Development of transport system of Moscow
THE MOSCOW CENTRAL CIRCLE IS A SURE STEP INTO THE FUTURE

75 mln. passengers are anticipated in 2017

1,7 mln. passengers were transported during the first week

82% of MCC passengers are Metro system passengers

80 min. – ride round the ring

First month is for free

15% relief of the Metro circle line

20–40% unloading of the central railway stations

From 5:30 a.m. till 1:00 a.m. – hours of operation

6 min. – rush hour traffic intervals

54 km – the length of the circle

31 stations with an option of transfer to the surface transport (26 at the moment of launch)

17 points of transfer to the Metro system (12 at the moment of launch)

10 points of transfer to the railway system (6 at the moment of launch)

13 stations with parking lots for 1 500 cars

Within walking distance and developing bicycle infrastructure

Shared ticket menu for the MCC and Moscow Metro system

Integration into the city navigation system
MOSCOW IS A CONTEMPORARY MEGAPOLIS, COMPARED TO THE WORLD'S LARGEST CITIES

<table>
<thead>
<tr>
<th>Population, million people</th>
<th>Number of cars per thousand residents</th>
<th>Transportation area per 1 car, m²</th>
<th>City area, thousand km²</th>
<th>Average daily ridership, million trips a day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moscow</td>
<td>12,1</td>
<td>324</td>
<td>1,1*</td>
<td>15,7</td>
</tr>
<tr>
<td>Tokyo</td>
<td>13,2</td>
<td>181</td>
<td>2,2</td>
<td>9,0</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>7,1</td>
<td>63</td>
<td>8,8</td>
<td>5,5</td>
</tr>
<tr>
<td>Singapore</td>
<td>5,3</td>
<td>101</td>
<td>0,7</td>
<td>5,5</td>
</tr>
<tr>
<td>London</td>
<td>8,4</td>
<td>305</td>
<td>1,6</td>
<td>10,4</td>
</tr>
<tr>
<td>Berlin</td>
<td>3,5</td>
<td>342</td>
<td>0,9</td>
<td>3,8</td>
</tr>
<tr>
<td>Paris</td>
<td>7</td>
<td>320</td>
<td>0,8</td>
<td>10,9</td>
</tr>
</tbody>
</table>

Sources: open source data 2012–2015. The analysis was conducted in comparable areas.

* in 2012 the city area expanded to 2.6 thousand km² due to additional territories incorporation.
IN 2010, THE APPROACH TOWARDS CITY TRANSPORTATION SYSTEM DEVELOPMENT STRATEGY WAS FUNDAMENTALLY REVISED

Priorities for the development of the transportation system

Before 2010

- Private vehicles
- Public transport
- Pedestrians/cyclists

After 2010

- Public transport
- Pedestrians/cyclists
- Private vehicles
### THE GOVERNMENT OF MOSCOW HAS SET ITSELF AMBITIOUS GOALS AND OBJECTIVES

**Objectives** | **Key indicators** | **Notes**
---|---|---
Increasing accessibility | Share of public transport in the average daily ridership, % | Public transport is constantly gaining popularity among Muscovites

Increasing comfort level | Total capacity of public transport, million passenger seats per day | Increasing the capacity of public transport by 4 million passenger seats per day has enhanced comfort level and convenience

Increasing speed | Average travelling time during morning rush hours from the suburbs to the centre | The government has managed to reverse the long-standing negative trend – every year the traffic situation in the city is improving

Creating inclusive environment | Level of adaptation of the city’s public surface transportation\(^1\) for mobility impaired people\(^2\), % | Since 2015 all surface public transport routs are adapted for mobility impaired people

Creating environmental sustainability | Emissions from public traffic, kg/person a year | Transportation is gradually ceasing to be the largest source of air pollution

---

\[^1\] LCPT — land city passenger transport

\[^2\] PWLM — people with limited mobility
ENVIRONMENTAL SITUATION IN THE CITY HAS SIGNIFICANTLY IMPROVED AS A RESULT OF THE MEASURES UNDERTAKEN BY THE GOVERNMENT OF MOSCOW

Air pollution level has decreased by 11% by 2015

Between 2010 and 2015 the amount of the PM10 fine particles in the air went down from 0.044 to 0.039 mg/m³

Measures to improve the environmental situation:

- Public transport development
- Parking space organization
- Truck transport regulation
- Traffic situation improvement
- Cycling lanes and pedestrian areas development
- Taxi service system development
- Carsharing system organisation
- Implementation of the “My street” programme
### DEVELOPMENT OF PUBLIC TRANSPORT IN 2010-2015

**Metro**

- **18** new metro stations (a total of 200 stations)
- **7500** parking slots as part of the park-and-ride system near metro stations
- **around 1500** new generation rolling stock units (30% of fleet renewed)
- **100%** of rolling stock units are covered with Wi-Fi (2,5 million logs a day)

**Surface public transport**

- **5 700** vehicles bought (86% of operating fleet renewed)
- **50% of buses** covered with Wi-Fi (100% by the end of 2016)
- **230 km** km of public transport lanes created
- **11** night surface public transport routes organised

**Suburb rail**

- **299** stations renovated and upgraded including 9 railways stations
- **1 600** new parking slots as part of the park-and-ride system near railway stations
- **54 km** is the length of the Moscow Ring Railway (MKZD), (first stage of launch in September 2016)
- **76 km** of railway track is constructed (+240 km by 2020)
INTRODUCTION OF NEW STANDARD OF COMMERCIAL TRANSPORTATION BY LAND

New standard:

- no more than 2 years old
- meet Euro-5 standard
- equipped for mobility impaired people
- equipped by climate control system
- obey traffic regulations
- uniform ticket menu

First results:

- about 1900 new buses for Moscovites
- more than 12 million passengers were transported, of which 4.5 million beneficiaries (since May 9, 2016)
- quality of services is controlled by the Government of Moscow and passengers themselves
- 10 billion of private investments in vehicle stock
- +30% new passenger seats for city residents
- the largest procurement of vehicle stock for the last 10 years (2 700 vehicles in 2016)*

* commercial carriers and State Unitary Enterprise Mosgortrans
REGULATION OF TRUCK TRANSPORT IN THE CITY

The key initiatives to improve truck logistics:

- Regulation of truck transport:
  - movement of trucks in the day-time prohibited
  - control over excess weight of vehicles
  - control over emission standards for vehicles

- Creation of unloading / loading spaces in the city centre

- Creation of logistics centres

900 CCTV ensure the regulation of truck transport

From 6AM to 11PM entry of trucks in the city is limited

Twofold is reduced the number of trucks in the day-time

Down by 17% is the number of transit trucks in the day-time (by 7.5 thousand per day)
THE CITY’S CYCLING FACILITIES HAVE BEEN SIGNIFICANTLY TRANSFORMED

- 2,700 Bicycle stations in Moscow (18,000 parking lots)
- >200 km of cycling lanes
- 1 million Trips per season are made by the users of bicycle rentals
- Down by 20% is the number of traffic accidents involving cyclists in 2015
- In 2016 a pilot project of electric bike rentals will be launched
  - Advanced rent-a-bike system
    - 300 spots
    - 2,600 bicycles
    - 300 thousand users per season
KEY RESULTS OF THE TAXI SERVICE DEVELOPMENT

Number of permits issued, thousand

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7</td>
<td>12</td>
<td>24</td>
<td>38</td>
<td>49</td>
<td>60</td>
</tr>
</tbody>
</table>

Moscow taxi standards:
- Official work permit
- Yellow colour and licence plate
- Using public transport lanes
- Advanced booking system

The largest and youngest taxi fleet in Europe
- cars are less than 3 years old

6.1 million rubles was invested by the Government of Moscow in taxi service development support over 5 years

7 minutes
- The average taxi car arrival time (30 minutes in 2010)

300 thousand rides per day are made by taxis
Carsharing was launched in Moscow in 2015. By the end of 2016, carsharing fleet will increase 15 times.

**The First in Russia**
- Carsharing service in Russia

**30 thousand**
- Registered users in the system (from October 2015)

**8.5 million rubles**
- Of private investments attracted for the development of the service

**5**
- Daily rides are made by one shared car
Projects
as part of "My street" programme:

- improving and upgrading entire streets
- dismantling of external cable systems
- architectural highlighting of dominant buildings
- facade renovation
- leveling lawns and planting extra trees and shrubs
- making it easy for mobility impaired people to travel

Every 5th street in the city centre will be transformed in the same way as part of the municipal improvement programme by 2018.

2.5 times increase in pedestrian traffic on the reconstructed streets.
ORGANISATION OF PARKING SPACE HAS LED TO A SIGNIFICANT IMPROVEMENT OF THE TRAFFIC CONDITION IN THE CITY CENTRE

- 67 500 parking slots created
- 3,5 times increase in parking lots turnover
- 100% of all income from paid parking is allocated for the city redevelopment
- 95% parking sessions are paid for via mobile devices

Features of parking system:
- per-minute payment
- progressive tariffs
- special privileges for residents

Free parking for electro cars

Effective control system:
- City residents control (mobile app)
- police and urban services

Cost of one hour of parking*

- Zone 1 — € 1
- Zone 2 — € 0,8
- Zone 3 — € 0,5

*According to the Central Bank average weighted exchange rate in 2016
PAID PARKING WAS BEING INTRODUCED IN MOSCOW INCREMENTALLY AND BEGAN FROM A PILOT PROJECT IN 2012

The pilot project and the Boulevard Ring Road
November 1, 2012 and June 1, 2013

Garden Ring Road
December 25, 2013

Part of the Third Ring Road
June 1, 2014 and August 1, 2014

Part of the Third Ring Road and beyond it selectively
December 25, 2014

Inside the Third Ring Road and beyond it selectively
October 10 and December 26, 2015

4.5 thousand parking lots
(of which 558 parking lots as part of the Pilot project)* Boulevard Ring road and Petrovka – Karetny Riad streets

16.5 thousand parking lots*
(+12 thousand parking lots)
Within the boundaries of the entire Garden Ring

24 thousand parking lots*
(+7.5 thousand parking lots)
The area up to the Third Transport Ring in 5 districts and Moscow International Business Center Moscow City

45 thousand parking lots*
(+21 thousand parking lots)

67.5 thousand parking lots*
(+22.5 thousand parking lots)

Allocation of 3–4 free parking lots near social facilities (hospitals, temples)

Allocation of 3–4 free parking lots near social facilities (hospitals, temples)

Allocation of 3–4 free parking lots near social facilities (hospitals, temples)

Allocation of 3–4 free parking lots near social facilities (hospitals, temples)
CURRENT TARIFFS FOR MOSCOW PROVIDE FOR TARIFF ZONING AND DIFFERENTIATED SCALE IN SPECIAL LOCATIONS

Cost of one hour of parking

- **80 rubles/hour** – within the Boulevard Ring Road
- **60 rubles/hour** – within the boundaries from the Boulevard Ring Road and the Garden Ring Road
- **40 rubles/hour** – within the boundaries from the Garden Ring Road to the Moscow Automobile Ring Road
- The differentiated tariff near MIBC Moscow City and 75 streets within the Boulevard Ring Road
- 8.00 AM – 8.00 PM: 80 rubles / hour
- From the second hour: 130 rubles / hour
- 8.00 PM – 8.00 AM: 80 rubles / hour

For the drivers convenience they may purchase permanent parking tickets for a month and year time

- **25 000/ 250 000** – zone 1+2+3
- **12 000/ 120 000** – zone 2+3
- **8 000/ 80 000** – zone 3
  The permanent tickets are not valid – zone 4

Permanent ticket calculation principle (for example, a month in zone 1 + 2 + 3) does not provide for any reduction of the “wholesale” purchase tariff but enables to make a convenient one-time payment

- **80 rubles / hour * 9 working hours * 22 working days ~ 16 000 rubles / month**
**CURRENT CONDITIONS OF GRANTING PREFERENTIAL PARKING PERMITS FOR LOCAL RESIDENTS, DISABLED PERSONS AND MULTI-CHILD FAMILIES**

**Conditions of granting preferential permits**

<table>
<thead>
<tr>
<th>Local residents</th>
<th>Applicant</th>
<th>Only the home owner (when approved by other owners, a document certified by a notary public or official in the Multifunctional Center of Public Service Provision)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual users</td>
<td>• Home owner • Person permanently registered (&quot;registered domicile&quot;) at the owner's home • Apartment tenant temporarily registered at the owner's home (for the duration of the registration and rental contract &gt; 1 year)</td>
<td></td>
</tr>
<tr>
<td>Car</td>
<td>Only cars owned by actual users with no penalty arrears *</td>
<td></td>
</tr>
<tr>
<td>Cancellation</td>
<td>When the grounds for obtaining permits (1-3) cease to exist In case of the arrears in 3 penalties* the permit validity is suspended until full payment and blocked for 3 months after the date of payment</td>
<td></td>
</tr>
<tr>
<td>Zone and validity period</td>
<td>Within the boundaries of the municipal district for 1, 2 or 3 years at the request of a local resident</td>
<td></td>
</tr>
<tr>
<td>Validity hours</td>
<td>8.00 PM - 8.00 AM - free of charge, 8.00 AM - 8.00 PM - if a permanent ticket is bought for 3000 rubles / year</td>
<td></td>
</tr>
<tr>
<td>Number of permits</td>
<td>2 permits for 1 residential unit</td>
<td></td>
</tr>
<tr>
<td>Replacement of vehicle license plate</td>
<td>Vehicle can be replaced every day (usual response time, if applied for - 6 days)</td>
<td></td>
</tr>
<tr>
<td>Permit extension</td>
<td>Delayed entry of permit into force (a new permit can be applied for 2 months before the expiration of the former one)</td>
<td></td>
</tr>
<tr>
<td>WWII veterans</td>
<td>If a local resident permit exists, the validity area is the whole city paid parking area (for 1 vehicle)</td>
<td></td>
</tr>
</tbody>
</table>

**Disabled**

For disabled persons of 1-3 groups. In relation to all vehicles owned; vehicles granted based on medical necessity (1 vehicle); vehicles transporting disabled people when there are contraindications for the disabled people to drive (1 vehicle), validity period = disability period

**Multi-child families**

In relation to vehicles owned by either parent. Validity area - the whole city paid parking area

*Penalties for violations of road traffic (Chapter 12 of the Code of Administrative Offences of the Russian Federation) and failure to pay for parking (Art. 8.14 of the Code of Administrative Offences of Moscow)*

**Notes**

Regulatory control of parking issues is built on 3 levels

- Federal law (257-FZ dated 08.11.2007) reads that the constituents of the Russian Federation may create paid parking areas in the road network
- Resolution of the Government of Moscow (#289-PP dated 17.05.2013) sets forth the principles of parking areas operation, tariffs and benefits
- By Orders of the Department, chargeable zones in the streets are introduced

Non-payment for parking is considered to be a violation in the area of urban land improvement and is governed by the Code of Administrative Offences of Moscow
# PARKING IN MOSCOW IS PAID FOR BY MODERN WAYS USING MAINLY MOBILE PAYMENTS ~ 95% of ALL PARKING SESSIONS

## Parking account replenishing method

<table>
<thead>
<tr>
<th>Method</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMS</td>
<td>Mobile phone account</td>
</tr>
<tr>
<td>Mobile application</td>
<td>Bank card, scratch card, mobile operator account, other payment systems</td>
</tr>
<tr>
<td>Qiwi Terminal Qiwi - wallet</td>
<td>Cash, Qivi-wallet</td>
</tr>
<tr>
<td>Elexnet terminals</td>
<td>Cash</td>
</tr>
<tr>
<td>Website parking.mos.ru</td>
<td>Bank card, other payment systems</td>
</tr>
<tr>
<td>Scratch cards</td>
<td>Cards of 300, 500, 1,000 rubles at gas stations</td>
</tr>
<tr>
<td>Sviaznoi Euroset</td>
<td>In cash at cash desk</td>
</tr>
</tbody>
</table>

## Parking payment method

<table>
<thead>
<tr>
<th>Method</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMS</td>
<td>Payment from mobile phone account or parking account</td>
</tr>
<tr>
<td></td>
<td>Per-minute tariffication</td>
</tr>
<tr>
<td></td>
<td>21% of all payments</td>
</tr>
<tr>
<td>Mobile application</td>
<td>Payment from parking account</td>
</tr>
<tr>
<td></td>
<td>Per-minute tariffication</td>
</tr>
<tr>
<td></td>
<td>71% of all payments</td>
</tr>
<tr>
<td>Parking meter</td>
<td>Tariffication - 15 minutes</td>
</tr>
<tr>
<td></td>
<td>Payment by bank card or parking card</td>
</tr>
<tr>
<td></td>
<td>5% of all payments</td>
</tr>
<tr>
<td>Qiwi Terminal, Qiwi-wallet</td>
<td>Payment by cash</td>
</tr>
<tr>
<td></td>
<td>Change is credited to the parking account or mobile phone account</td>
</tr>
<tr>
<td></td>
<td>Per-hour tariffication</td>
</tr>
<tr>
<td>Website parking.mos.ru</td>
<td>Payment from parking account</td>
</tr>
<tr>
<td></td>
<td>Per-minute tariffication</td>
</tr>
<tr>
<td>Yandex parkings</td>
<td>Payment from parking account</td>
</tr>
<tr>
<td></td>
<td>Per-minute tariffication</td>
</tr>
<tr>
<td></td>
<td>3% of all payments</td>
</tr>
<tr>
<td>Bycicle rental terminals</td>
<td>Payment from bank card</td>
</tr>
<tr>
<td></td>
<td>Tariffication - 15 minutes</td>
</tr>
<tr>
<td>Voice payment</td>
<td>Payment from parking account or mobile phone account</td>
</tr>
<tr>
<td></td>
<td>Per-minute tariffication</td>
</tr>
<tr>
<td></td>
<td>Parking termination via any channel</td>
</tr>
</tbody>
</table>

Paying by SMS, online via mobile applications, or through bank cards, scratch cards, or other payment systems is commonly used. Parkers pay in cash, with Qiwi-terminal or through Qivi-wallet. The parking payment method is divided into standard and voice payments, with the latter being used in rare cases.
WITHIN THE PAID PARKING AREA MONITORING SYSTEM IS ARRANGED TO MAINTAIN COMPLIANCE WITH TRAFFIC RULES AND PARKING PAYMENT RULES WITH USE OF AUTOMATIC RECORD MEANS

### Violations recording

<table>
<thead>
<tr>
<th>Mobile recording complexes</th>
<th>On-foot inspectors</th>
<th>Application &quot;Assistant of Moscow&quot;</th>
<th>Evacuation</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 370 cars equipped with recording cameras</td>
<td>• ~120 inspectors</td>
<td>• Mobile application to record violations by the city residents</td>
<td>• 320 evacuators</td>
</tr>
<tr>
<td>• ~400 routes</td>
<td>• Control on narrow streets</td>
<td>• Record of parking under the &quot;No entry&quot; signs, lawns, in paid parking area</td>
<td>• ~700 evacuations per day</td>
</tr>
<tr>
<td></td>
<td>• Fight against the concealment of license plates</td>
<td></td>
<td>• Evacuation is effected for fee*</td>
</tr>
</tbody>
</table>

### Preventive measures

#### Violation of traffic rules in terms of parking and stopping

- **Penalty is from 2,500 to 5,000 rubles**  
  (Art. 12.16, 12.19 of the Code of Administrative Offences of the Russian Federation) is controlled by State Road Safety Inspection or Moscow Administrative Traffic Inspection (executive body)

#### Parking rules violation

- **P**arking payment no later than 15 minutes from the moment of entry into the parking lot
- **R**elease of a parking lot no later than 10 minutes after the end of the paid period
- **E**ergency vehicle evacuation – from 3,000 to 7,000 rubles*
- **V**ehicle storage per day – from 500 to 2900 rubles*  
  / **D**iscount 25% for payment for evacuation till the vehicle return

---

In 2015, traffic situation significantly improved despite the yearly increase in the number of registered vehicles in Moscow and the Moscow Region.
RATINGS OF INTERNATIONAL COMPANIES SHOW POSITIVE CHANGES IN THE TRAFFIC SITUATION IN MOSCOW

Tom-tom traffic load index in 2012-2015
Percentage of time wasted in traffic

In 2014 Moscow ceased to be the city with the biggest traffic jams
Since 2012 time wasted in traffic went down by 23%
Since 2014 time wasted in traffic went down by 12%

Source: tomtom.com

Comparative time spent in traffic jams in 2015, according to Inrix

<table>
<thead>
<tr>
<th>City</th>
<th>Time in traffic jams (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>London</td>
<td>101</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>81</td>
</tr>
<tr>
<td>San Francisco</td>
<td>75</td>
</tr>
<tr>
<td>New York</td>
<td>73</td>
</tr>
<tr>
<td>Brussels</td>
<td>70</td>
</tr>
<tr>
<td>Moscow</td>
<td>57</td>
</tr>
<tr>
<td>Milan</td>
<td>52</td>
</tr>
<tr>
<td>Paris</td>
<td>45</td>
</tr>
</tbody>
</table>

Muscovites spend less time in traffic jams than the residents of London, Los Angeles and New York

Source: inrix.com