accommodating private car infrastructure** without reference to how that supply connects to other transport and land use development plans. The concept’s headline assertion that growth in car ownership will require accommodation of vehicles is **counter to policies promoted in European cities to deter car use**. Indeed, the provision of parking is linked to stimulating driving trips and is incongruent with the idea of a more sustainable city.

Remark 1: the consultant team’s survey did find that existing unofficial curbside places could be included as part of the regulated program and charged a fee to impact travel behavior. However, increasing the amount of parking supply to accommodate a growing number of cars coming to the city center is a quite different goal incompatible with sustainable mobility.

Remark 2: the assertion that "in European capitals and large cities the average number of parking spaces is 16-17 per cent of the number of inhabitants" is rather dubious:

- *There is indeed no rule about public parking supply, since it is closely linked to numerous factors related to mobility access management such as the amount of private parking supply, the urban density, the transport and land use policy, people's needs¹³ and many other factors.*
- *Moreover, it misses the point that all European capitals are working on initiatives to de-prioritize private car trips, especially single passenger car trips, and reallocate public space to pedestrians, bus lanes, cycling lanes and other uses deemed more desirable for public life. As one of the most recent and striking examples, Oslo announced that cars would be banned from the city center by 2019. The long-term capacity should instead be defined in coherence with the plans that are currently being defined for public transport improvement and Park-and-Ride development.*

In Paris, the number of on-street parking places is about 150,000 for 2.3 million inhabitants, i.e. a ratio of 6.5%. Of course the calculation would be very different if the places of residential car parks or Park-and-Ride facilities outside the city were taken into account. This illustrates how difficult it is to calculate such a ratio and how one should focus on the objectives of the transport policy and the local mobility demand and supply patterns to size municipal parking supply.

4.3.2. The Concept's aim

The expressed aims can be grouped in four main categories:

- Achieving a more sustainable city by limiting car use and developing other means of transport ("decrease the load onto the city's street network", "lowering air pollution by transportation vehicles, facilitating development of transport with zero emission - bikes, electric cars");
- Improving revenue to the City budget ("increasing budget revenues");
- Improving service ("improving the quality of parking services", "making the use of parking services more convenient for people and organizations"...);
- Extending the parking infrastructure ("from the existing 25,000 up to approximately 125,000 by the end of 2020").

The parking concept however demonstrates a **confusion between setting objectives** (e.g., creating a performance-based curbside parking system, improving access to the city center by non-motorized transport modes and decreasing single passenger private car trips) **and strategies to reach those objectives** (e.g.,

¹³ To this respect, car ownership in Kyiv is significantly lower than in many other cities around the world as already mentioned in the report.

“introduction of innovative payment technologies for parking services,” “substantiated and flexible pricing”).

4.3.3. Legal assessment

The Concept includes legislative reform measures, which were then reproduced in the Draft Law No. 2228 rejected by the Ukrainian Parliament on July 17, 2015 as discussed previously (see section 4.1).

The concept states that in order to implement the best European practices with regard to parking, it is necessary to introduce legislative changes, in particular related to:

- The possibility for (public) parking operator to document (photo-capture) violations;
- The possibility for the (public) parking operator employees to enforce payment and issue fines ;
- Presumption of guilt for the car owner;
- The possibility to block (with a wheel boot) and tow vehicles.

These statements are aligned with best practice in many European countries such as England, Belgium and the Netherlands.

Instead in France (see Lyon case study in Annex VII), the operators do not currently have the right to issue fines, which must be done by the police (whether national or municipal). The fine is a national standard set by the State with no consideration of local conditions and parking fees. The outcome is unsatisfactory: due to inadequate enforcement, most French cities experience low compliance rates with on-street parking payment, typically around 30%, as in Kyiv. As a result, a decentralization law was recently passed, which in particular decriminalizes parking: by January 2018, it will be possible to delegate on-street parking control to private operators and the level of the fines will be set by local authorities.

Hence, the concept provides for rather positive impression. At the same time, a number of concept's provisions should be improved.

Importantly, the concept envisages involvement of private investors specifically under the terms of investment tenders adopted by the Kyiv City Council.

At the same time, **no information on specific plans of private sector involvement in the parking infrastructure services** was made and no intention to gain public acceptance of this approach by the Kyiv community was indicated. Additionally, no efforts in terms of solid feasibility studies were made to ensure the support and readiness of potential private investors to engage in parking services, which have traditionally been the public sector's field of activity.

The “parking development concept” could be improved based on outcomes of the feasibility studies.

Whereas it is not possible to reform the Parking Charge in the short-run as it requires involvement of the Parliament, more focus should be made on more effective use of the Parking Fee.

Unlike the Parking Charge, the Parking Fee is a more important tool to influence driving behavior in Kyiv. At the same time, since the Parking Fee is paid by end-users, the use of the collected Parking Fee requires additional legal regulation to increase its visibility for local communities.

To improve the payment structure, **the mere existence of a concept for parking infrastructure development without a commitment to invest parking fees into performance-based parking management is not sufficient.**

4.3.4. Technical assessment

A. Improvement of the service and the payment

The concept also focuses on **dematerialization of payment and an automated system, to “reduce the human factor”**. Three means of payment are envisioned: “payment terminals”, mobile phone (SMS or application) payment and on-line payment through the website of the operator. This is again **aligned with best practice**; in many countries, credit card and mobile phone payment tends to develop significantly.

One should however mention that a more classical and less modern service relying on cash payment through parking meters can also achieve satisfactory results (see case study on Budapest in Annex VII). In any case, it seems that resorting to a physical infrastructure (e.g., parking meters) would be inescapable to serve as a reminder about payment to develop a local culture/sensitivity to the need to pay for parking — as has successfully been the case in Moscow (see case study in Annex VII).

B. Development of parking infrastructure

The concept also aims to develop parking infrastructure with **the objective to multiply the current number of regulated places by 5 (from 25,000 to 125,000) within 5 years**. This objective is set on the assertion that “on the basis of European experience Kyiv needs about 500,000 car spaces”, which is questionable as discussed previously (see section 4.3.1). Moreover, as the current situation is unsatisfactory, it seems **rather risky to extend a system that actually does not work properly**. It would be more logical to improve the existing system first, as described in the concept, before extending it.

In particular, the concept focuses on developing incentive parking sites (**Park-and-Ride facilities**). The concept adds that “the price of using the incentive parking site (lot) must be more advantageous than the price for using parking sites. For incentive parking sites (lots), construction and equipping of which will be financed at investors’ expense, the tender conditions should contain a requirement for investors to ensure the price of parking not higher than the price of using incentive parking sites (lots) set for Kyivtransparkservis”. This might work if Park-and-Ride facilities are envisaged as ground parking lots. However it is unlikely an investor could be found for a multi-story car park. One should also outline that the use of paid Park-and-Ride facilities would be uncertain if on-street parking just outside is not properly regulated.

The concept also suggests the creation of **new car parks in the city center** by attracting investors. **Proper enforcement of on-street regulation would be a prerequisite** as Vinci Park has indicated to the consultant team during an interview. The construction of such facilities would require feasibility studies to determine appropriate sizing, location, legal feasibility and other preliminary assessments. Some elements of the legal feasibility are presented in Annex VI.

Concerning all new parking infrastructure, the concept aims to equip **5% of the parking capacity with EV-charging points**. This seems laudable though very ambitious. Moreover, the way the development of this infrastructure is envisaged (investment tenders) gives no guarantee that it would be interoperable.

C. Mobility aspects and parking policy

Furthermore, the concept suggests good points from the transport policy perspective, such as:

- to allow free parking for drivers of electric cars and bicycles until 2020;
- to make provisions for fitting parking sites with charges for electric cars;
- to make provisions for free parking of bicycles on parking sites.

Surprisingly, fitting for bicycles or motorbikes on public space is not mentioned.

The proposition to grant free parking to electric vehicles could be discussed, although the concept wisely suggests that this measure should last only until 2020. Indeed to favor the development of electric vehicles, one should decide whether parking or EV-charging or both should be offered to the electric car driver. Over the last few years, Paris has developed a significant EV charging infrastructure in parallel with the development of the so-called Autolib' (an electric one-way car-sharing service); using the service is not free (about 25 UAH/hour). Eventually, one should not overlook the negative financial impact of granting free parking on 10% of places for the disabled plus 5% of places for electric vehicles.

The concept also proposes "free parking spaces for motorbikes (...) as an incentive to using compact and environmentally friendly transport," which would seem rather surprising in many European countries. If charging motorbikes parking on street has been little developed so far, this changes progressively, since two-wheeled powered vehicles are not considered as "environmentally friendly" due to noise, pollution and safety issues.

More generally, **the concept defines no clear priority between car users such as short-term occasional users, long-term occasional users, residents and commuters.** On the contrary, it proposes "making provisions for monthly, quarterly and annual tickets for parking throughout the entire city." Even if this may improve the budget upfront, it is **in contradiction with the aim to "decrease the load onto the city's street network during business days"**. See in Annex VII case studies where only residents (within a small limited catchment area) and short-term users are allowed to park on-street.

Chapter III

RECOMMENDATIONS

Based on meetings with the Kyiv City State Administration, the analysis and recommendations in this paper respond to two stated objectives:

- Achieving a more sustainable city by limiting car use and developing other means of transport;
- Increasing the revenue to the city budget (search for a better “cost-efficiency” of parking operation).

We were also sensitive to the ambition expressed by the KCSA to resort to new technologies and updated parking equipment to align Kyiv with best practices in other cities.

1. SHORT TERM (2016)

1.1. Introduction

The general principle for the short-term recommendations is **“Make the existing system work”** especially before extending it. Actually whereas the consultant team’s counterparts seemed to focus on legal matters, it turns out that **a lot can be done short-term to improve the current situation, starting immediately.**

However, given the legal obstacles to having robust enforcement, no significant financial improvement to the situation can be expected in the short term. Hence attracting investors to help managing the municipal parking assets in the short-run is unlikely. International operators would only respond to a tender once the enforcement issue is resolved.

Remark: as shown in Chapter I2.4.5, the July 2015 law enables towing cars only if they are parked in violation of the Traffic Safety Rules, but:

- *It is yet to be seen whether in practice the police will use these tactics to bring punitive measures to offenders of traffic rules;*
- *In any case, towing is not allowed for failure to pay.*

Therefore the impact of this law may improve the quality of the city by diminishing the number of cars parked illegally, but it is insufficient to improve the financial situation. Furthermore, according to the results of the survey shown in Annex III, it may even impact the budget negatively, by pushing more long-term users (commuters, residents...) to park on legal parking places without paying.

1.2. Create a project unit

The stakes of on-street parking are not coordinated between the different bodies and units of the KCSA. As mentioned in the Conclusions chapter (see section 1), no integration of the parking strategy exists with transport and land use plans and, as far as the consultant team is aware, there is no particular coordination with the municipal police.

The first important step to take would therefore be to **create a working group**, similar to the one created for thinking through the transport plan, that would **convene all relevant city stakeholders until the on-street parking situation is improved** – such as the Mayor’s office, the Transport Department and the Urban Development Department, the finance commission, KTPS and the municipal/traffic police to name a few. The role of the group would be to review how the on-street parking situation is evolving, reform how the municipal budget relates to parking, prepare and submit municipal budget requests for parking reform promotion purposes, etc.

Other stakeholders such as auditors, NGOs, academic experts, foreign donors or Members of the Parliament may be invited occasionally.

Establishing a parking group at the KCSA Transport Department (policy design, programming, etc.) would constitute a useful technical support for the project unit.

1.3. Update the general parking policy

- **Update the Zonal Map** – for example:
 - * Extend Zone I at least to Bogdan Khmelnytsky Street and the area near the Golden Gates (which could generate some additional revenue)
 - * Extend Zone II to the entire Podil district
- **Unify working hours within each zone** to simplify the system and make it more understandable to the public
- **Stimulate car turnover at parking lots** to improve access to the city for short-term users and increase revenue from the Parking Fee
 - * **Introduce a legal limit on the maximum period of use of day parking lots** – for example 3 or 4 hours maximum in Zone I, 12h in Zone II and 24h in Zone III;
 - * **Differentiate monthly subscription tickets for residents** and other potential subscribers (such as commuters). Commuters should not benefit from attractive fees – they could even be banned from Zone I;
 - * Cancel the discount offered by daily subscription tickets;
- Draft the long-term policy in coordination with the long-term land use and transport plans for the city.

1.4. Improve information and clarify rules

- **Improve back-end information**
 - * A full inventory of municipal parking supply should be carried out (by another body than KTPS to avoid underreporting)
 - * GIS maps would be needed for planning purposes: location of regulated parking places, parking zone, working hours, location of reserved places for the disabled, location of parking meters
- **Improve general information to the public** about how parking works through a website, map, leaflets and other communication channels (e.g. social media interaction with public)

The website may include maps (extracted from GIS data used for planning purposes) and frequently asked questions (updated regularly).

- **Clarify on-site rules**

- * **Improve signage** by indicating working hours and the payment Zone, at the very least. Include signage about off-street parking facilities nearby
- * **Improve markings:** clear demarcation of individual parking spaces (see examples in Annex V)
- * **Use physical obstacles such as bollards,** barriers and planters more comprehensively to contain illegal parking, , starting with Zone I
- * **Make some unofficial parking places along the curb part of the official municipal parking supply** (such as where the parking survey for this report was conducted) as long as they do not impede traffic

1.5. Improve administration of KTPS

Parking attendants seem to be the only solution to encourage drivers to pay in a situation where the legal tools to enforce the laws are insufficient. Their mere presence assures payment is made by at least some drivers. This recommendation is confirmed by the results of the failed 2014 pilot mentioned previously (see Chapter I3.4).

To improve the revenue collection and reporting process, it is advised to:

- **Rotate attendants to different streets** on a regular basis to prevent them from becoming too familiar with return drivers as a result to evade their duty of encouraging accurate payment for parking.
- **Clarify system of payment**
 - * Payment should be allowed ONLY at parking meters when they exist
 - * Elsewhere, each attendant should have his/her own cash machine

As mentioned above, parking users must be provided with a valid cash receipt. When receiving cash payments without giving a valid receipt the attendants act clearly in breach of the law.
- **Train attendants :**
 - * To ask for payment systematically, by sensitizing them to the stakes of on-street parking payment (such as stimulating car turnover and improving access to the city center);
 - * Not to take money and direct car users to use parking meters when they exist;
 - * Manage potential situations of conflict with car users refusing to pay;
- **Change agents that collect money from parking meters on a regular basis:** this is meant to avoid potential misappropriation of the parking fees by a pair of collecting agents;

- **Involve staff from the City Administration in revenue collection process¹⁴:** this could be done occasionally, a few days per year on a random basis, or systematically (e.g.: coupling one agent of the operator with one person working with the local authority is very widespread in France to avoid underreporting);
- **Lease NIGHT parking assets systematically** instead of operating some directly, since it is more profitable (see Chapter I4.2).

1.6. Improve transparency

To improve transparency and reduce the potential areas of corruption identified above (see Chapter II3), the Kyiv City State Administration should also consider to:

- **Conduct an annual audit**
 - * **Financial:** check the books, the expenses... It could be envisaged to replace a few parking attendants for a day to check fee collection
 - * **Physical:** random check of parking lots (e.g., number of parking places reported, occupancy rate, etc.)

During the first years, it may be preferable to resort to an external audit rather than the audit department of the KCSA.

- **Investigate into lease agreements** (financial and legal audit): estimation of the profitability of a few lease contracts, rate of renewal of those contracts, etc.
- **Investigate further** topics that could not be assessed in depth during the present assignment: organizational chart and revenue collection / reporting process in particular
- **Ask/oblige KTPS to systematize tenders for new lease agreements**
- **Ask KTPS to provide more complete information in annual reports** – concerning revenue in particular (see Chapter I4.2.1).

¹⁴ To this respect, one should remember that KTPS pays a flat charge to the City budget, but pays also a yearly contribution to the budget that depends on its financial outcome.

1.7. Improve communication to the general public

Beyond improving information to the public recommended in section 1.4, the city may also consider to:

- **Launch a PR campaign:**
 - * “Why pay”, to sensitize the public to the Parking Fee and rules; and
 - * “Ask for a receipt”, so that parking attendants may be incited to report the fees collected more systematically;
- **Consider organizing volunteers.**

1.8. Lobby in favor of legal changes

1.8.1. Decentralization of parking regulatory framework and policy making

Parking legislation is extremely centralized. Ukraine’s central government, the Cabinet of Ministers, plays too important a role in regulation of allocated parking lots and parking fees. It is not clear from the policy viewpoint why the competence of the national government should extend to regulation of parking space owned entirely by municipalities. The parking regulatory framework requires cardinal decentralization to make the applicable rules closer tailored to unique needs of parking users in Kyiv. At the same time, operation of car parks is less dependent on the government’s will.

More specifically, the Parking Fee formula provided by the Cabinet of Ministers of Ukraine is inconsistent with how on-street parking is actually used. The potential Parking Fee levels and potential driver willingness to pay seem much greater. Hence the formula is an obstacle to increase the fees and does not comply with international best practice, in which fees are based on curbside occupancy levels.

Lobbying measures:

- Exclusion of the Kyiv parking from the Rules of Parking of Transport Vehicles adopted by the Resolution of the Cabinet of Ministers of Ukraine dated 03.12.2009 No. 1342.
- Exclusion of the Kyiv parking from the Procedure of Pricing for Services on Use of Paid Parking Lots adopted by the Resolution of the Cabinet of Ministers of Ukraine dated 02.03.2010 No. 258 (this may require amendment of the Law on Ukraine on Traffic).

1.8.2. Transition to performance-based parking service

Under current legislation it is rather difficult to consider operation of paid parking as a service rather than tax under current legislation, with exception of car parks. Therefore, the use of allocated parking lots de facto results in additional tax burden for car drivers without obvious benefits.

People's willingness to pay for parking may be encouraged by more services targeting local residents and businesses and providing various means of payment too.

There is also a clear need to stimulate car turnover at parking lots to increase revenues from the Parking Fee. This can be done by introducing a legal limit on the maximum period of use of parking lots during the day.

Lobbying measure: Amend the Kyiv City Council Decision on Municipal Parking Areas Development Concept dated 22.01.2015 No. 22/887

1.8.3. Ensuring effective sanctions

Law enforcement measures are very poor. More specifically, the Ukrainian law distinguishes clearly between violations of traffic rules and a failure to pay for parking, whereby the latter violation is punishable only by the administrative fine and the administration commission imposing them is understaffed. Furthermore, according to several court decisions, in case of a failure to pay the Parking Fee, it is no longer possible to tow away cars and impose fines without the physical presence of the car owner.

In principle, recently adopted July laws (see Chapter I2.4.5) will contribute to a greater use of municipal parking infrastructure by those drivers who previously preferred to park in breach of the traffic rules. At the same time, since the July law does not increase and improve sanctions for the failure to pay for parking, they have no impact of on compliance with parking rules.

Lobbying measure: Re-start lobbying of the draft law n°2228 to facilitate private investment in parking

1.8.4. Parking Charge reform

Although the Parking Charge exists, its rates and potential amounts do not seem to add significant revenue to the municipal budget yet. Moreover, the Parking Charge's amounts cannot be used to finance capital expenses of the city relating to the mobility infrastructure's development. There are no visible attempts to prioritize the fiscal effect of parking services in general. The actual public importance of the

Parking Charge is not high at the moment. The Parking Charge needs to be reformed by making it performance-based and target-oriented (i.e. accumulated specifically to finance mobility infrastructure development). The revenue generated by the Parking Charge could vary according to the actual revenue received from operators. This would particularly make sense if control is performed by an agent appointed by the Kyiv City Council.

Lobbying measures:

- Amend Article 268-1.2 of the Tax Code of Ukraine in order to link the amount of the Parking Charge to the car turnover on the parking lot, rather than its physical size
- Lifting up for Kyiv of the Clause 20-1 of Article 64 of the Budget Code of Ukraine requesting to use the Parking Charge to finance general fund of the Kyiv city budget, rather than the special fund aimed at capital expenditures.

1.8.5. Straightening legal basis for private operators / role of KTPS

KTPS, the municipal operator, is granted with exclusive status as the only appointed operator in Kyiv. It is not explained on the policy level why the Kyiv City Council or the Kyiv City State Administration are not in position to appoint other private operators to offer parking services independently from KTPS.

Stiffer competition in parking services will make them more performance-based. In case of a privately run parking scenario KTPS should be transformed into a vehicle specifically responsible for selection on behalf of the Kyiv City State Administration and control over performance by private operators and/or investment under municipally-funded parking development programs.

Furthermore, planning would best be handled by an entity which has a macro-level overview of the overall transport network functions beyond just parking. Supervision and control may be delegated to a special parking project implementation unit created within the Kyiv City State Administration with participation of KTPS and municipal operators responsible for streets maintenance, public transport etc.

Lobbying measures:

- Suppressing of Clause 3 of the Kyiv City Council Decision on Improvement of Parking Lots in Kyiv dated 26.06.2007 No. 930/1591, establishing exclusivity of KTPS as the only parking operator in Kyiv;
- Adopting competitive tendering on selection of private operators to operate and maintain parking infrastructure in Kyiv

1.8.6. Coordinate with other Ukrainian cities

Our discussions with parking stakeholders in Lviv and Odessa showed that they experience the same difficulties and are aware of the legal obstacles to achieve proper parking management in their cities.

Better coordination with other Ukrainian cities may help to lobby in favor of the legal changes proposed.

1.9. Additional discussion about how to improve revenue

To improve the profitability of the parking system in the current legal and organizational framework, one could imagine several solutions:

Decrease Staff?

As mentioned previously (see Chapter I4.1.1), some steps have already been taken to reduce the number of staff in 2015. This work of restructuring may need to be further pursued. Further audit on the organizational chart—as recommended in section 1.6—would however be useful to identify potential redundancies in staff more specifically.

Increase the Parking Fee?

As shown in Chapter I1.3, the current parking fees are low in Kyiv. The parking fee in Zone I reached 30 UAH per hour in 2007 (whereas it is only 10 UAH in 2015), which is a useful precedent that demonstrates driver willingness to pay for parking.

If the hourly Parking Fee (versus subscription tickets) is doubled or tripled, parking demand would probably diminish—although it is unclear to what precise level. We can however assert from our experience that a limited increase in hourly fees incurs a direct rise in parking revenue in exactly the same proportions. This occurred in several cities, even in the case of increases by 30% such as in Nantes (France).

Hence in the short run, a general 10% increase in DAY parking fees, for example, could generate a 10% increase in the gross revenue—2.2 million UAH per year, or else about 1.8 million UAH per year after deduction of the VAT in the KTPS budget. The increase should however comply with the Parking Fee formula defined by the Cabinet of Ministers of Ukraine.

In a more long-term approach, increasing drastically the Parking Fee would align with the objective of diminishing car use and favoring alternative means of transport. This must however be phased in in conjunction with improvements to public transport and walking/cycling infrastructure; any changes to the fee are best handled with incremental increases, rather than a stark rise not to overly shock users. It would be also necessary to reform or suppress the National Parking Fee formula set by the

Cabinet of Ministers, as proposed in section **Erreur! Source du renvoi introuvable.**

Others:

As discussed in the financial analysis (see Annex IV), the revenue per place and per year in 2014 was of 4634 UAH in Zone I, 3527 in Zone II and 2177 in zone III. Therefore, amending the zonal map (as proposed in section 1.3) to reflect current parking demand patterns will also help to increase revenue.

The improvements of administration and transparency recommended in section 1.5 and 1.6 may also contribute to increase revenue.

2. MEDIUM TERM (2018)

2.1. Introduction

To improve enforcement of payment, a new law must be adopted by the Ukrainian Parliament, which seems to be possible only in the medium-term since the Draft Law n°2228 was recently rejected (see Chapter II4.1).

The recommendations below rely on the **assumption that the Draft Law n°2228** or an equivalent one **will be passed to enable robust enforcement of parking rules** and feasibility of private investment in parking (see section 1.8.3).

Even if it is now possible to photo-capture and tow cars for breach of traffic rules, illegally parking on street crossings or pavements without any risk of getting penalized may continue to some degree, depending on the willingness of the police to use these tactics to bring punitive measures to offenders of traffic rules. Compliance with parking rules in the medium term may improve but still remain far from optimal.

2.2. Shift to an automated payment system

Advanced on-street payment systems in other cities have reduced or eliminated revenue spillage by equipping all paid spaces with automated payment methods whereby cash is not exchanged between hands. These systems do not have attendants overseeing payment, only enforcement wardens (see the case studies in the Annex VII).

More specifically, the pros and cons of the current organization and a fully automated system are discussed in the table below:

	Parking attendants	Automated system
Advantages	<p>Assistance provided to parking users to park their cars</p> <p>New employment opportunities</p>	<p>Reduction in potential loopholes in the system, especially related to revenue collection</p> <p>Better auditing power over the collection of parking fees for the City</p> <p>Image of a more organized and sustainable city</p>
Disadvantages	<p>Suspicion by the general public of misappropriation of collected money</p> <p>Service not always reliable from the parking users point of view (presence/ availability of parking attendants)</p> <p>Risk of attendants being assaulted and robbed of collected fees during the day, even if this does not really happen currently given the limited amounts of money collected</p> <p>Image associated corruption and developing countries</p>	<p>Labor cuts, even if some portion of parking attendants become enforcement agents</p>

Shifting toward a functional automated parking payment system is an optimal long-term strategy for the advantages listed above.

Remark: an intermediate step to a more sophisticated parking system will include having good enforcement with parking attendants directing drivers to pay in the existing parking meters.

An automated system (“pay-by-plate”) should rely on:

- **Updated parking meters** as a reminder about payment and to develop a local culture to pay for parking—as has successfully been the case in Moscow (see Annex VII for case study);
- **All modern digital means** of payment such as mobile phone, SMS, credit card and internet.

To this respect, the “parking development concept” discussed in Chapter II4.3 aligns with best practice.

As far as we know there are no cities in the world that rely on fully dematerialized payment. In London, the City of Westminster borough is moving progressively to such a system by removing parking meters, but this is being done incrementally after having successfully creating a culture of payment with very high compliance rates. The same applies to Tel Aviv.

Remark: if the city implements in the long-term an automated license plate recognition scheme enabled by the photo-capturing law, there may be some additional barriers. Twenty-three types of cars plates exist in Ukraine that could present a challenge. The multitude of license plate varieties confounds the issue of tracking down the rightful vehicle owner. Currently, a car may be registered with untraceable company names but is unclear to what extent this is a problem.

2.3. Involve an international private operator

The demand formulated by the KCSA is:

- An efficient service....
- ... that reaches European standards...
- ... and that should not cost anything more than today (since no significant public investment could be possible).

To this respect it was felt that only **an international private operator well-versed in managing an automated payment system** could make a significant investment (e.g., modern parking meters, control center) and provide a high quality service in the long-term.

Reminder: international operators would only respond to a tender once the enforcement issue is resolved.

2.3.1. Scope of the tender

The international tender for long-term implementation of the new parking system recommended should:

- **Start with a pilot zone of about 2,000 DAY parking places in the City Center** (including the current Zone I and one part of Zone II, i.e. the most profitable area), which would limit the risk for both the City and the operator;
- Anticipate the eventual possibility of extending the system to other areas in Kyiv.

A list of important key performance indicators (such as number of hours paid per place and per year, compliance rate, customers’ satisfaction...) needs to be

developed that would be included in the tender. The pilot launch of the new system could start with a goal of reaching 1,600 paid hours/place/year.

Initial discussion with international private operators and public comment period (maybe 1 month?) on call for tender would be useful to get feedback about the proposed pilot, its perimeter and feasibility.

2.3.2. Role of KTPS

In case of a privately run parking scenario KTPS could be transformed into **a vehicle specifically responsible for selection on behalf of the Kyiv City State Administration and control over performance by private operators** and/or investment under municipally-funded parking development programs (more details provided in section 1.8.5).

More specifically with the pilot, KTPS would be deprived of operating DAY parking places in the city center, but could be in charge of managing the new contract with the City Center operator, since it is very unlikely that the Department of Transport would/could manage the contract.

KTPS is headed by a Director, who is authorized to conclude agreements on its behalf. Importantly, KTPS may involve third private companies under investment tenders for construction of new parking lots and other infrastructure objects and subject to approval by the Main Investment Department of the Kyiv City Administration.

Starting with a pilot zone of about 2,000 parking places would also mean that **some DAY parking places** in Zone II and Zone III **would still have to be operated by KTPS**.

Eventually, KTPS would still **manage the NIGHT parking lease contracts** – granted with systematized transparent tenders as recommended in section 1.6.

2.3.3. Transitioning KTPS parking attendants

KTPS could **train parking attendants to become progressively enforcement agents**. However, the number of places managed per attendant would probably be higher, so that not all the attendants would still be necessary.

One attendant currently manages 16 or 17 parking places on average in Kyiv.

The table below shows the number of enforcement employees in other cities. All these cities have automated payment schemes and no need for attendants. Amsterdam excels due to its automated license plate recognition program, which utilizes a scan van and 3 men on scooters who place automatically generated tickets on cars in violation of parking rules.

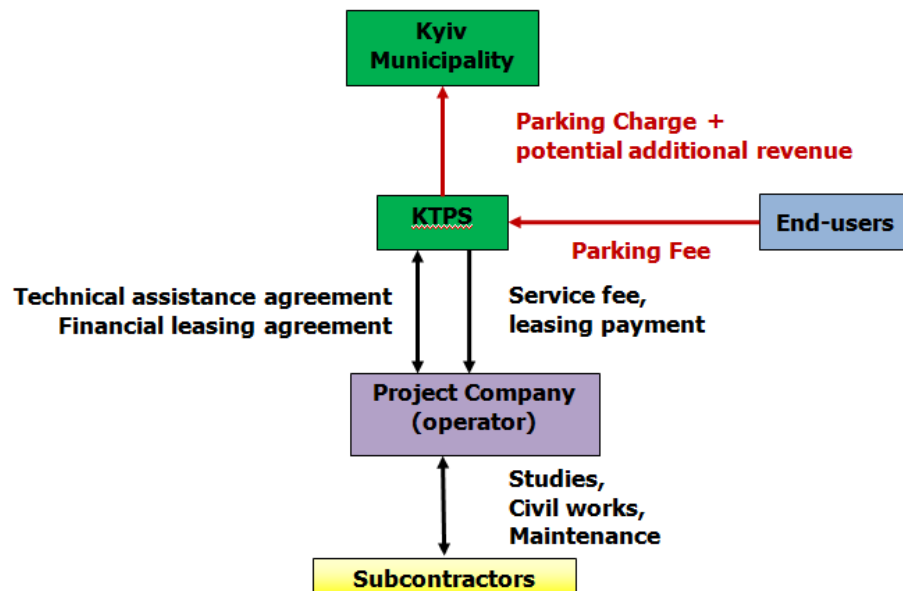
Estimate of Regulated Spaces Per Enforcement Employee (2015)	
Amsterdam	1839
Barcelona	363
Mexico City	556
Manhattan	55
Stockholm	160

The private operator could also proceed to payment control directly with its own agents, in which case it could be incentivized to employ some of the former parking attendants as enforcement agents. This type of strategy has been used in parking reform as well as in other related industries, such as the transition of mini-bus operators to become bus drivers in the case of a new BRT corridor.

Remark: KTPS could also choose not to renew existing NIGHT parking leases with private operators and have the former DAY parking attendants operate them, but as noted previously, this would probably be less profitable.

2.3.4. Possible legal scenarios

A. Public procurement



Law of Ukraine "On conducting of public procurements" dated 10.04.2014 No. 1197-VII; Status: publically accessible through Internet¹⁵

Under this type of asset management agreement, a private operator is responsible for complete operation of parking assets, including technical maintenance and collection of fees from end-users, exclusively in the interests of and for the benefit of the Kyiv City Council. The objective of this scenario would be to have the private operator finance, install, operate and maintain the system (parking meters mainly). As compensation, the operator would get an annual subsidy for several years (e.g., 10 years)¹⁶.

It is perhaps a more advantageous contract arrangement from an urban planning perspective since it allows the city to temporarily remove parking places, such as during parades and other major public events, or to permanently dedicate the space to alternative transport modes like segregated bus lanes without paying a penalty. In the case of an investor tender, as described in the next section, it could be that a penalty would need to be paid for lost fee collection hours caused by removing inventory and thereby impacting potential income generation. Of course, the risk of no fees being collected in the case of an incompetent operator is expressly borne by the Kyiv City Council.

Parking fees collected from drivers go directly to the city. The city pays the private operator a flat service fee and in return the operator must comply with key performance indicators. A similar type of arrangement was done in Barcelona in establishing the for-hire bike-share system. Remuneration of the contractor is provided by KTPS. The service contract could be structured to include a bonus and penalty depending on how the key performance indicators are fulfilled.

B. PPP¹⁷ (investment tender)

Law of Ukraine "On investment activities" dated 18.09.1991 No. 1560-XII; Status: publically accessible through Internet¹⁸

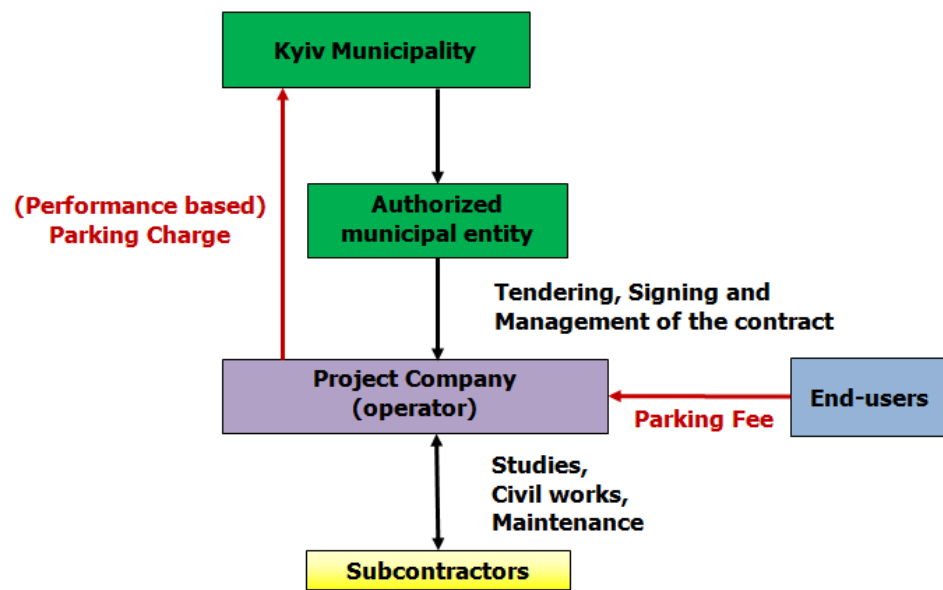
Regulation on investment tenders in the city of Kyiv adopted by the Resolution of the Kyiv City Council dated 24.05.2007 No. 528/1189

¹⁵ <http://zakon0.rada.gov.ua/laws/show/1197-18/card5#Links>

¹⁶ Annual subsidies for several years may require additional structuring, such as the adoption by the Kyiv city council of an investment program, co-approved by the Ukrainian government.

¹⁷ For the sake of clarity, we use the PPP term in a broad sense and irrespective to the "state-private partnerships" regulated by the Law of Ukraine "On state - private partnerships" dated 01.07.2010 No. 2404-VI.

¹⁸ <http://zakon5.rada.gov.ua/laws/show/1560-12>



Investment agreements are pretty unique compared to other PPP models, as they allow transferring into ownership by the investor of some of the project's assets in order to compensate the low-income risk. To this end, one may say that investment agreements also represent a combination of BOT/BOOT¹⁹ contracts. Investment tenders are included in the 2015 Parking Development Concept, but the short-term recommendations in this report will need to be done to attract investors.

The clear advantage of investment agreements is that the law gives municipalities a broad discretion to negotiate investment conditions so that the PPP project can be shaped very close to local needs.

Further advantage of investments agreements is that they provide a certain flexibility for the private investor. More specifically, in accordance with the Law on Ukraine on Investment Activity:

- Any investor, at its own discretion, determines the goal, field, type, and amount of the investment and has the right to engage partners to achieve the above;
- Investors have the right to raise financial resources in the form of credits, loans, as well as the right to issue securities;
- Investors have the right, at their own discretion, to assign investment rights and investment results to third persons.

As mentioned earlier (see Chapter II.4.3), investment agreements seem to be preferred by the Kyiv municipality both on the level of KTPS' by-laws and on the strategic level. From a planning perspective, the city would likely need to pay a penalty if any parking places included in the investment agreement are removed and used for other purposes (thereby impacting the investor's possible revenue). More generally, updates to the parking policy (e.g. changes in parking fees)

¹⁹ Build, Operate and Transfer / Build, Own, Operate and Transfer.

would necessitate renegotiations between the Kyiv municipality and the private operator.

Under condition of law changes listed in sections 1.8.4 and 1.8.5, the Parking Charge could be paid directly to the City by the investor as either a flat fee or as a percentage of the revenue collected (which is common in these types of contracts but requires that the city have full access to all funds collected in real-time). The latter arrangement would assume the Parking Charge is more akin to the current additional fee that KTPS must pay to the city from 50% of net revenue.

The private operator's revenue would depend on the amount of parking fees collected. Hence it would make more sense if control of parking payment was performed directly by the operator rather than KTPS, who would have less of a stake in revenue collection.

3. LONG TERM (2025)

3.1. Parking policy

As discussed in Chapter II4.3, the “parking development concept” imagines 125,000 parking spaces developed by 2020 without specifying whether the newly created parking places would be DAY parking, NIGHT parking, public car parks, private car parks or Park-and-Ride facilities.

Instead, the creation of new parking infrastructure should be discussed by the “project unit” (see section 1.2) in coordination with transport and land use plans. The long-term strategy drafted in 2016 (see section 1.3) should be finessed and implemented.

Doubling the number of DAY parking places seems easily reachable, in particular by legalizing spaces along curbsides already used for parking – that are currently considered unofficial.

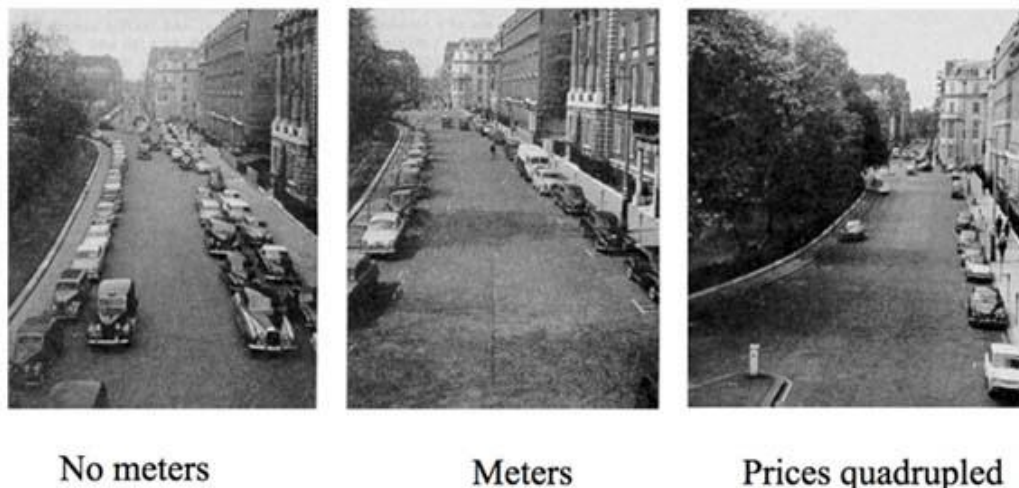
	DAY parking in 2014	DAY parking in 2025
Zone I	1,200	2,500
Zone II	2,400	5,000
Zone III	3,500	7,500
Total	7,100	15,000

As the City aspires to improve air pollution from transport sources, EV-charging points could be progressively installed, maybe aiming to equip 1% of the on-street parking capacity. The City should preferably invest directly in EV-charging infrastructure to ensure interoperability.

As discussed in section 1.9:

- Parking fees should be increased significantly;
- They should be incrementally raised over time in conjunction with improvements to public transport and walking/cycling infrastructure;
- This would imply that the National Parking Fee formula set by the Cabinet of Ministers has been reformed or removed, as proposed in section **Erreur ! Source du renvoi introuvable.**

The image below shows the sensitivity to high parking demand with respect to the level of fees in Grosvenor Square, London.



3.2. Financial forecast

A financial model has been designed on the assumptions that:

- DAY parking would be operated by a private operator through a PPP (investment tender) as described in section 2.3.4.B;
- This operator would perform control of parking payment itself.

The model is meant to explicit a few investment costs and ratios useful to design an on-street parking scheme. It also aims to illustrate the potential profitability of such a scheme depending on various variables.

The whole spreadsheet is shown in Annex VIII.

The assumptions about costs and revenue are based on benchmarking and experiences in other cities. In particular, it was hypothesized that one enforcement agent would be needed for 150 DAY parking places, based on the table presented in section 2.3.3.

There remains some uncertainty about:

- Costs of investment (shipping costs, custom costs... of parking meters);
- Operating costs since it is unclear whether the competent staff can be found locally;
- Revenue, depending on the legal changes that will occur and actual enforcement of traffic laws by the police;

- The Internal Rate of Return (IRR): 15% for the private operator is rather high but considered as appropriate for a risky activity (pilot, political context, legal instability...).

The table below shows the results obtained for various scenarios to show the sensitivity of the financial forecast depending on various parameters (number of day parking places regulated, level of fees, number of years of the investment contract, etc.), all the other assumptions being specified in Annex VIII:

	Scheme corresponding to the 2014 situation in terms of number of DAY parking places and fees		Extended regulated parking area		
Number of DAY parking places	7,100	7,100	15,000	15,000	15,000
Operation	Current organization (parking attendants and poor enforcement)	Automated system and effective control	Automated system and effective control	Automated system and effective control	Automated system and effective control
Number of years for a PPP contract	9 years	9 years	6 years	9 years	9 years
Fees	Current fees	Current fees	Current fees	Current fees	Fees doubled
Parking charge paid to the City budget (UAH)	9.3m	9.3m	19.6m	19.6m	19.6m
Potential additional fee ²⁰ (UAH)	0.2m	6.4m	7.2m	15.0m	96.9m
Total potential payment to the City budget (UAH)	9.5m	15.7m	26.9m	34.6m	116.5m

Revenue from NIGHT parking is not included

²⁰ It could be paid to the City budget or to KTPS according to the legal scenario chosen. Currently KTPS pays the charge to the City budget, and also a yearly contribution to the budget depending on its financial outcome (50% of the net revenue).

Six years might be too short from the operator's point of view, while 9 years might be the optimal duration to amortize the capital investment and maximize the fees paid to the City budget.

Annex I

REFERENCES

Technical and financial information reviewed

- "Regulations of Parking in the City of Kyiv" memo from Squire Patton Boggs, dated August 2014
- Kyiv Parking Development Concept from 22 January 2015 no. 22/887
- KyivTransParkService 2012, 2013 and 2014 annual reports
- Parking lots working hours in each of the 10 city districts
- Analysis of the parking areas in Kyiv compared to other Ukrainian cities, 2015
- List of parking lots under the jurisdiction of KyivTransParkService
- KTPS Financial dossier on the average revenue per parking lot
- Powerpoint on Concept of Parking Space Development in Kyiv from 2015-2020
- World Bank "Kyiv Sustainable Urban Transport: Analysis of Mobility Patterns of Kyiv" Draft Report, dated July 2015
- Kyiv Traffic Management chapter on Parking Management (from Finish Cooperation), dated January 2010
- Tap4Parking analysis of parking space in Ukraine, 2015
- Vinci Park info on car ownership in Kyiv, 2007
- Meeting with Vladimir Pershyn on 8 July and 8 September
- Meeting at KCSA on 6 July
- Meeting with Sergiy Tselovalnik from Urban Planning Dept on 9 and 10 September
- Meeting with Antonio Nunez from World Bank on 7 July, 8 and 9 September
- Meeting with Nick Taylor and David Brenig-Jones from ITP on 8 and 9 September
- Meeting with Dmitrij Bespalov from A+S on 14 July

Civil Society perspective reviewed

- Meeting with Irina Bondarenko from Kyiv Cycling Association on 9 July
- Meeting with Anton Moyseyenko from Kyiv Smart City Initiative on 9 July
- NGO roundtable on 14 July (see Annex II).

Laws and regulations reviewed

Statutory laws:

- Constitution of Ukraine dated 28.06.1996 No. 254к/96-BP [public access] - <http://zakon2.rada.gov.ua/laws/show/254%D0%BA/96-%D0%B2%D1%80>
- Code of Ukraine on Administrative Violations dated 07.12.1984 No. 8073-X [public access] - <http://zakon3.rada.gov.ua/laws/show/80731-10>
- Law of Ukraine on National Police dated 02.07.2015 No. 580-VIII [public access] - <http://zakon1.rada.gov.ua/laws/show/580-1>
- Tax Code of Ukraine dated 02.12.2010 No. 2755-VI [public access] - <http://zakon2.rada.gov.ua/laws/show/2755-17>
- Civil Code of Ukraine dated 16.01.2003 No. 435-IV [public access] - <http://zakon2.rada.gov.ua/laws/show/435-15>
- Land Code of Ukraine dated 25.10.2001 No. 2768-III [public access] - <http://zakon0.rada.gov.ua/laws/show/2768-14>
- Economic Code of Ukraine dated 16.01.2003 No. 436-IV [public access] - <http://zakon1.rada.gov.ua/laws/show/436-15>
- Budget Code of Ukraine dated 08.07.2010 No. 2456-VI [public access] - <http://zakon0.rada.gov.ua/laws/show/2456-17>
- Law of Ukraine on concessions dated 16.07.1999 No. 997-XIV [public access] - <http://zakon0.rada.gov.ua/laws/show/997-14>
- Law of Ukraine "On conducting of public procurements" dated 10.04.2014 No. 1197-VII [public access] - <http://zakon0.rada.gov.ua/laws/show/1197-18/card5#Links>
- Law of Ukraine on lease of state and municipal property dated 10.04.1992 No. 2269-XII [public access] - <http://zakon0.rada.gov.ua/laws/show/2269-12>
- Law of Ukraine on Financial Leasing dated 16.12.1997 No. 723/97-BP [public access] - <http://zakon3.rada.gov.ua/laws/show/723/97-%D0%B2%D1%80>
- Law of Ukraine on State-private partnership dated 01.07.2010 No. 2404-VI [public access] - <http://zakon2.rada.gov.ua/laws/show/2404-17>
- Law of Ukraine on Automobile Roads dated 08.09.2005 No. 2862-IV [public access] - <http://zakon5.rada.gov.ua/laws/show/2862-15>
- Law of Ukraine on Capital of Ukraine dated 15.01.1999 No. 401-XIV [public access] - <http://zakon0.rada.gov.ua/laws/show/401-14>
- Law of Ukraine on Improvement of Populated Areas dated 06.09.2005 No. 2807-IV [public access] - <http://zakon5.rada.gov.ua/laws/show/2807-15>
- Law of Ukraine on Local Self-Governance dated 21.05.1997 No. 280/97-BP [public access] - <http://zakon5.rada.gov.ua/laws/show/280/97-%D0%B2%D1%80>
- Law of Ukraine on Social Protection of Disabled Persons in Ukraine dated 21.03.1991 No. 875-XII [public access] - <http://zakon0.rada.gov.ua/laws/show/875-12>

- Law of Ukraine on Traffic dated 30.06.1993 No. 3353-XII [public access] - <http://zakon5.rada.gov.ua/laws/show/3353-12>
- Law of Ukraine "On investment activities" dated 18.09.1991 No. 1560-XII [public access] - <http://zakon5.rada.gov.ua/laws/show/1560-12>

Government's regulations:

- Procedure of Pricing for Services on Use of Paid Parking Lots adopted by the Resolution of the Cabinet of Ministers of Ukraine dated 02.03.2010 No. 258 [public access] - <http://zakon0.rada.gov.ua/laws/show/258-2010-%D0%BF>
- Regulation on State Automobile Inspection, adopted by the Cabinet of Ministers of Ukraine dated 14.04.1997 No. 341 [public access] - <http://zakon3.rada.gov.ua/laws/show/341-97-%D0%BF>
- Rules of Parking of Transport Vehicles adopted by the Resolution of the Cabinet of Ministers of Ukraine dated 03.12.2009 No. 1342 [public access] - <http://zakon4.rada.gov.ua/laws/show/1342-2009-%D0%BF>
- Traffic Rules adopted by the Resolution of the Cabinet of Ministers of Ukraine dated 10.03.2001 No. 1306 [public access] - <http://zakon2.rada.gov.ua/laws/show/1094-93-%D0%B>
- *Rules for Safekeeping of Transport Vehicles* adopted by the Resolution of the Cabinet of Ministers of Ukraine dated 22.01.1996 No. 115 [public access] - <http://zakon3.rada.gov.ua/laws/show/115-96-%D0%BF>

Kyiv City regulations:

- Kyiv City Council Decision on Local Taxes and Rates with annexes dated 23.06.2011 No. 242/5629 [public access] - http://kmr.ligazakon.ua/SITE2/l_docki2.nsf/alldocWWW/FF63C3407BA93D32C22578BF00686E5A?OpenDocument
- Kyiv City Council Decision on Urban Landscaping Rules dated 25.12.2008 No. 1051 [public access] - http://search.ligazakon.ua/l_doc2.nsf/link1/MR081108.html
- Kyiv City Council Decision on Incorporation of Kyivtransparkservis dated 261/922 No. 15.03.2007 [public access] - http://search.ligazakon.ua/l_doc2.nsf/link1/MR070356.html
- Kyiv City Council Decision on Municipal Parking Areas Development Concept dated 22.01.2015 No. 22/887 [public access] - http://kmr.ligazakon.ua/SITE2/l_docki2.nsf/alldocWWW/7CB5A33458B140B7C2257DF9006DE917?
- Kyiv City Council Decision on Improvement of Parking Lots in Kyiv dated 26.06.2007 No. 930/1591 [public access] - <http://kievtransport.com.ua/zakonodavstvo/galuzeve-zakonodavstvo/rishennja->

kijivskoji-miskoji-radi-vid-26062007-9301591-pro-vdoskonalennja-parkuvannja-avtotransportu-v-m-kivi/

- Regulation on investment tenders in the city of Kyiv adopted by the Resolution of the Kyiv City Council dated 24.05.2007 No. 528/1189 [public access]
kmr.ligazakon.ua/SITE2/I_docki2.nsf/alldocWWW/BCEF118A6D829EBDC22573FC006DF07

Draft laws and regulations:

- The draft law of Ukraine No. 2228 relating to improvement of parking legislation [public access] - http://w1.c1.rada.gov.ua/pls/zweb2/webproc4_1?pf3511=54177
- The draft law of Ukraine No. 2635 relating to improvement of parking tax legislation [public access] - http://w1.c1.rada.gov.ua/pls/zweb2/webproc4_1?pf3511=54775
- The draft law of Ukraine No. 2890 on the municipal guard [public access] - http://w1.c1.rada.gov.ua/pls/zweb2/webproc4_1?pf3511=55192
- The draft Kyiv City Council regulation on granting by the operator of parking lots into use by companies [public access] - <https://kievcity.gov.ua/news/29266.html>

Annex II

ROUNDTABLE DISCUSSION WITH CIVIL SOCIETY GROUPS / NGOS (JULY 14, 2015)

As part of the effort to speak with users to determine needs for a better parking service, the consultant team organized a roundtable discussion with NGOs and civil society stakeholders to get the perspective from civil society of the parking problem on July 14, 2015. Prior to the meeting, questions were circulated by email to gauge initial thoughts including:

- How do you perceive the on-street parking management in Kyiv?
- How would you improve the existing parking conditions/service?

Participants included the CEO of Tap4Parking (Igor Shapataiev), a representative from AutoMaidan (Oleksiy Grytsenko), a representative from A+S (Dmitrij Bepalov) and a representative from the office of Deputy of the Ukrainian Parliament Dmitry Linka (Tatiana Chislova). The outcome of the roundtable discussion was the identification of 13 key problems by the NGO stakeholders listed below:

- 1) Rampant illegal/unofficial parking
- 2) Unclear / unpredictable organizational structure of parking
- 3) Non-transparent sublease of a large quantity of parking spaces
- 4) Non-transparent usage of parking revenue
- 5) High commission rate on mobile phone payments
- 6) Illegal methods of payment collection
- 7) Ineffective or non-existent dialogue between involved parties
- 8) Lack of liability for damages (on the part of operator)
- 9) Lack of audit or accountability of public parking enterprise
- 10) Difficulties/ obstructions in established terms for future tenders
- 11) Abusive practice in usage of "no standing" signs
- 12) Lack of modern integrated digitized traffic information chart
- 13) Inadequate construction norms relating to a minimum size of parking spaces in new buildings

Annex III

ON-STREET SURVEY (SEPTEMBER 4, 2015): METHODOLOGY AND RESULTS

General presentation

A survey was conducted in a small area in the center of Kyiv located near the Golden Gate and the National Opera. The streets surveyed are highlighted in red on the map. Data collection occurred on Thursday 4 September 2015, a date considered as representative of "normal parking conditions" after the summer period.

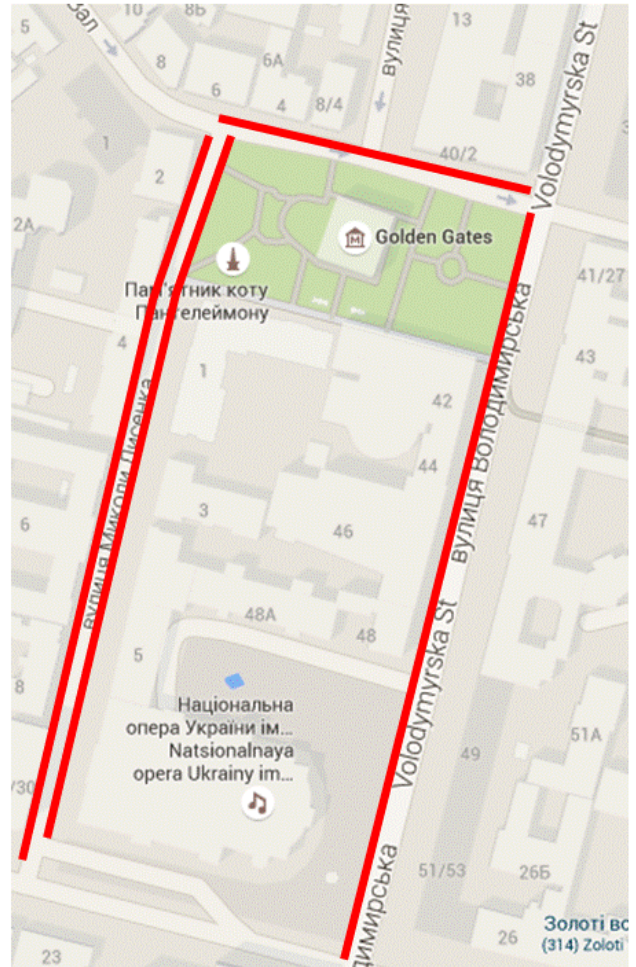
The survey consisted of dialing the number plates of all the cars parked in the streets, every hour from 6.30am to 9.30pm. The status of the place on which the car was parked was also registered (official place, disabled place, illegal parking).

The objectives of the survey were to:

- Estimate on-street parking occupancy hour per hour during a "normal" day
- Identify the various categories of on-street parking users

Some additional observations were also performed before and during the survey to:

- Identify regulations on the streets surveyed and estimating car parking places that looked authorized to compare against official documents
- Gather some qualitative information to understand better the quantitative results of the survey and, more generally, car parking behavior and the impacting factors.



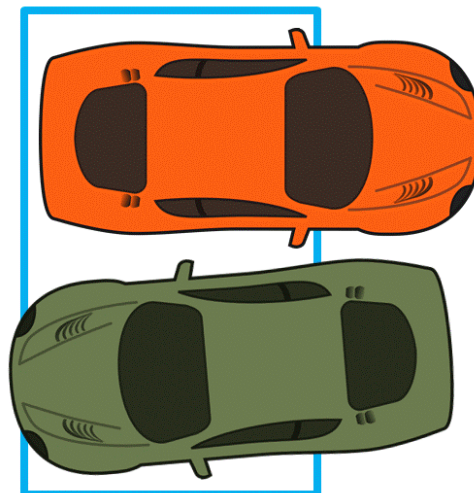
Parking capacity and methodology

It was estimated that the area is comprised of about 110 authorized parking spaces, among which 15 are reserved to the disabled. This estimation is however approximate since the information available on the street was imprecise and difficult to interpret with blurred ground markings, contradictory information between signs and markings and orientation of signs making it difficult to know what places were reserved to the disabled.

According to documents shared by KTPS later on, the survey area has indeed only **85 official parking places** (28 on Mykoly Lysenka and 57 on Volodymyrska St).

It was also observed during the survey that even if the regulation states that drivers must park longitudinally, cars are often found parking diagonally on the pavement or perpendicular to the curb, in that encouraged by parking attendants who show it as a solution to increase the number of parked cars.

During the survey, cars parked completely or partly in observed authorized place were considered "legal", which led to a slight overestimation of the official parking supply and the proportion of cars parked legally.



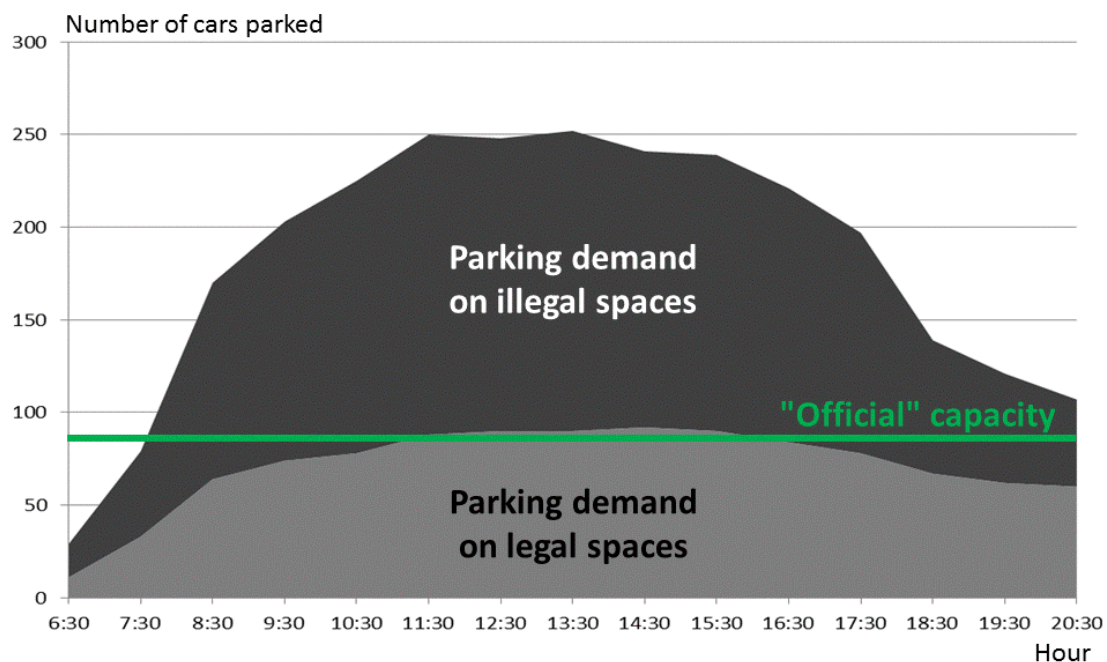
Main results and conclusions

Parking demand exceeds significantly the official on-street parking capacity (see graph 1):

- Public space gets saturated from 7.30am until late in the evening;
- Demand is more than twice as high as the official capacity from 10.30am to 4.30pm.

The fact that parking demand should exceed parking supply in such important proportions suggests that **some spaces currently considered as illegal could be made officially legal**. This could be for example the case on Yaroslaviv Val Street where some cars were observed to park all day long along both sides of the street without generating significant nuisance either to car traffic or pedestrians.

Graph 1 : parking demand



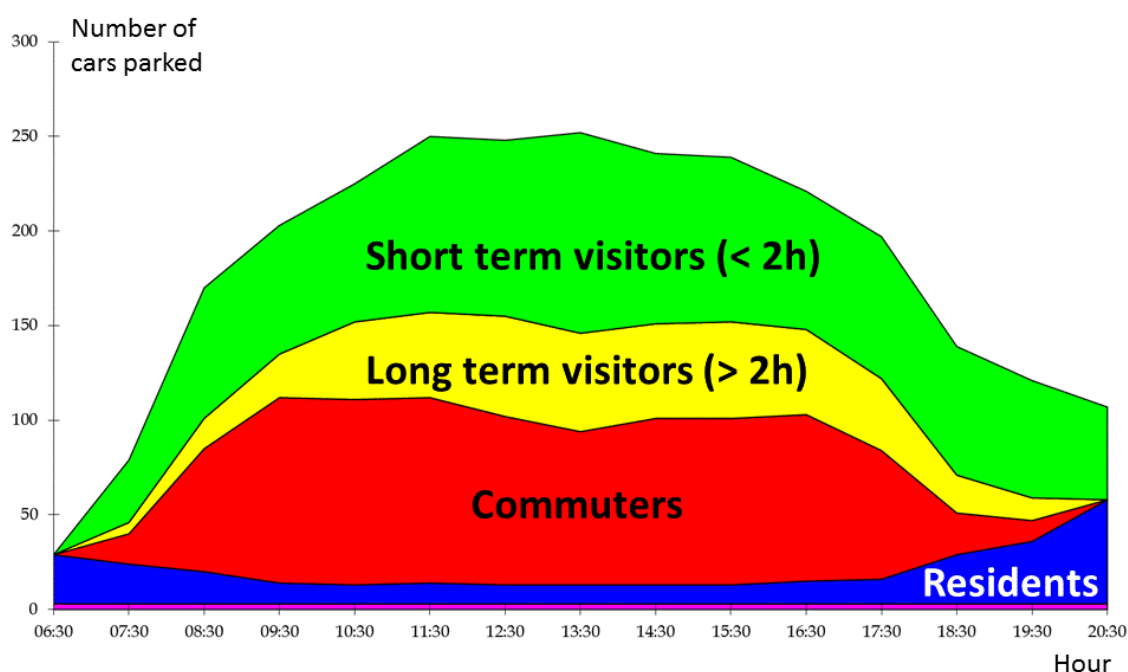
Early in the morning, some cars were parked illegally whereas some official parking places were still available, showing thereby that **users park wherever they want without paying much attention to traffic rules** (see graph 1).

This can be explained by the **absence of significant enforcement** of traffic (nor parking) rules – indeed throughout the whole period of the survey, no police officer could be seen to perform any kind of control.

The structure of parking demand is as follows (see graph 2):

- **Residential demand is low;**
- **Commuters' demand is high:** at peak hours, it represents more than 40% of parking demand, whereas the area is very central and has several metro stations;
- **Short term parking demand is high:** up to 106 vehicles – to this respect, the official supply (85 places) would not be sufficient to meet this demand even if other types of car users were excluded.

Graph 2 : categories of users



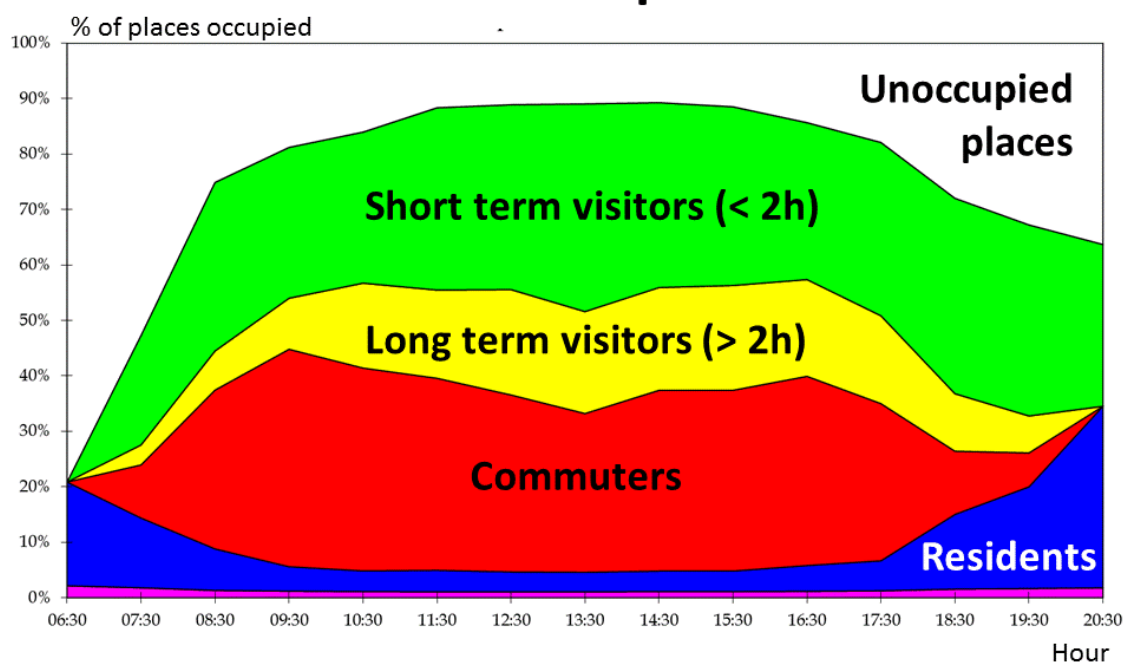
Cars accumulate on public space throughout the day, whatever the categories of car drivers it might be. Therefore **traffic and parking rules do not enable to prioritize the coming cars** (see graph 2):

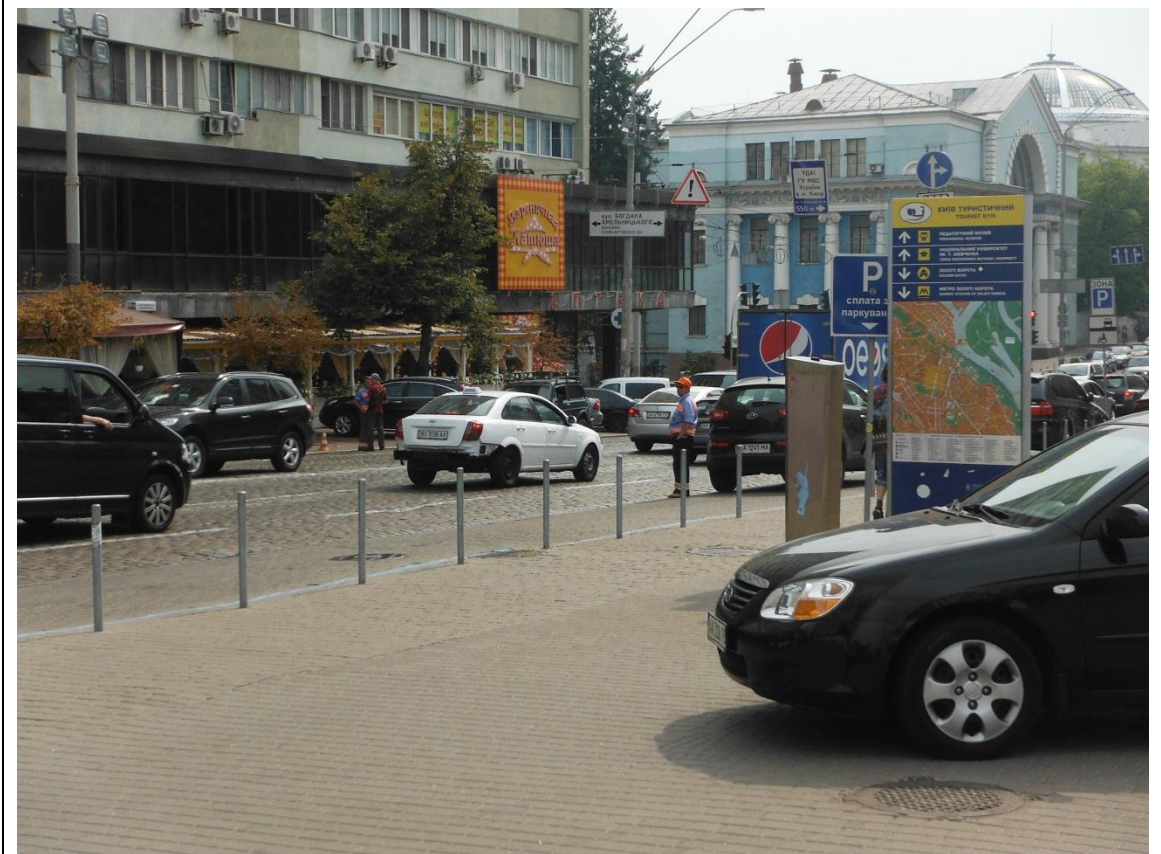
- **Neither in terms of parking duration:** more than 60% of parking demand is above 2 hours;
- **Nor in terms of categories of users.**

Paradoxically, **some authorized parking places remain available whereas public space is generally highly saturated** (see graph 3). This can be explained by three main reasons:

- The observed supply is actually slightly overestimated as compared to the official one, for the methodological matters explained previously;
- **Some of the parking spaces are *de facto* reserved by some businesses** (banks, restaurants...), the staff of which puts cones until some employees or customers arrive. This could for example be seen on Volodymyrska Street and Mykoly Lysenska Street (restaurant Pantagrue);
- **Several users prefer to park illegally** on the pavement rather than on authorized spaces **to avoid being asked for the parking fee** by the parking attendants, as witnessed in front of the opera (see photos here after).

Graph 3 : occupancy of authorized places

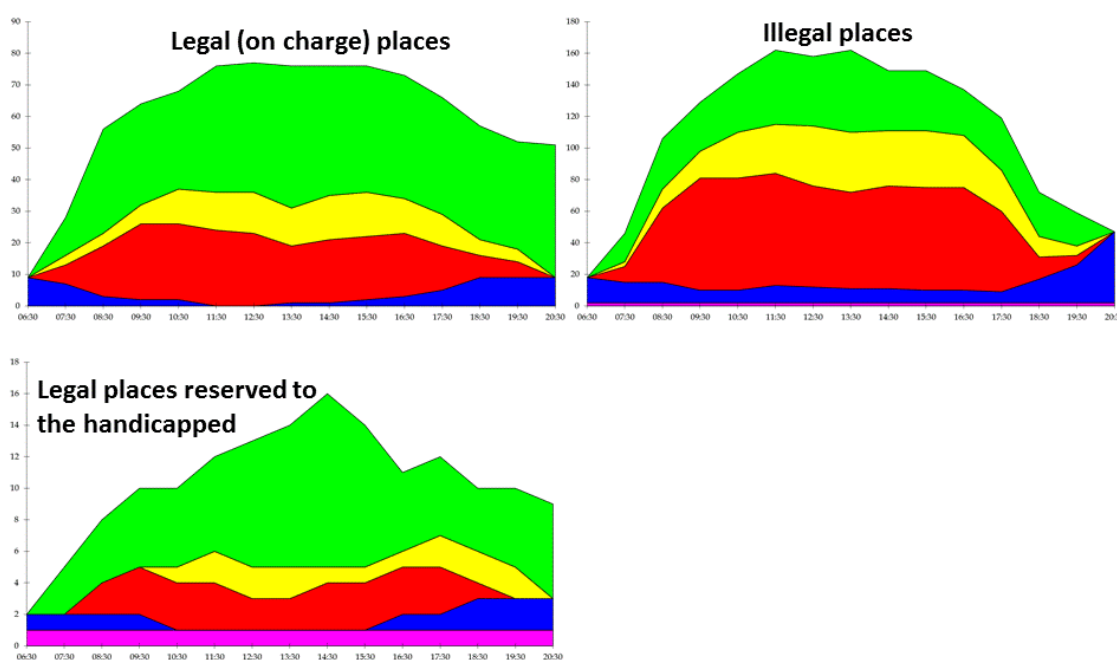




As a whole, **parking places are not used exactly the same way** (similar categories of users and parking durations) **depending on their status** (legal, illegal or reserved to the handicapped – see graph 4), **showing thereby that parking regulation is not completely ineffective despite the absence of enforcement**: for examples, commuters seem to favor illegal parking where no parking attendant asks to pay a fee, whereas the proportion of short term visitors is higher on on-charge parking places. This can be explained by voluntary compliance to the rules by some of the car users, or a sort of “moral pressure” aroused by the presence of parking attendants. Another reason is that commuters parked just in front of their company as they probably do every day, even though parking should theoretically forbidden.

It should be added that during the survey, very few “handicapped” badges were seen in the windshields of the cars parked on reserved places.

Graph 4 : categories of users according to the type of places



Annex IV

ADDITIONAL FINANCIAL REVIEW OF KTPS ANNUAL REPORTS (2012-2014)

The on-charge parking places can be divided as follows, according to the zone, the day or night status and the operator:

*Figures for **2014** rounded to one hundred*

	Operation by KTPS		Operated privately		Total
	Day parking	Night parking	Day parking	Night parking	
Zone 1	1,200	0	100	0	1,300
Zone 2	2,100	0	300	400	2,800
Zone 3	3,000	200	500	10,800	14,500
Total	6,300	200	900	11,200	18,600

This shows that:

- About 18,500 on-street parking places were operated in 2014;
- There is no NIGHT parking in Zone I;
- Most of day parking places were operated by KTPS, but a few ones were still operated privately – it is no longer possible to design such contracts according to the Law;
- KTPS operates very few NIGHT parking places.

DAY PARKING (OPERATED DIRECTLY BY KTPS)

2012

Zone	Fee/hour charged on user	Number of places	Revenue UAH/year	Revenue UAH/pl/year	Number of hours sold per place and per year
1	10	965	4 014 897	4 161	416
2	7	1 866	7 048 413	3 777	540
3	5	2 517	5 580 903	2 217	443
Total	6,6	5 348	16 644 213	3 112	472

2013

Zone	Fee/hour charged on user	Number of places	Revenue UAH/year	Revenue UAH/pl/year	Number of hours sold per place and per year
1	10	973	3 744 244	3 848	385
2	7	2 041	7 088 757	3 473	496
3	5	2 978	6 183 662	2 076	415
Total	6,5	5 992	17 016 663	2 840	430

2014

Zone	Fee/hour charged on user	Number of places	Revenue UAH/year	Revenue UAH/pl/year	Number of hours sold per place and per year
1	10	1 189	5 509 463	4 634	463
2	7	2 066	7 286 620	3 527	504
3	5	3 032	6 601 468	2 177	435
Total	6,6	6 287	19 397 551	3 085	467

NIGHT PARKING (OPERATED DIRECTLY BY KTPS)

2012

Zone	Fee/night charged on user	Number of places	Revenue UAH/year	Revenue UAH/pl/year	Number of nights sold per place and per year
2	12	21	69 430	3 306	276
3	11	377	173 976	461	42
Total	11,1	398	243 406	612	55

2013

Zone	Fee/night charged on user	Number of places	Revenue UAH/year	Revenue UAH/pl/year	Number of nights sold per place and per year
2	12	21	69 556	3 312	276
3	11	375	64 488	172	16
Total	11,1	396	134 044	338	31

2014

Zone	Fee/night charged on user	Number of places	Revenue UAH/year	Revenue UAH/pl/year	Number of nights sold per place and per year
2	12	21	47 234	2 249	187
3	11	177	62 667	354	32
Total	11,1	198	109 901	555	50

DAY PARKING (OPERATED BY PRIVATE OPERATORS)

2012

Zone	Fee/month charged on operator	Number of places	Revenue UAH/year	Revenue UAH/pl/year	Number of hours months per place and per year
1	700	312	2 801 774	8 980	12,8
2	480	1 213	7 176 553	5 916	12,3
3	350	665	2 777 008	4 176	11,9
Total	471,9	2 190	12 755 335	5 824	12,3

2013

Zone	Fee/month charged on operator	Number of places	Revenue UAH/year	Revenue UAH/pl/year	Number of hours months per place and per year
1	700	401	3 135 310	7 819	11,2
2	480	966	7 125 834	7 377	15,4
3	350	590	2 748 815	4 659	13,3
Total	485,9	1 957	13 009 959	6 648	13,7

2014

Zone	Fee/month charged on operator	Number of places	Revenue UAH/year	Revenue UAH/pl/year	Number of hours months per place and per year
1	700	61	705 880	11 572	16,5
2	480	313	2 188 939	6 993	14,6
3	350	461	1 695 260	3 677	10,5
Total	424,3	835	4 590 079	5 497	13,0

NIGHT PARKING (OPERATED BY PRIVATE OPERATORS)

2012

Zone	Fee/night charged on operator	Number of places	Revenue UAH/year	Revenue UAH/pl/year	Number of nights sold per place and per year
2	7,5	343	821 291	2 394	319
3	6,5	13 206	31 465 020	2 383	367
Total	6,5	13 549	32 286 311	2 383	365

2013

Zone	Fee/night charged on operator	Number of places	Revenue UAH/year	Revenue UAH/pl/year	Number of nights sold per place and per year
2	7,5	389	906 385	2 330	311
3	6,5	12 561	28 467 480	2 266	349
Total	6,5	12 950	29 373 865	2 268	347

2014

Zone	Fee/night charged on operator	Number of places	Revenue UAH/year	Revenue UAH/pl/year	Number of nights sold per place and per year
2	7,5	419	1 037 028	2 475	330
3	6,5	10 772	24 419 124	2 267	349
Total	6,5	11 191	25 456 152	2 275	348

			2012			2013			2014		
			Number of parking places	Revenue (UAH)	Revenue (UAH/ place)	Number of parking places	Revenue (UAH)	Revenue (UAH/ place)	Number of parking places	Revenue (UAH)	Revenue (UAH/ place)
Zone 1	Day parking	Operated by KTPS	965	4 014 897	4 161	973	3 744 244	3 848	1 189	5 509 463	4 634
		Operated privately	312	2 801 774	8 980	401	3 135 310	7 819	61	705 880	11 572
Zone 2	Day parking	Operated by KTPS	1 866	7 048 413	3 777	2 041	7 088 757	3 473	2 066	7 286 620	3 527
		Operated privately	1 213	7 176 553	5 916	966	7 125 834	7 377	313	2 188 939	6 993
	Night parking	Operated by KTPS	21	69 430	3 306	21	69 556	3 312	21	47 234	2 249
		Operated privately	343	821 291	2 394	389	906 385	2 330	419	1 037 028	2 475
Zone 3	Day parking	Operated by KTPS	2 517	5 580 903	2 217	2 978	6 183 662	2 076	3 032	6 601 468	2 177
		Operated privately	665	2 777 008	4 176	590	2 748 815	4 659	461	1 695 260	3 677
	Night parking	Operated by KTPS	377	173 976	461	375	64 488	172	177	62 667	354
		Operated privately	13 206	31 465 020	2 383	12 561	28 467 480	2 266	10 772	24 419 124	2 267
Operated by KTPS			5 746	16 887 619	2 939	6 388	17 150 707	2 685	6 485	19 507 452	3 008
Operated privately			15 739	45 041 646	2 862	14 907	42 383 824	2 843	12 026	30 046 231	2 498
TOTAL			21 485	61 929 265	2 882	21 295	59 534 531	2 796	18 511	49 553 683	2 677

	2012	2013	2014	
Operating costs	30 281	21 189	18 008	100%
Material costs	982	1 398	1 240	7%
Labor costs	8 983	9 097	8 858	49%
Payroll tax	3 359	3 401	3 347	19%
Depreciation	2 280	4 614	1 731	10%
Other	14 677	2 679	2 832	16%
<i>Number of places operated by KTPS</i>	<i>5 746</i>	<i>6 388</i>	<i>6 485</i>	
<i>Operating cost : UAH/place</i>	<i>5 270</i>	<i>3 317</i>	<i>2 777</i>	
Administrative costs	5 309	5 384	4 457	100%
Material costs	318	301	221	5%
Labor costs	2 841	2 934	2 442	55%
Payroll tax	1 095	1 159	940	21%
Depreciation	254	252	154	3%
Other	801	738	700	16%
Other costs	2 288	1 863	1 174	
Material costs	178	80	79	
Labor costs	732	656	392	
Payroll tax	248	287	151	
Depreciation	4	2	3	
Other	1 126	838	549	
TOTAL	37 878	28 436	23 639	100%
Material costs	1 478	1 779	1 540	7%
Labor costs	12 556	12 687	11 692	49%
Payroll tax	4 702	4 847	4 438	19%
Depreciation	2 538	4 868	1 888	8%
Other	16 604	4 255	4 081	17%
<i>Average number of employees</i>	<i>520</i>	<i>478</i>	<i>464</i>	
<i>Labor cost : UAH/month/employee</i>	<i>2 012</i>	<i>2 212</i>	<i>2 100</i>	
<i>Total number of parking places</i>	<i>21 485</i>	<i>21 295</i>	<i>18 511</i>	
<i>Total cost : UAH/place</i>	<i>1 763</i>	<i>1 335</i>	<i>1 277</i>	

Annex V

ROAD MARKINGS AND SIGNAGE

Clear road markings and signage are advisable at each block face with the following information:

- Where parking is allowed and not allowed;
- What type of vehicle may park (e.g., motorbike, private car, delivery truck);
- Permitted parking orientation (e.g. perpendicular, angular, or parallel);
- Applicable parking fees;
- Operational working hours when parking fees are in effect

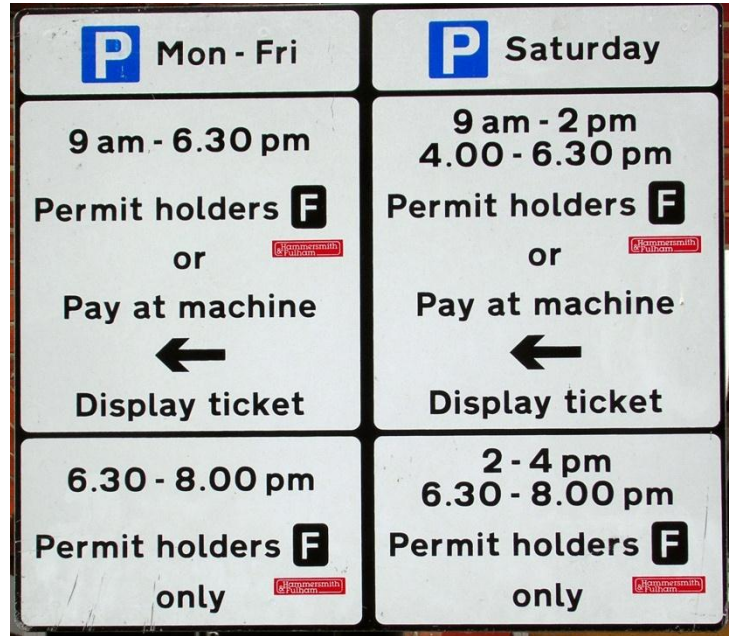
City operational hours around the world are presented in the table below.

	Amsterdam	Sydney - City of Sydney	London - City of Westminster	Moscow	New York - Manhattan	Prague	Stockholm	Tel Aviv	Warsaw
Operating Hours	9:00-19:00	8:00-22:00	8:30-18:30	24 hours	7:00-19:00	8:00-18:00	9:00-17:00	9:00-17:00	8:00-18:00

Examples of parking signs with working hours :



Figure 1 The new parking signage in Los Angeles simplifies paid parking operating hours.



Examples of Road Markings :



Road markings include painted curbs and text to make rules clear to drivers.



Paid parking lane ends and No-Parking (in yellow) behinds in the UK

Annex VI

ADDITIONAL INFORMATION ABOUT PARKING POLICYMAKERS AND REGULATIONS

1. ADDITIONAL KEY ACTORS IN PARKING INFRASTRUCTURE

Ukrainian Parliament

The Ukrainian Parliament (“Verkhovna Rada”) sets general terms and conditions of use of the municipal property, including parking lots, which are then further detailed by the Cabinet of Ministers of Ukraine and/or local governments.

At the same time, in issues relating to state sanctions for violations of parking rules the Ukrainian parliament has an exclusive competence, which cannot be delegated.

Cabinet of Ministers of Ukraine

In principle, the Cabinet of Ministers of Ukraine plays a policy making role in various areas of social life, subject to prior authorization by the law of Ukraine.

In parking infrastructure the role of the Cabinet of Ministers increased significantly with the adoption in 2009 of the National Parking Rules.

Although the underlying law of Ukraine was not clear, in 2011 the Higher Administrative Court of Ukraine confirmed that the Cabinet of Ministers of Ukraine is competent to set parking rules for the entire territory of Ukraine.

Besides, the Cabinet of Ministers is also the key policy maker with respect to the functioning of car parks and parking fees.

At the same time, the Cabinet of Ministers of Ukraine may not regulate state sanctions for violations of parking rules.

Based on the above, we may conclude that the role of the Cabinet of Ministers of Ukraine is quite high.

Kyiv City Council and Administration

City streets and squares comprise a municipal property, whereby in accordance with Article 41 of the Constitution of Ukraine the municipal property may be used by everyone within the limits set out in statutory laws.

The law obliges local governments to ensure plain and safe traffic through city streets, with this being the first priority task among other obligations. Furthermore, local governments are responsible for compliance of city streets with safety requirements.

The Kyiv City Council has the powers to define location, control operation of parking lots, including control over payment of by users for parking services.

It is worth mentioning that the Kyiv City Council adopted the Kyiv Parking Rules in 2007, i.e. before similar rules were adopted by the Cabinet of Ministers on the national level. The Kyiv Parking Rules are still valid. We understand that the municipal rules

apply in all cases, except for provisions, which are clearly not in line with the National Parking Rules.

The Transportation Department of the Kyiv City Administration is charged with the control and supervision over adherence to the Kyiv Parking Rules.

Besides, the Kyiv City Administration is obliged by law to create parking lots the number of which corresponds to 10% of the Kyiv's official population, although it is not fully clear how this obligation has to be implemented (e.g. if it has to be supported by the Kyiv City Council).

Based on the above we may conclude that the law is quite clear as regards the obligation of the Kyiv City Council to organize the parking infrastructure in the way as to ensure good and safe traffic in Kyiv.

Ministry of Internal Affairs / National (traffic) police

First of all, the Ministry of Internal Affairs is obliged to control compliance with the parking rules adopted by the Cabinet of Ministers.

More specifically, in accordance with the National Parking Rules, parking operators undertake to notify officers of the State Automobile Inspectorate, which is part of the Ministry, about violation of the parking rules.

At the same time, the above provision is not clear enough. More specifically, it remains not clear how the traffic police should react to such notifications and what are the measures to be undertaken (e.g. issue of fines, towing of cars etc.).

2. LEGAL DEFINITION OF PARKING SPACE

Allocated parking lots

Allocated parking lots are element of the city streets network and belong specifically to municipalities.

These parking lots must have a blue-colored marking. Paid parking lots must additionally be equipped with special road signs and park-o-mats.

Further, as an option allocated parking lots may be equipped with fences and other devices preventing carjacking (in this case it is possible to offer safekeeping services - the issue is further considered below). Counter devices controlling the car turnover are optional as well.

Allocated parking lots are divided into on-street parking lots and parking lots within pedestrian area.

Specially equipped parking lots

Specially equipped parking lots are located outside of streets. They have to be equipped with fences and a number of other pieces of infrastructures.

At the same time, counter devices controlling the car turnover are optional.

Specially equipped parking lots can be on- or underground. This category also includes car parks aimed at safe-keeping of cars (the issue is further considered below).

Places for storage of cars (car parks)

In principle, operators of parking lots are not responsible for the safety of cars. At the same time, parties may enter into a public storage agreement under Article 977 of the Civil Code of Ukraine. In this case, the operator deems to guarantee the safety of a car and is liable for damages.

Parking lots providing storage services qualify as a "car park" and have separate regulation basis - the Car Park Rules. For the sake of clarity, the National Parking Rules are not applicable to operation of car parks.

Car parks may be day-, night- and long-term parking lots located in both public places (out-of-streets) and any other locations. As an exception, the law permits allocation of night car parks directly on streets, provided that such streets have very low traffic.

3. PARKING PRIVILEGES

Local inhabitants

Local inhabitants do not have any specific privileges in terms of access to parking lots.

Disabled persons

The law provides for the obligation of the state to ensure a fair level of accessibility of city infrastructure for disabled persons (Article 4 of the *Law of Ukraine on Social Protection of Disabled Persons*).

Further, Article 30 of the law grants to disabled persons the right to park cars for free in accordance with the government's regulation.

Resolution of the Cabinet of Ministers of Ukraine No. 585 dated May 25, 2011, establishes that disabled persons have the right to park their cars on free-of-charge parking lots (Clause 5).

It seems, therefore, that the existing rules provide for a privileged access for disabled persons to free-of-charge parking lots, subject to their availability at particular parking lot.

Besides, the National Parking Rules require that parking lots must include at least one place for parking of cars owned by disabled persons (Clause 22). For the sake of clarity, this rule does not apply to car parks.

Veterans

Veterans have the right for a free-of-charge parking in accordance with Clause 17.11 of the Kyiv Parking Rules. This provision is not detailed further.

Corporate cars

In accordance with the Kyiv Parking Rules, parking lots may include places for a privileged parking of corporate cars and cars belonging to governmental agencies.

Foreign embassies and international organizations

In accordance with Article 4 of the *Law of Ukraine on Kyiv - Capital of Ukraine*, the Kyiv municipality is obliged to ensure proper functioning of the national governmental agencies and foreign embassies.

More specifically, in accordance with the Kyiv Parking Rules, the Kyiv City Administration should define parking lots for free-of-charge parking of cars belonging to foreign embassies and international organizations subject to their written requests (Clause 17.3.7).

Special purpose vehicles

The Kyiv Parking Rules reserve the free-of-charge parking of special purpose vehicles, such as police, ambulance, municipal services etc. (Clause 17.11).

Hospitals, schools and similar

It is prohibited to allocate paid parking lots in front of public hospitals, schools and similar public institutions in line with Clause 17.3.5.3 of the Kyiv Parking Rules.

Shops / restaurants / hotels

The law provides for the right of shops, restaurants and hotels to allocate parking lots if permitted by the State Automobile Inspectorate, subject to an agreement with the municipal operator (Clause 17.3.6 of the Kyiv Parking Rules).

In respect to allocated parking lots, the possibility was actually limited in 2013 with adoption of the National Parking Rules amendment, which prohibited transfer of allocated parking lots for use by companies other than operators.

Logistics operators

Logistics operators do not have any specific privileges in terms of access to parking lots.

Public events

Parking during certain public celebrations is free-of-charge in accordance with Clause 17.3.8 of the Kyiv Parking Rules.

4. SPECIFICS OF CAR PARK SERVICES

Car park services as a public contract

The Civil Code of Ukraine recognizes the concept of adhesion and public contracts (Articles 633, 634).

More specifically, in accordance with Article 633 of the Civil Code of Ukraine, a public contract is a contract in which one party, an entrepreneur,– is assumed to render services to each consumer who has recourse to him.

Storage of motor vehicles by a business entity qualifies as a public storage agreement under Article 977 of the Civil Code of Ukraine.

Conditions of a public contract are established as identical for all consumers except those to whom respective privileges have been granted according to the law.

In accordance with Article 634 of the Civil Code of Ukraine, a person may offer to another person to enter into a contract of adhesion, which conditions are pre-defined in standard forms and cannot be changed by this other person.

Civil law nature of storage of cars

Under a contract of storage, one party (the facility's owner) is obliged to store a piece of property deposited by another party thereto (depositor) and to return the same to the depositor safe and intact (Article 936 of the Civil Code of Ukraine).

A contract of storage must be concluded in a written form. The written form of a contract is considered to be complied with if the acceptance of a piece of property for storage is certified by a signature, receipt, or another document signed by the facility's owner (Article 937 of the Civil Code of Ukraine).

The facility's owner is obliged to store a piece of property for a period established in the contract of storage (Article 938 of the Civil Code of Ukraine).

The facility's owner has the right to transfer the piece of property for storage to another person if he must do this in the interests of the depositor, even in a situation when the facility's owner cannot obtain the consent of the person.

A professional provider of storage services is liable for the loss (or shortage) or damage of a piece of property, unless it is proved that this occurred as a consequence of force-major or as a result of intent or gross negligence of the depositor (Article 950 of the Civil Code of Ukraine). Further, the facility's owner is liable for the loss (or shortage) or damage of a piece of property upon the expiry of the period of storage only when there is his intent or gross negligence.

Liability of a parking operator for damages

Under a contract of storage of motor vehicles, the facility's owner is obliged not to allow for unauthorized persons to have access to them (Article 977 of the Civil Code of Ukraine). Further, the Ukrainian law excludes the limitation of liability of service providers for damage caused to customers, other than in cases of force-major (Article 1209 of the Civil Code of Ukraine).

At the same time, in accordance with the Resolution of the Supreme Court of Ukraine dated October 13, 2010, an operator of paid parking lots can be found responsible for storage of cars provided that two conditions are met: the parking lot is indeed equipped with a mechanism preventing car-jacking and the operator offers storage of cars as a separate service. This position is also shared by the Higher Administrative Court (Resolution of the High Administrative Court of Ukraine dated September 7, 2011 (case No. K/9991/5802/11)).

Therefore, parking services do not presume the liability of the operator for damage caused to users in connection with car-jacking. This liability can be included as an element of additional storage services.

Customers protection

In accordance with Article 178 of the Commercial Code of Ukraine, a company, which groundlessly evades the fulfilment of a public contract, must compensate the other party for losses caused by this in a manner prescribed by a statutory law. It seems to be a rather declarative provision, as there is currently no statutory law proving for mechanism of such compensation.

Article 18 of the *Law of Ukraine On Protection of Consumers* contains quite an extensive list of conditions, which may be found invalid by a court because they breach the principle of fairness towards the consumer. These conditions include, without being limited to:

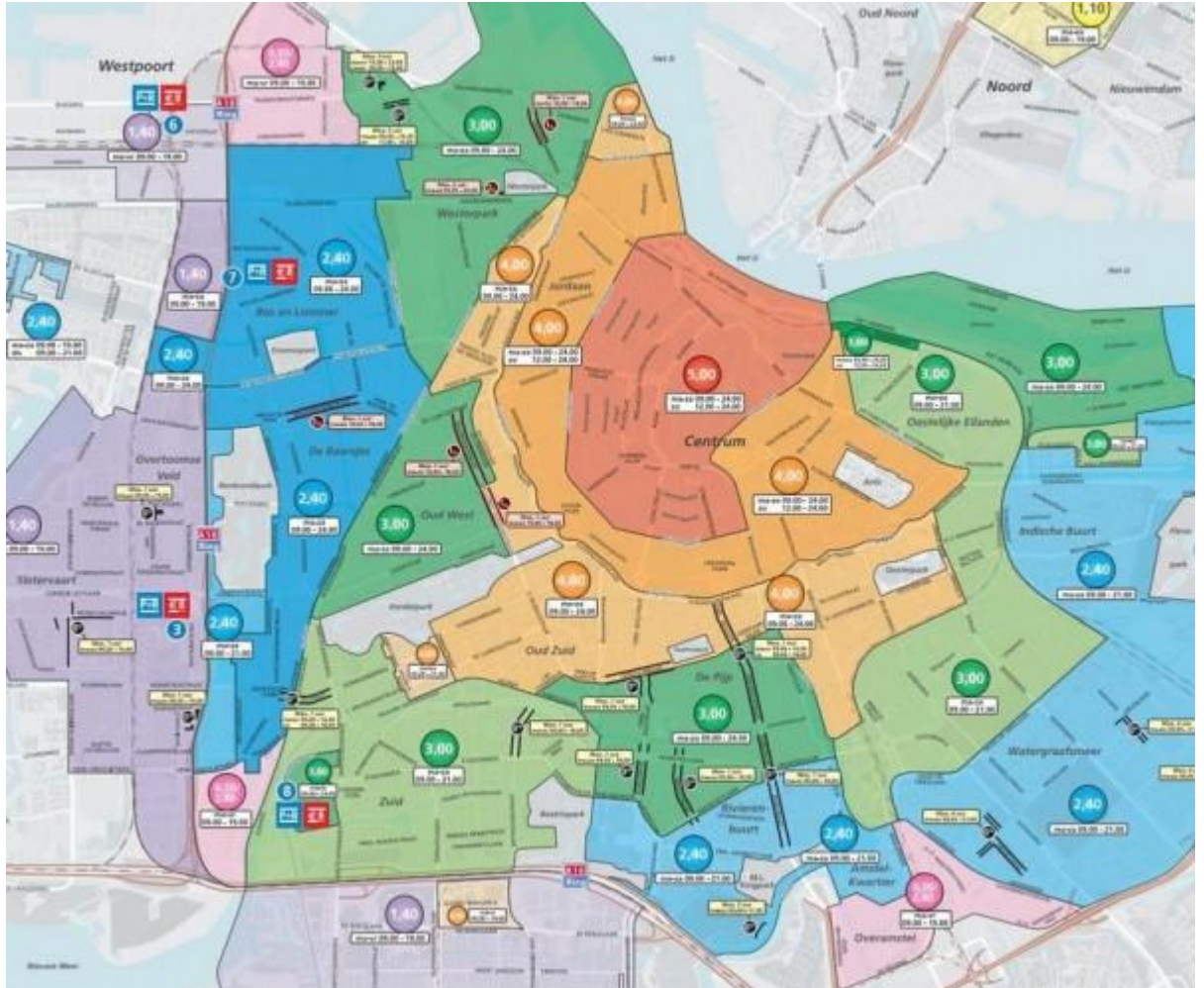
- possibility to unilaterally terminate the contract without valid reasons or increase the price previously agreed with the customer;
- limitation of liability in case of death or physical injury of the customer;
- limitation of liability of the services provider for obligations undertaken by its agents;
- possibility to assign rights and obligations to third persons, if such third persons are not able to maintain the same level of guarantees as extended by the provider of services.

Last but not least, in accordance with the National Parking Rules, operators must inform users about terms and conditions of the use of parking lots.

Annex VII

BENCHMARK: 5 CASE STUDIES

1. AMSTERDAM, THE NETHERLANDS



Overview

Population:	826,659
Metropolitan Population:	1.6 million
Curbside Fees:	Range from € 0.10/hour up to € 5.00/hour
Car Ownership:	260,600 registered cars
Area of the City / population density:	219 km ² / 4,908 inhab/km ²
Paid on-street parking:	// places

Problem

Amsterdam suffered from air pollution and the EU required cities in member-states to improve compliance with air quality standards. Approximately 40% of air pollution in

Amsterdam was caused by 10% of cars. Before 1993, vehicle exhaust was not registered in any way. The city decided to target parking, especially on-street parking, to improve compliance with air quality rules.

Strategy

Parking fees were introduced to counter decades of car-centric policies and were expanded to tackle air quality issues triggered by EU directives regarding NO2 emissions. The Dutch government chose to follow the most rigid of the EU interpretations.

A municipal enterprise known as Cition was created to handle all payment collection, maintenance of parking meters and enforcement personnel. Cition was created to oversee a pilot automated license plate recognition scheme to improve enforcement. Parking enforcement was mostly carried out by wardens patrolling the streets on foot. This was often quite inefficient, requiring a large number of employees with limited range. A van with the automated license plate recognition technology, linked to a central control center by GPS, could immediately determine and communicate to the control center whether a car paid, overstayed or didn't pay for parking. The program proved highly successful.

Program

Paid parking can be found nearly everywhere in the pre-1940s parts of Amsterdam and is rapidly spreading to newer areas. By the end of 2010, every traditional multi-space parking meter was replaced with license plate input technology. Approximately 3,000 multi-space parking meters are used to handle payments. Most of the on-street parking within the A10 ring road has a fee as well as some areas outside the ring. Residential permits are issued for restricted use on the street where car owners reside. There is a quota on the number of permits, resulting in a ten year waiting list to purchase one.

Every borough in Amsterdam has a contract with Cition, a company owned by the municipality. Cition must pay a penalty if it does not collect parking meter fees from visitors. In 2013, the city had a competitive tender to manage the parking based on new performance indicators. The tender call was open to companies besides Cition, which was viewed as having a strategic advantage with insider information. Despite the attempt to generate competition, Cition won a renewed contract.

Parking revenues go back into infrastructure projects via the Amsterdam Mobility Fund. They must be used in the city-wide mobility scheme, not just within the borough where it's collected. The parking fund comes from: parking meter fees, penalty fines and permit revenues. Every borough now has to give ~30% of its parking income back to the central city. About 31% of the mobility fund is spent on bicycle projects, 18% is spent on improvement of public transport and 13% on road safety.

Amsterdam also has Park-and-Rides at public transit stations outside the city center to assure drivers would be less likely to drive into the congested center.

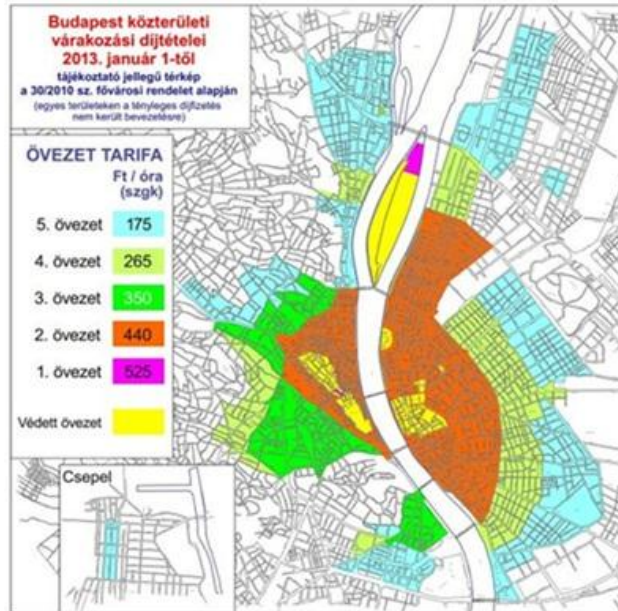
Outcome

The effect of paid on-street parking, improved enforcement and Park-and-Rides has been a 20% decrease in car traffic in the inner city as well as a 20% reduction in traffic searching for a space to park. This is viewed as improving the air quality. Biking has been increasing for 20 years and now has a mode share of 38%. Walking makes up 25% and public transport 18% of trips.

Additional Resources

<https://www.amsterdam.nl/parkeren-verkeer/parkeren-amsterdam/street-parking/street-parking-rates/>

2. BUDAPEST, HUNGARY



Overview

Population:	1.7 million
Metropolitan population:	3.3 million
Curbside Fees (max 3 hrs): (0.55 EUR)	Range 535 HUF/hr (1,67 EUR) to 175 HUF/hr
Area of the City / population density:	525 km ² / 3,348 inhab/km ²

Problem

Budapest rapidly motorized in the 1980s and 90s, and with motorization came heavy congestion and parking problems. Cars parked on pavements, in moving lanes and in pedestrian crosswalks. The streets looked disorderly and were uncomfortable to navigate for pedestrians and cyclists.

Strategy

The city tried to bring parking fees and other transport issues more in-line with growth goals of concentrating high building densities near transit in central areas where street capacity was limited. Better parking management was part of making access to the city center more comfortable for everyone. A new parking strategy with the following goals was created:

- Directing cars parking longer than 2-3 hours (mostly commuters) into off-street garages.

- To strengthen the competitiveness of public transport against private transport, the prices of parking on the street were raised to be at least as expensive as public transport. If public transport costs were raised, parking fees were raised as well in order to make parking (and therefore driving) more expensive than using public transport.
- Providing parking spaces for residents, services, institutions and commercial vehicles.
- Creating a better balance between the supply and demand for parking spaces

Program

Budapest's transportation system is centralized under the City Operation Committee, a group of policy makers that makes key decisions about public transit, parking, and non-motorized transportation. The committee established the Budapesti Közlekedési Központ (Budapest Transport Center) to manage the transportation system on a day-to-day basis. The transport control center monitors payment, wheel-clamping and towing on large screens for all employees to witness in real time.

The committee established four parking zones with prices varying based on density, transportation system capacity, and documented parking occupancy. Parking is more expensive than a transit ticket in the two most central zones. The most expensive zone is in the historic district, where there is a desire to minimize traffic.

The city uses multi-space electronic meters, which allow a variety of payment methods and uses pay-by-phone systems in certain areas as well.²¹ The city also uses parking sensors to better understand parking utilization rates and communicate that information in real time with the public.

To make enforcement more efficient, the city uses van-mounted license plate readers, similar to Amsterdam and Moscow, and sensor technology to alert parking enforcement officers to violators. Enforcement officers also carry GPS-enabled devices that share data with the parking operator and central government.

Budapest has a build-operate-transfer arrangement with a private company that installed all the meters as well as handled operations and enforcement. The expectation is that after a number of years the private companies will train and turn over the systems to the city.

Outcome

In the more expensive inner-city zones the occupancy rate is around 70-80% because of the higher parking fees and the many off-street parking spaces. Parking conflicts can usually be observed where the fee is lower or there is no fee at all—such as where the occupancy might be 110%. However, this is nearly non-existent now in Budapest.

Additional Resources

http://www.budapest.com/travel/getting_around/parking_in_budapest.en.html

3. LYON, FRANCE

Overview

City Population:	500,000
Metropolitan population:	2.21 million
Area of the City / population density:	48 km ² / 10,370 inhab/km ²
Curbside Fees (max 1 hour 30 min):	€ 2,00/hour
Paid on-street parking:	35,000 spaces
Public car-parks:	23,000 places (30 car parks)
Park-and-Ride facilities:	6,000 (18 car parks)
Parking places in private car-parks estimated at	76,000 places

Problem

On-street parking in Lyon, as in other French cities, was viewed as consuming too much public space that made the urban environment less attractive. Long duration parking in key areas, especially by commuters, was eroding economic dynamism of the city.

Strategy

The city created an on-street parking program that prioritizes short duration parking to deter commuters from coming to work by car and encouraged them to use alternative means of transport. As a result, the number of paid on-street parking spaces has progressively risen for several years, as well as the quantity of Park-and-Ride facilities provided around the city at public transit nodes to encourage greater travel to the city center by alternative modes.

Program

The City of Lyon manages on-street parking through a service contract with a private operator. The duration of this contract is for one (1) year and is renewable three (3) times. The operator is in charge of:

- Installation, replacement and removal of parking meters;
- Operation and maintenance of the parking meters
- Collection of parking fees;
- Business reporting;
- Customer service and public relations;

The operator is paid a lump-sum, regardless of the on-street revenue, which is kept by the City of Lyon. The main reason for this arrangement, according to French Law, is

that enforcement cannot be performed by a private company. As the operator cannot ensure compliance of parking regulations, it would be less attractive arrangement if the operator's revenue depended on the amount of fees paid by the parking users. The City of Lyon owns all parking meters, including main stock and spare parts.

Lyon Parc Auto, a "semi-public" company (Société d'Economie Mixte – SEM) was created in 1969 by several local authorities specifically to operate on-street and off-street parking assets. French Law, however, requires that the company submit to competition for public tenders when the various on-going contracts are renewed. This makes the durability of this type of company somewhat fragile.

In 2010, it became possible for local authorities to exempt public companies (Sociétés Publiques Locales – SPL) from tenders, under the following conditions: 100% of the capital investment must be made by the public sector, it has to be split by at least two local authorities, the company is not allowed to participate in contracts that go beyond their activity and the geographical limits of its shareholders. Lyon Parc Auto has eventually remained a SEM and was not changed into a SPL. Lyon Parc Auto is also allowed to perform complementary activities (e.g., car-sharing operation, consultancy) insofar as they remain secondary to core operations.

In 2006, there were 60 full-time parking attendants which controlled 16,000 on-street parking places, that is to say a ratio of about 250 places per controller. They used to give 40,000 fines per month (i.e. 2.5 fines per place and per month). The parking situation was considered satisfactory as a whole. Wheel-clamping is rarely used and towing cars is generally done for illegal parking but not non-payment (as in Kyiv). The fine in Lyon is a national standard set by the State.

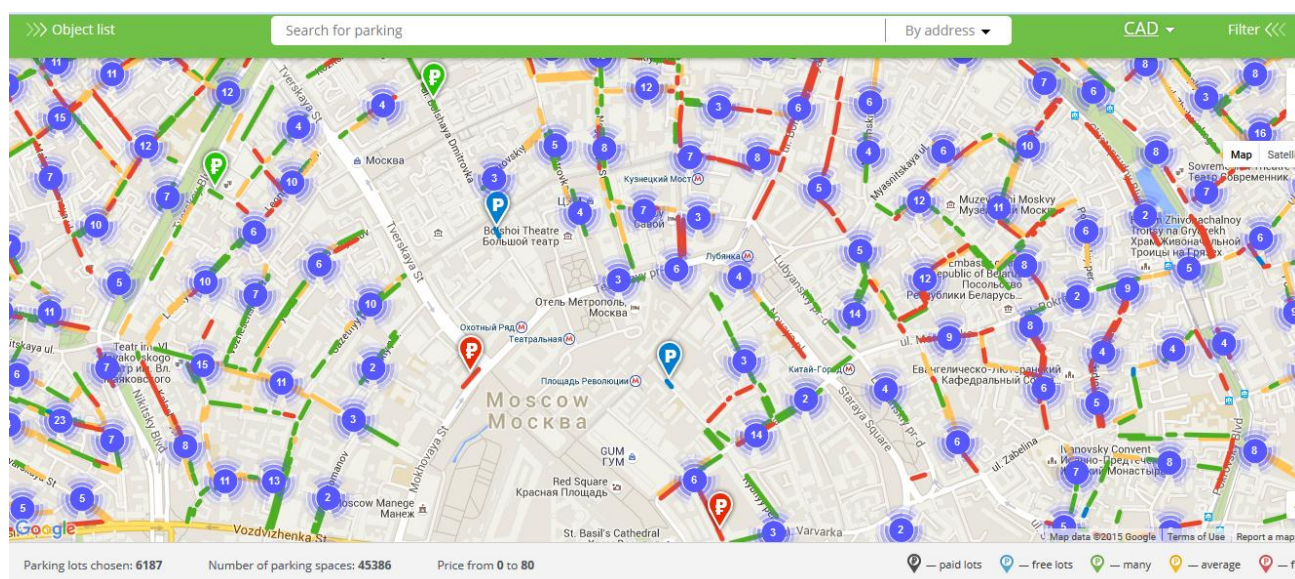
Outcome

Lyon was able to improve driving and parking behavior in the city center with the creation of Lyon Parc Auto, introduction of on-street parking fees in the city center, off-street facilities and the designing Park-and-Rides. Nonetheless, due to inadequate enforcement the city experiences low compliance rates with on-street parking payment: typically around 30%, as in Kyiv. Plans are underway to change the enforcement law. In January 2018, it will be possible to delegate on-street parking control to private operators and the level of the fines will be set by local authorities.

Additional Resources

<http://www.lyon.fr/page/deplacements/le-stationnement.html>

4. MOSCOW, RUSSIA



Overview

Population:	12 million
Area of the City / population density:	2,511 km ² / 4,581 inhab/km ²
Curbside Fees (max 1 hour 30 min):	80 Rubles (\$1.20 USD)/hour
Car Ownership:	6 million
Paid parking spaces:	46,095
Overall parking spaces:	270,000

Problem

As in Kyiv, Moscow had cars parking on pavements, in pedestrian crosswalks, along public transit traffic lanes and anywhere a space could be found. The ample free parking and lack of enforcement contributed to chaotic street conditions, especially during weekdays. Legislation needed to be passed so collecting a fee with automated license plate recognition vans would be legal. The haphazard on-street parking environment impacted overall mobility in the city with chaotic traffic conditions.

Strategy

A pilot paid parking zone was implemented in 2012 in a busy part of the city in an area that included Petrovskaya Street, Karetny and 18 additional nearby streets. The pilot included installation of sensors into the ground to utilize occupancy levels from a newly established central control center and institute dynamic pricing. By the end of the same year, it was decided that the pilot was widely successful and would be expanded to many more spaces after December 2012.

Program

As of 2015, Moscow implemented over 10,000 sensors in the city center and enforces payment of parking with a scan van, as in Amsterdam, that captures license plate numbers with automated license plate recognition technology. The program is rumored to have cost \$100 million USD, which surpasses the sensor-based program in San Francisco (though it never reached the same scale as Moscow) and is credited with being highly effective in solving the parking woes in the city. Installation of multi-space meters was done concurrently with implementation of the sensors.

The goal was to:

- Decrease the number of parking spaces
- Designate paid parking spaces
- Issue resident permits
- Improve communication of parking rules with local drivers, visitors and residents.
- Creating a web-based portal for payments and account management.

The parking website for Moscow is highly sophisticated, showing real-time availability of parking throughout the city center. Availability is indicated as high when the parking icon is green, with some spaces when the icon is yellow and with no availability when it is red. An interactive map is on the homepage when a customer enters the website. A comprehensive FAQ section evolves to include all questions that are raised as the public gets more acquainted with the system. The parking operators can be reached via social media, email or phone. These multitude of communication channels for the public has helped get greater public support for the program.

The cost to install one parking meter is 600,000 rubles (\$9,168 USD) with 200,000 rubles (\$3,056 USD) for annual operation. The meters are viewed as important to sensitizing the public to pay for parking even though now most drivers (90%) pay by phone or SMS with only 10% actually paying at the meter. Payment by SMS and mobile app is billed per minute. If a person stops parking ahead of time, money for unused parking time can be used to pay for future parking.

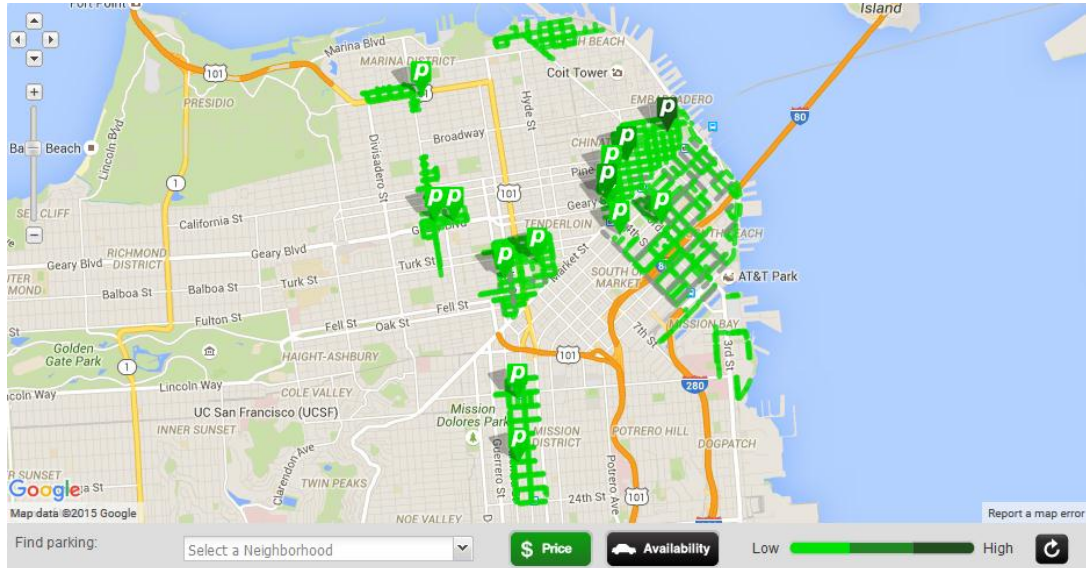
Outcome

By the end of the pilot in 2012, a study had shown that illegal parking had fallen by 64% in the pilot area. This could be attributed to higher fines and increased enforcement. It's also estimated that average parking space occupancy decreased from 4½ hours to 1½ hours, prioritizing short-term parking. The fees and fines allowed the city to generate 34 million rubles (\$1 million USD) in new revenue, which was only possible because of the strong enforcement program using license plate recognition technology.

Additional Resources

<http://parking.mos.ru/en/>

5. SAN FRANCISCO, USA



Overview

Population:	852,469
Metropolitan Population:	4.5 million
Area of the City / population density:	232 km ² / 18,187 inhab/km ²
SFpark Fees:	Range \$6.00 USD/hour to \$0.25 USD/hour
Publicly-available parking spaces:	441,950
On-street supply:	275,450 (metered: 26,750, unmetered: 248,700)
Off-street supply:	166,500

Problem

With car ownership in San Francisco and the greater area going up, the city was facing increasingly untenable traffic congestion.

Strategy

The city applied for national funding in 2008 to use dynamic parking pricing, as promoted by the UCLA Professor Donald Shoup, as a way to impact traffic congestion. It was the first such pilot program of its kind using sensors installed in the ground to monitor occupancy and turnover of vehicles in real time. The cost was roughly \$25 million USD for the installation of 6,000 sensors and other related hardware and software. Between 2011 and 2013, the city ran the pilot program using national

funding. The program became a precursor to similar programs that later launched in London, Moscow and La Spezia.

Program

San Francisco's SFpark program was the largest, and by far the most sophisticated, on-street parking reform project in the United States when it first launched. SFpark is the brand for the demonstration parking project by the San Francisco Municipal Transportation Agency (SFMTA), funded through the national Department of Transportation. The city launched the program in April 2011 with 6,000 metered on-street parking spaces (25% of total supply) and 12,250 spaces in SFMTA-administered garages (75% of total supply). Hourly rates were not allowed to exceed \$6.00 per hour or go below \$0.25 per hour. SFpark adjusted on-street rates about every eight weeks starting in August 2011. With the project the SFMTA used pricing to help redistribute the demand for parking. The goal was to encourage drivers to park in garages and lots, and to almost always have one space available on every metered block.

The SFMTA gradually and periodically adjusted rates at on-street meters and in garages. The goal was to achieve a minimum level of availability so that it was easy to find a parking space most of the time on every block and that garages would always have some open spaces. After ten SFpark rate adjustments, parking availability and utilization for both on- and off-street parking improved significantly. During the pilot project, on-street parking availability in pilot areas improved by 16%, and by 22% during peak periods, while parking availability in control areas went down by over 50%. In SFpark garages, utilization increased by 11% overall and by 14% during off-peak periods. In other words, both on-street parking availability and off-street parking utilization improved when it mattered most to help reduce searching for on-street parking during peak periods.

Outcome

Furthermore, meeting target availability also means improving utilization of parking so that spaces—on-street or off—would not sit unused.

Over the course of the two year pilot evaluation period through June 2013 the SFMTA made ten on-street rate adjustments with the following results:

- On-street parking availability in pilot areas improved by 16%, and by 22% during peak periods, while parking availability in control areas went down by over 50% (where prices remained the same at \$2,00/hour). In SFpark garages, utilization increased by 11% overall and by 14% during off-peak periods. Average daytime garage occupancy increased from 51 to 59%—a 14.5% increase. Even as occupancy increased, SFpark garages maintained parking availability at least 97% of the time. In other words, both on-street parking availability and off-street parking utilization improved when it mattered most to help reduce circling for on-street parking: during peak periods.

- Parking search time went down by 43% (13% down in control area) from 11.6 to 6.6 minutes.
- Vehicle Kilometers Traveled (VKT) in the pilot areas went down by 30% from 13.0 to 9.2km (6% down in control areas) and traffic volumes were drastically reduced.
- After SFpark, payment compliance increased by 21% on weekdays and by 12% on Saturdays.
- Due to the use of high-technology SFMTA collected real-time information on turnover, length of stay, failure to pay and other illegal parking allowing the city to continuously adjust prices and policies to improve the system and to more effectively deploy enforcement personnel.
- The highly transparent, rules-based, and data-driven approach to making changes to parking prices, which improved customer acceptance and service.

Additional Resources

<http://sfpark.org/>

Annex VIII

FINANCIAL FORECAST

Assumptions

Assumptions are indicated in blue

1 USD = 21,27 UAH

Number of DAY parking places

Zone I	2 500
Zone II	5 000
Zone III	7 500
Total	15 000

Number of DAY parking spaces per parking meter	20	
Cost per parking meter	\$8 000	170 160 UAH
shipping and installation costs incl., VAT not incl.		
Lifetime of parking meters	10	
Cost for marking/signaling per parking place	\$60	1 276 UAH
Lifetime of marking/signalling	10	
Enforcement meter (PDA) per controller	1	
Cost per enforcement meter (VAT not included)	\$5 000	106 350 UAH
Lifetime of PDAs	3	
Software developments	\$50 000	1 063 500 UAH
% of parking places equipped with EV charging	1,0%	
Cost per parking place equipped	\$4 500	95 715 UAH
Lifetime of EV charging stations	10	
Annual cost of operation/maintenance per DAY parking place	\$80	1 702 UAH
Annual cost of pay-and-plate software per parking meter	\$720	15 314 UAH
Annual cost of operation/maintenance per EV-charging parking place	\$1 000	21 270 UAH
One enforcement agent can manage	150 DAY parking places	
One manager for	30 enforcement agents	
One supervisor per district	10 districts	
One administrative staff for	1000 parking places	
Number of directors	2	
Annual salary per enforcement agent	\$2 300	48 921 UAH
Annual salary per manager	\$3 200	68 064 UAH
Annual salary per supervisor	\$4 000	85 080 UAH
Annual salary per administrative staff	\$2 300	48 921 UAH
Annual salary per director	\$5 000	106 350 UAH
Social contribution	40% of salary	

Fees

	Fee (UAH/hour)
Zone I	10
Zone II	7
Zone III	5

Fine 200 UAH

Annual number of hours paid per place

	Hours paid / place / year
Zone I	1600
Zone II	950
Zone III	650

Annual number of fines per DAY parking place 15

Parking charge 1307,4 UAH/place/year

VAT rate on parking fee 20%

Capital investment

Number of parking meters 750
 Number of PDAs 100
 Number of parking places equipped with EV charging stations 150

Parking meters	\$6 000 000	127 620 000 UAH
Marking/signalling	\$900 000	19 143 000 UAH
PDAs	\$500 000	10 635 000 UAH
EV charging stations	\$675 000	14 357 250 UAH
Software developments	\$50 000	1 063 500 UAH
TOTAL	\$8 125 000	172 818 750 UAH

Annual operating costs

Number of controllers 100
 Number of managers 3
 Number of supervisors 10
 Number of administrative staff 15
 Director + Vice-Director 2

Operation/maintenance costs	\$1 890 000	40 200 300 UAH
Salaries	\$324 100	6 893 607 UAH
Social contribution	\$129 640	2 757 443 UAH
TOTAL	\$2 343 740	49 851 350 UAH

Annual revenue

Zone I	\$1 880 583	
Zone II	\$1 563 235	
Zone III	\$1 145 980	
Total	\$4 589 798	97 625 000 UAH
Fines	\$2 115 656	45 000 000 UAH

Financial outcome from the operator point of view

Year	1	2	3	4	5	6	7	8	9
Capital investment	-8 125 000	0	0	-500 000	0	0	-500 000	0	0
Operating costs	-2 343 740	-2 343 740	-2 343 740	-2 343 740	-2 343 740	-2 343 740	-2 343 740	-2 343 740	-2 343 740
Pkg charge paid to City budget	-922 003	-922 003	-922 003	-922 003	-922 003	-922 003	-922 003	-922 003	-922 003
Revenue	6 705 454	6 705 454	6 705 454	6 705 454	6 705 454	6 705 454	6 705 454	6 705 454	6 705 454
VAT	-1 156 690	-1 156 690	-1 156 690	-1 156 690	-1 156 690	-1 156 690	-1 156 690	-1 156 690	-1 156 690
Additional fee paid to City budget	-703 031	-703 031	-703 031	-703 031	-703 031	-703 031	-703 031	-703 031	-703 031
TOTAL (USD)	-6 545 010	1 579 990	1 579 990	1 079 990	1 579 990	1 579 990	1 079 990	1 579 990	1 579 990
TOTAL (UAH)	-139 212 371	33 606 379	33 606 379	22 971 379	33 606 379	33 606 379	22 971 379	33 606 379	33 606 379

IRR **15%**

Fee + charge paid to Kyiv City budget

Parking charge	\$922 003	19 611 000 UAH
Additional fee paid to City budget	\$703 031	14 953 471 UAH
Annual payment to City budget	\$1 625 034	34 564 471 UAH