

The Moscow Transport System's Achievements from 2010 to 2019





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## Transport in Moscow Today





### MOSCOW TRANSPORT



Transport policy implementation; management and control



#### Traffic management and control

#### Road traffic

MTCC - The Moscow Traffic Control Centre

#### Car parking

Moscow Parking



#### **R&D** and special projects

(4) MosTransProekt

The Moscow Directorate of Transport Services



Moscow Transport employees are committed to helping residents and visitors to the capital comfortably move around the city every day



#### Passenger service regulation

#### Metro

Moscow Metro

#### Surface transport

- Mosgortrans
- Commercial carriers under governmental

#### Suburban rail services

- The Central Suburban Passenger Company
- The Moscow-Tver Suburban Passenger



Aeroexpress

- Taxi companies
- (G) Car-sharing operators



#### Control and supervision

Street and road network The Moscow Administrative Road Inspection



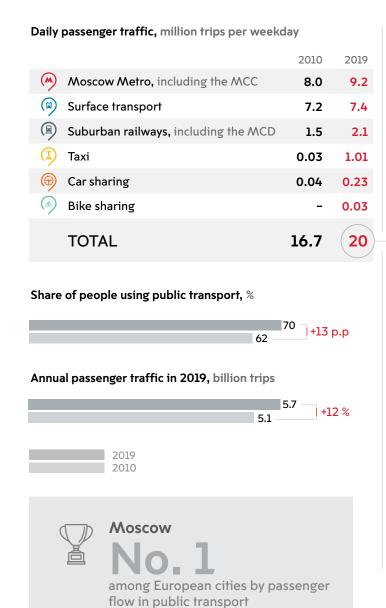
#### **Transport**

The Transportation Organizing Company



The Directorate of Transport Procurement

### PASSENGER TRAFFIC ON MOSCOW TRANSPORT











MCC



**MCDs** 





Tram Electric bus



Electric car sharing



Bike and scooter sharing



## The rail framework of the Moscow metropolitan area

Transport in Moscow Today







 $238_{\,\text{stations}}$ 

**780** trains (5,580 cars)

No. 1 in Europe by growth in the number of stations and length of lines since 2010 (COMET)





**54**<sub>km</sub>

 $31_{
m stations}$ 

**51** trains (255 cars)

Special recognition at the UITP Summit for the success of the MCC project (UITP, Montreal, Canada, 2017)





132<sub>km</sub>

**60** stations

180 trains (1,978 cars)

A worldrecord project
implementation
timeframe for the
MCD project vs
comparable projects:
two years from
decision to launch





~2,000 km of rail

**56** station

10 routes

**362** trains (3,427 cars) within Moscow

The most dense rail transport network (PwC, Quality of Living survey, 2018)





>11,000 buses, trams and electric buses

**>1,000** routes

351<sub>km</sub> of dedicated lanes

World-record growth rate in the number of electric buses on city routes (UITP, Brussels, Belgium)







every day 153.000

permits issued since 2011

>1,500 dedicated parking spaces for taxis

Top 3 globally for lowest priced taxi rides
(Carspring's survey, UK, 2017)





**30,000** vehicles

**50** electric car-sharing vehicles

6 operator

No. 1 globally by the number of car-sharing vehicles

(Autostat, Russia, 2020)

#### 7

## Transport in Moscow Today









32.5 million
Troika cards issued

9 payment options

5 mobile app

The World's Best Smart Ticketing System (Transport Ticketing Global, London, UK, 2020)



BICYCLE
INFRASTRUCTURE

**6,500** bikes across 629 rental stations

850 km of bike paths (taking into account dedicated lanes)

No. 1 in Europe by the number of trips per city bike (7 rides)



PEDESTRIAN
INFRASTRUCTURE

**410** pedestrian facilities set up (361 km)

>800
navigation pylons on the streets

Honourable mention at the Sustainable Transport Award for reorganising the city space and improving conditions for pedestrians (Washington, USA, 2018)



INTELLIGENT
TRANSPORT SYSTEM
(ITS)

24/7 command centre at the Traffic Control Centre

**3,000** photo and video recording systems

40,000 traffic lights connected to the ITS

No. 1 in Russia for road safety



ROAD INFRASTRUCTURE

>6,000 km of roads

**8.2** million vehicles registered within the Moscow transport hub

Moscow is in the Top-3 megacities by the growth rate of road length (PwC, Quality of Living survey, 2018)



SMART PARKING

123,000 parking spaces at urban parking facilities

**82,000** resident parking permits

8 parking payment options

No. 1 in the world in smart parking space organisation (Tom-Tom, Netherlands, 2017)

## The Moscow Transport Strategy: **Achievements and Plans**





## THE IMPLEMENTATION OF THE CURRENT STRATEGY **BETWEEN 2010 AND 2020**

Since 2010, the Government of Moscow has been successfully implementing its global development strategy to 2020, aimed at improving the efficiency of the Moscow transport system. The interim results of the current transport policy's key programmes are summed up below.

#### Average speed of private vehicles along the key highways on a 24/7 basis, km/h



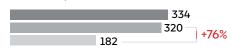
#### Social risk, road fatalities per 100,000 residents



#### Number of passenger seats on public transport, million people per day



#### Rail transport stations (metro, the MCC, the MCD), units



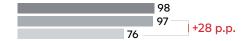
### Average travel time on public transport from the Moscow Ring Road to the city centre, minutes



#### Average time in queue for purchasing tickets during rush hour, minutes



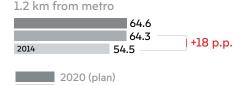
#### Punctuality and reliability of surface transport services using dedicated infrastructure, %



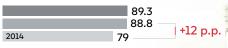
#### Proportion of passengers using different modes of public transport, %



#### Metro availability, proportion of people living within a radius of







## THE NEW TRANSPORT STRATEGY UP TO 2023 AND BEYOND TO 2040

Moscow and its residents have identified the key focus areas for the further development of the Moscow transport system up to 2023, 2030 and beyond to 2040.

### Five key focus areas

### Affordable and comfortable public transport

- Transport framework
- Fixed-route surface public transport services

#### Safe roads

- Road safety (Vision Zero)
- The future of taxi and car-sharing services

### Healthy streets

- Developing pedestrian and bicycle infrastructure
- Reducing transport emissions

#### Digitalisation of transport

- A wide range of digital technologies for
- Unlocking the full potential of the ITS
- A single mobile app to plan and pay for trips on a MaaS basis

#### New modes of mobility

- Individual mobility
- Personalised bus services
- Water transport development
- Autonomous transport development

#### Four key sources to identify further growth areas



Analysis of the results of the transport policy for 2010-2020



Assignments from the President of the Russian Federation and the Mayor of Moscow



Public surveys (The Marathon of



Evaluating best practices of the world's megacities and their applicability to Moscow

### Seven key objectives

Increased use of



Accessible and everyone



Safe and reliable public transport



Higher average speed of travel



Better affordability



Lower air and noise pollution



New mobile and technological solutions

# --- Awards and Ratings





International and Russian experts rank Moscow among the world's top cities for transport development.

Global awards for the successful overall transport policy of Moscow between 2016-2020

### UITP

Belgium

uitp.org

The 62nd UITP Summit (Montreal, Canada, 2017): Special recognition for the comprehensive development of the Moscow transport system, including:

- the pace of network expansion and modernisation of the metro, including for the launch of the MCC
- the renewal of the surface passenger transport fleet and modernisation of the route network

International Transport Forum

SUSTAINABLE **TRANSPORT** 

### INTERNATIONAL TRANSPORT FORUM (ITF)

France

itf-oecd.org

ITF (Leipzig, Germany, 2016): Passenger Transport Award for the comprehensive development and improvement of passenger services in Moscow

#### SUSTAINABLE TRANSPORT AWARD



staward.org

2018: Honourable mention for reorganising the city space, improving conditions for pedestrians and the launch of the Magistral route network and the Moscow Central Circle

## **CIHT**



ciht.org.uk





**Rankings** 



**Human Dimension** in the Urban **Environment (2018)** 

No. 3 globally

- Thanks to the balanced development of its transport system, Moscow ranks in the Top-3 cities, just behind the US megacities
- According to the integral indicator, Moscow is one of the leading cities for transport infrastructure convenience



## McKinsey&Company

www.mckinsey.com

**Elements of success: Urban** transportation systems of 24 global cities (2018)

No. 6

globally

- Moscow is ranked on par with London, Madrid, Chicago and Seoul
- The city is demonstrating the highest rate of improvement - in 2010, it would have only been ranked the 20th on the list
- Moscow is ranked No. 1 in terms of public transport efficiency





**Global Urban Transport Development Index (2019)** 

No. 2 globally

- In 2018. Moscow climbed up to 2nd position compared to 8th in 2010
- From 2010, Moscow's index has been growing at an accelerating rate compared to other megacities (a sevenfold increase in absolute terms)





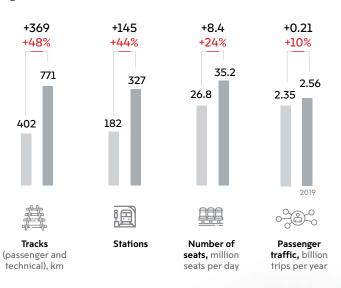


## The Rail Framework of the Moscow Metropolitan Area



### THE MOSCOW METRO

The Moscow Metro is No. 1 in Europe by the growth in the length of lines and the number of stations since 2010.



## The Moskva - next-generation train

Country of origin - 
Russia

April 2020

2010



## Fleet renewal, cars



The Unified Dispatch Center of the Moscow Metro management digitalisation 2.0:

100% coverage of the Moscow Metro and the MCC with 24/7 intelligent control

Two times faster response to emergencies

15 cm wider door openings (+12%)

Modern climate control systems

Video surveillance inside and outside trains

### Infrastructure upgrades since 2010:

- ~800 km of rails replaced
- ~200,000 sleepers replaced
- At 100 stations, entrance halls and pedestrian underpasses have been renovated
- 488 escalators repaired
- 312 new escalators

## THE MOSCOW CENTRAL CIRCLE

Since September 2016

The Moscow Central Circle (MCC) is a megaproject by the Government of Moscow and Russian Railways. Within a world-record timeframe of two years, all construction works were completed to enable a simultaneous launch throughout the entire circle. For almost four years now, the MCC has been successfully operating in sync with the Moscow Metro.

560,000 passengers per day

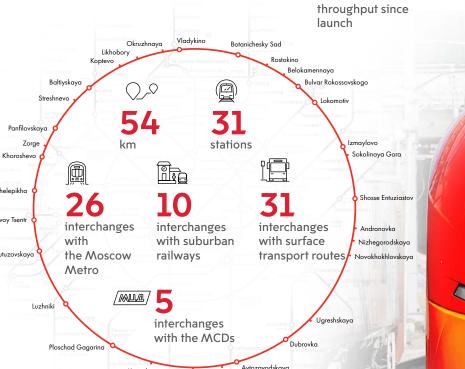
passengers carried in total

min. headway between trains during peak hours since 2019 (6 min. in 2016, 5 min. in 2017) resulting in:

increase in the MCC throughput since

load lifted from the Circle line

20%-40% load lifted from railway terminals



Verkhnie Kotly ZIL

## The Rail Framework of the Moscow Metropolitan Area





## THE MOSCOW CENTRAL DIAMETERS

The Moscow Central Diameters (MCDs) are the new metro network for Moscow and Moscow Region residents. This major transport project is being implemented jointly by the Ministry of Transport of the Russian Federation, Russian Railways, the Government of Moscow, the Government of the Moscow Region and the Central Suburban Passenger Company.

132 km

**60** stations

20 stations with interchanges to

the Moscow Metro, the MCC and radial rail routes

headway between trains during peak hours, from 5:30 am to 1:00 am

Unified tickets and free transfers to the metro and the MCC

Moscow and Moscow Region residents

Belorussko-Savyolovsky D2 Kursko-Rizhsky



Load lifted from metro stations

 Kuntsevskaya O Fili Okruzhnaya Tsaritsvno 5 % O Komsomolskava

Park Pobedy Kievskaya

> Load lifted from major roads

Volokolamskoe highway Novorizhskoe highway Varshavskoe highway Simferopolskoe highway **Plans** by 2025

D3

MCD-3 Leningradsko-Kazansky

D4

MCD-4 Kievsko-Gorkovsky

D5

MCD-5 Yaroslavsko-Paveletsky

new passenger seats per day

>550,000 +14%

increase in the number of passengers (vs the same period prior to the launch)

people - expected annual passenger traffic

roubles saved in total per year by passengers







# --- Convenient Surface Transport





## MODERN SURFACE TRANSPORT INFRASTRUCTURE

Today, Moscow buses, trams and electric buses operate on 1,050 routes and carry 7.4 million passengers per weekday. The development of surface transport is focused on modern infrastructure, a smart route network, and next-generation rolling stock.

Tram infrastructure

**418** km of tramlines

of tramlines are segregated



**Dedicated** lanes

passengers per day on dedicated lanes

660

routes use dedicated lanes (63% of total)

dedicated lanes

Length of dedicated lanes,

2019 2010



**Next-generation public transport** passenger shelters

**2,788** passenger shelters to be set up in Moscow by 2023

(25% of total; 100% of stops will be this type by 2023)



## The Magistral route network

Since October 2016

THE ROUTE NETWORK

Magistral is a network of routes connecting the city centre to outer districts. Surface transport is a faster way to travel through the city centre!

high-frequency routes

18 district routes

9 social routes

shorter waiting time for buses in the city

passengers per day (up by 30%)

night routes, including three 24-hour routes

buses and 6 electric buses on night routes

3,600 covering the city's major routes



# Large-Scale Renewal of the Surface Transport Fleet





Europe's best, specially for Moscow!

#### Specially for Moscow! NEXT-GENERATION ELECTRIC TRANSPORT -A PRIORITY FOR THE DEVELOPMENT OF SURFACE TRANSPORT

Fleet renewal

Moscow has been gradually replacing its surface public transport fleet. The goal is





Wi-Fi connection

100%

fleet replacement

## The Moscow electric bus Since September 2018

Moscow electric bus is a next-gen, eco-friendly, fast, comfortable and safe mode of transport. From 2021, Moscow will primarily purchase electric buses for its surface passenger services.

#### Country of origin - Russia

Capacity - >85 passengers

Maximum speed – 70 km/h

Service life – 15 years (under a life-cycle contract)

50 km - drive range

6-10 minutes - en-route charge

24 minutes to full charge

- 0.96 availability ratio (+20% vs trolleybuses)
- 99% schedule compliance by electric

#### Fleet development,

number of electric buses



- No. 1 in Europe by the number of electric buses (UITP, Brussels, Belgium, 2019)
- Moscow electric buses were voted the Project of the **Year** by the public on the Vehicle of the Year in Russia independent award platform (Russia, 2020)



## A Comfortable City for Motorists





## **INTELLIGENT TRANSPORT SYSTEM (ITS)**

The command centre at the Traffic Control Centre is a single point of control that manages all modern components of the ITS and road traffic in real time 24/7.



**Moscow ITS** 

photo and video recording

public CCTV cameras

3,700 speed detectors on roads

40,000

traffic lights connected to the



In 2019, Moscow reached a record-high level of road safety

compared to 2010

21% fewer road accidents involving casualties

42% fewer road fatalities

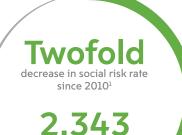
21% fewer road injuries

10% fewer public transport road accidents

5 times fewer car thefts

3.5 times fewer accident cluster sites

Twofold decrease in social risk rate since 20101 2,343



<sup>1</sup>Road fatalities per 100,000 residents.

### 2010-2019

## **TRAFFIC MANAGEMENT**



or renovated

Traffic schemes revised

along **3,500** km of the street and road network



>50,000 ~3,000 pedestrian crossings built

traffic management proposals from citizens processed

2011-2019

## **NEW ROAD INFRASTRUCTURE**



915 km of new roads

100,000 road signs repaired or installed annually



new bridges, tunnels and overpasses



243

new over-ground and underground pedestrian crossings





Since December 2012

UNIFIED **PARKING SYSTEM** 



Parking priority to local residents

 82,000 resident parking permits



85,600

paid parking spaces within the street and road network (including 9,500, or 11%, for the disabled)



14,300

parking spaces at park-andride facilities



parking spaces in at-grade parking lots with lifting gates



• Moscow is among the world's top 5 cities by the number of CCTV cameras

(BCG, Development of Comfortable Urban Environment in Moscow and Leading Cities Worldwide, 2018)

 Moscow is No. 1 in Russia for road safety

# ——— Next-Gen Urban Mobility Models



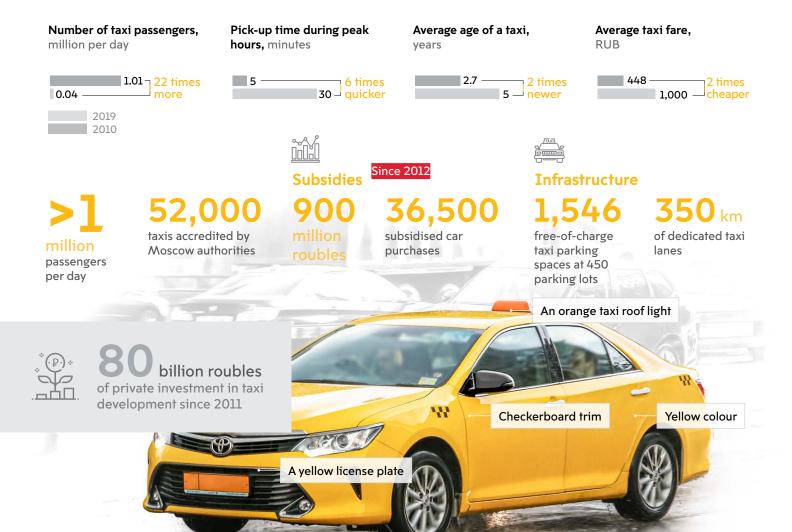


**Electric car sharing** 

## **MOSCOW TAXI**

Reformed in 2011

Moscow Taxi has celebrated its 112th anniversary. However, the revival of Moscow Taxi only started in 2011 with the adoption of a single standard for Moscow taxis to ensure a safe and seamless passenger experience. The service has become increasingly popular, with shifts in demand as Muscovites often choose taxi for last-mile journeys, short business trips or trips around the city centre.



## **MOSCOW CAR SHARING**

30,000

230,000

passengers per day

Moscow's short-term car rental system (Moscow Car Sharing) is an example of the sharing economy that offers an alternative to personal car ownership and allows users to save on the total cost of ownership.

>3,600

billion roubles

of private investments in the

>52.3

million roubles

subsidised car purchases

50 cars in the fleet

**Infrastructure** 



Free parking at paid public parking spaces for users

Pay per minute or per hour

Maintenance and inspections

Fuel and car wash

Motor third party liability insurance (OSAGO)



No. 1 globally by the number of car-sharing vehicles (Autostat, Russia, 2020)

## Active Travel





BIKE Since April 2013 AND E-SCOOTER Since 2018 SHARING SYSTEM

Bicycles and scooters are popular last-mile transport options and an excellent way to keep fit! Since 2013, a wide network for the rental of city bikes and e-scooters has been created, along with all necessary infrastructure for a seamless and convenient user experience.





**Infrastructure** 

of bike paths and lanes on the road network and in parks (taking into account dedicated lanes),

including the 9 km bike lane on the Boulevard Ring

parking racks for private bikes

e-scooters

3,250

e-scooters 3,000

rides per day during the

300 million roubles

of private investment in fleet



Public bicycle Since 2013 rental system

bikes across 629 rental stations, including:

429



100,000

bike festival participants annually

Number of rides per season (April-October), million



## SPACE FOR PEDESTRIANS Since 2011

1st Tverskaya-Yamskaya

Novy Arbat

Bolshaya Polyanka

Bolshava Yakimanka

Bolshava Nikitskava

People and pedestrians are at the forefront of the entire transport system. When travelling by any mode of transport, we all become pedestrians for a minute or more when we step onto the street. Since 2011, a comfortable pedestrian environment and pedestrian connections have been developed during the reconstruction of any street, with some streets completely pedestrianised.

THE 10 LONGEST RENOVAY

Novoslobodskaya

Tverskaya

Myasnitskaya

Bolshaya Ordynka

Taganskava



streets, squares, major routes and public spaces have been renovated and reconstructed since 2011 (361.5 km)



special transport schemes designed and completed



>800

next-generation navigation pylons in Moscow streets



**lwice** 

as often Muscovites have started to walk on the Moscow streets (in summer - 5 times more often)





Moscow has become a pedestrian-friendly city!



## **Smart Services** of Moscow Transport



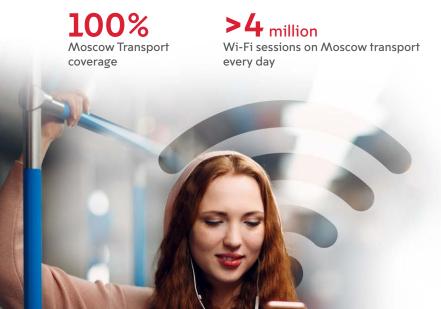


Moscow Transport offers the world's leading-edge passenger services, already successfully user-tested and recognised by a series of prestigious global awards.



## Free Wi-Fi on public Since 2014 transport (MT FREE)

MT FREE is Europe's largest public transport Wi-Fi network. It covers all metro trains, surface transport fleets, new passenger shelters, the MCC, the MCDs, as well as all Aeroexpress trains and terminals.





#### Universal travel card: Troika

The Troika card can be used to travel by any mode of public transport, to rent a bike, and to visit museums and ice-skating rinks around Moscow. Since 2018, a loyalty programme has been in effect for cardholders on the Wallet plan.

Since 2013

94% passengers pay for their trips with a Troika card

>32.5 million

Troika cards issued

Before end-2020, Troika will become:

virtual personalised top-up methods 850,000 loyalty programme users





### A smart fare Since 2013 collection system



### No. 1 globally

for the Best Smart Ticketing

(Transport Ticketing Global, London, UK, 2020)

#### 9 payment options



Troika card



Fobs, bracelets, rings and other accessories with Troika card functionality



Troika - Strelka (Moscow -Moscow Region) and Troika -Podorozhnik (Moscow - Saint Petersburg) integrated cards



Co-branding partnership with banks



Contactless bank cards

**₡** Pav

Bank cards via smartphone

**G** Pay



Paper tickets



A Mobile Ticket function for NFC-enabled smartphones



Social cards

## Mobile apps Since 2017



downloads



#### **Moscow Transport**

Since 2019

An integrated transport app for Moscow that combines all types of transport services on a MaaS basis



#### MosMetro

Since 2017

Everything about the Moscow Metro, the MCC and the MCDs: a map, a journey planner, payment, information, feedback and news



#### **Moscow Parking**

Since 2012

To find and pay for parking; to pay fines for traffic violations, subscription and residence permit fees: and to get information on impounded vehicles, etc.



#### Moscow Assistant

Since 2016

For residents to report parking violations



### Velobike

Since 2013

To search for the nearest bikesharing station, to plan a route, to pay for hire and to get assistance in case the bike breaks down





## No. 12 globally

(among 704 software products) for the innovative solutions offered by the Moscow Assistant mobile app



## **Contacts**

### **MOSCOW TRANSPORT SERVICE CENTRES**



Consult these centres on any matters related to:



#### **Moscow Transport's** contact centre

+7 495 539 5454

3210 (Beeline, MTS, MegaFon, Tele2)

Please contact us for any questions regarding the operation of and services provided by Moscow Transport.



#### Since 2020 Moscow **Transport Portal**

transport.mos.ru

Moscow Transport services are divided into sections for passengers, motorists and business people.

Visit the website to:

- create a personal account;
- save the data of several Troika cards at once:
- top up a Strelka card;
- o check for fines, taxi licenses, or truck passes;
- find available car-sharing vehicles:
- subscribe to news and to receive personally selected information, etc.

#### **Moscow Transport** on social media



t.me/

## **DtRoad**



vk.com/

## transportmos



instagram.com/

## mostransport



twitter.com/

## **DtRoad**



www.facebook.com/

## mostransport



ok.ru/

### mostrans

