



Moscow
Transport

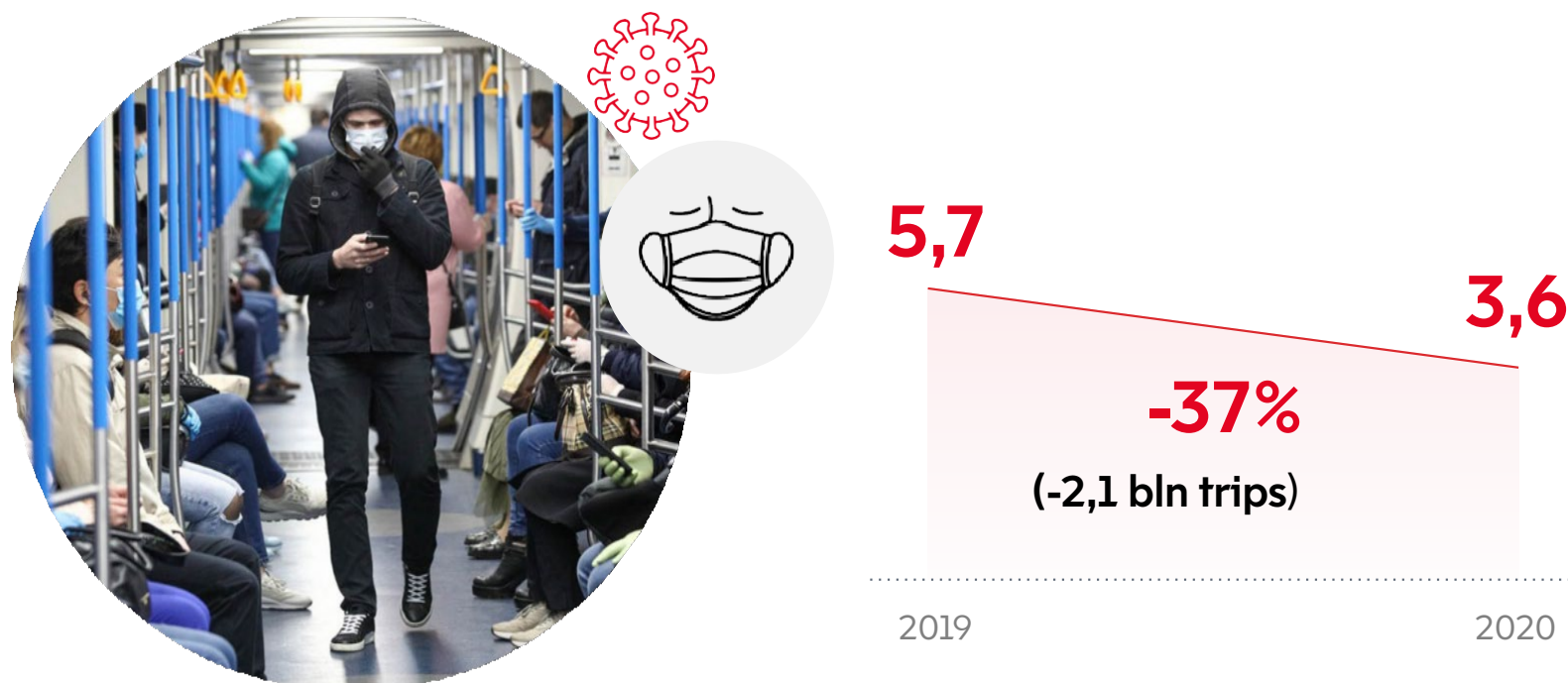
THE MOSCOW TRANSPORT COMPLEX: REVIEW OF 2020 AND PLANS FOR 2021

The Department of Transport and Road
Infrastructure Development of Moscow

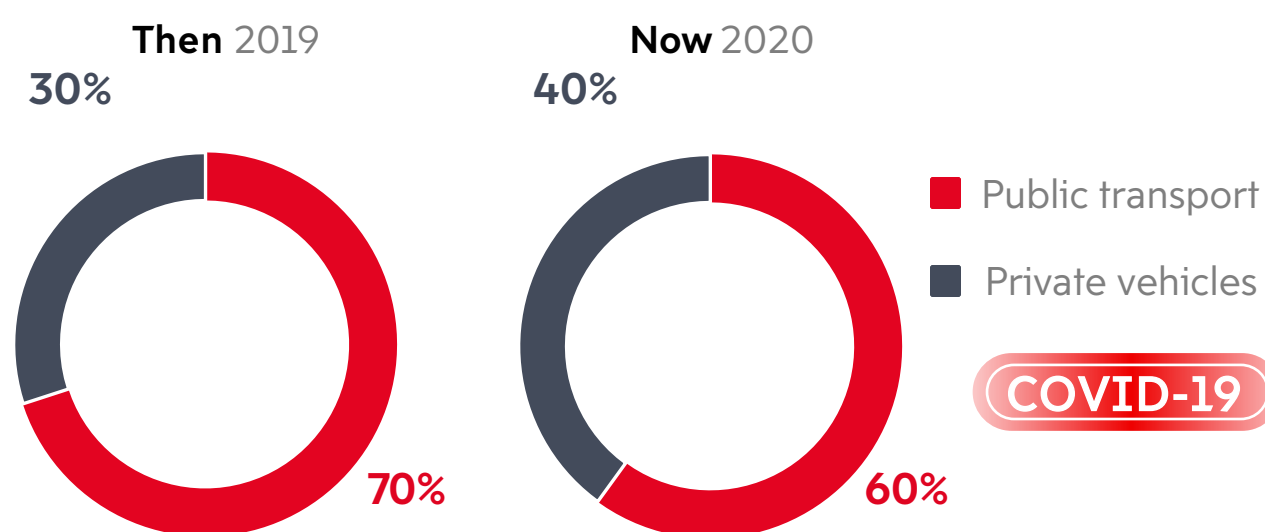
Moscow transport during the COVID-19 pandemic

The pandemic caused 37% decrease in passenger flow on all modes of public transport in 2020

(comparing to 2019)



Modal share on a week day in Moscow, %



	24 hour period on a week day, mln passengers	2019	2020	% to 2019	Operating mode in 2020
Metro, including the MCC		8,99	5,17	-42%	Maximum number of rolling stock on route
Surface transport		6,34	3,63	-43%	
Commuter rail, including the MCD		1,85	1,34	-28%	
Taxi		1,06	1,15	+8%	Increase in traffic
Car-sharing		0,26	0,19	-27%	From April 13 th to May 25 th – services fully suspended From May 25 th to June 9 th – minimum renting of 5 days
Bike-sharing		0,028	0,032	+14%	From April 10 th (opening of the season) to May 30 th – for volunteers and couriers, from June 1 st to November 30 th – open for all <div>COVID-19 </div>
TOTAL		18,5	11,5	-37%	



+33%

Share of trips made by personal vehicles increased – Muscovites tended to choose private cars for everyday trips around the city



-37%

Daily passenger flow on all modes of public transport diminished by 7 mln trips, however daily rides by bike-sharing and taxi increased

Tackling the COVID-19

The Moscow transport worked in a routine mode, quickly introducing safety measure and improving comfort for passengers

Provided safe access to public transport



x15 times
increased daily
disinfection



>3 000

sanitizers
installed

№ 1 in the world

by the number of
sanitizers in transport



by 40%

increased air exchange,
air disinfection systems
installed



**Selling of masks and
gloves**

at all metro stations, and
ticket offices of commuter
rails (the MCC and the
MCD)

Introduced breakthrough technological solutions for Moscow residents



**Briefing about
transport load**

of train cars in the metro and
surface transport in the mobile
apps Moscow Metro and
Moscow Transport



>6 mln passengers

used reduced cost of trip for off-peak
hour commuting – unloading of metro
~5 000 passengers daily (-3%)
(from November 2, 2020)



**Contactless
payment**

Surface transport drivers
suspended selling tickets.
Contactless payment modes
are preferred.

Helped medical staff , volunteers, couriers and business



**>60 000 doctors
and patients**

used special buses
and taxis



**>51 000 free
transport tickets**

were given to medical
staff and volunteers in
2020 (from April 2020)



>90 000 times

medical staff and
volunteers used free
parking
(from April 13, 2020)



**>800 000 free bike
rides were made by
volunteers and
couriers**

(from April 10, 2020)



By 50%

reduced the rent fee
for business on the
transport
infrastructure

**Safe
travels**

by



The Moscow Metro
received the Safe Travels
Discover Moscow sign *
for compliance with
international sanitary norms


As the result of 2020 Moscow improved major indicators, despite the increase in use of private vehicles

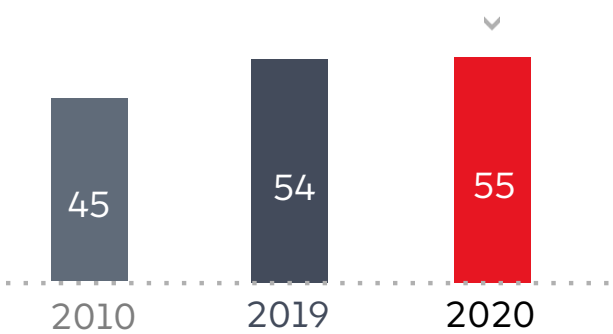


SPEED

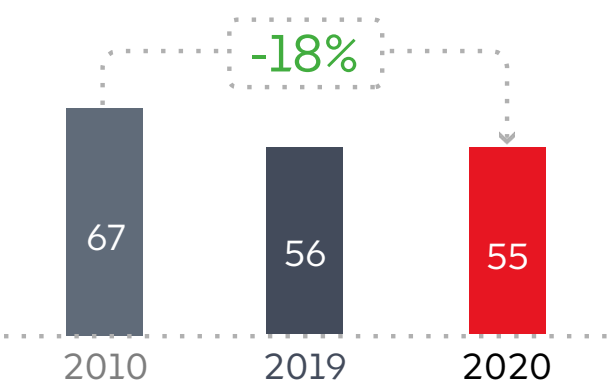


Average speed of private vehicles on major highways 24/7, km/h

 ЦОДД According to the Moscow Traffic Control Center



Average trip time from the MKAD to the city center by public transport, min

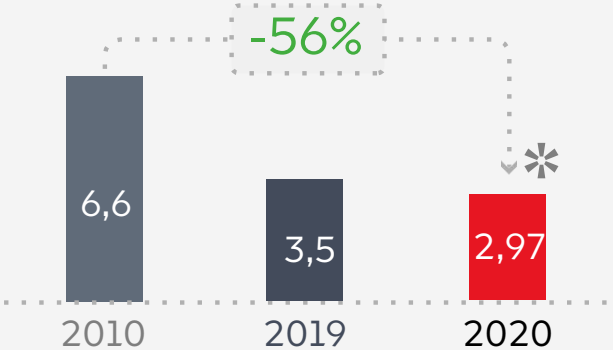


SAFETY

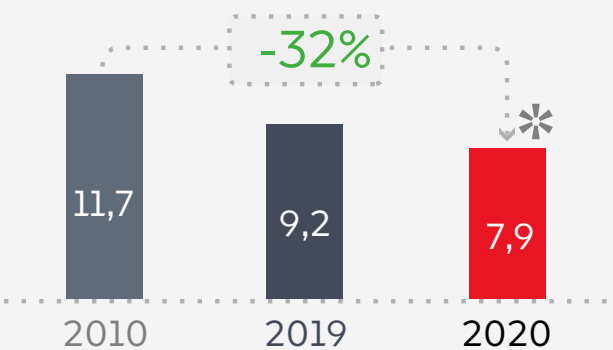


Social risk rate, the amount of road fatalities per 100 000 people

* The lowest level in the Russian Federation



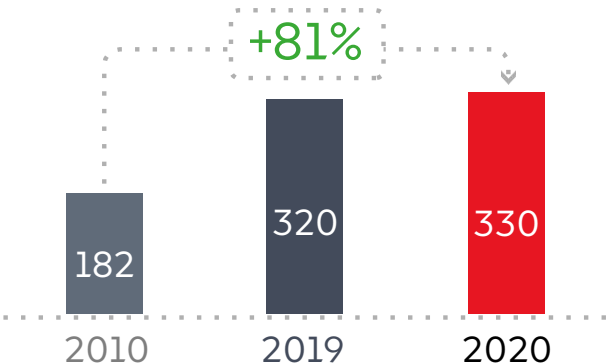
Road accidents with injured people, thousand units



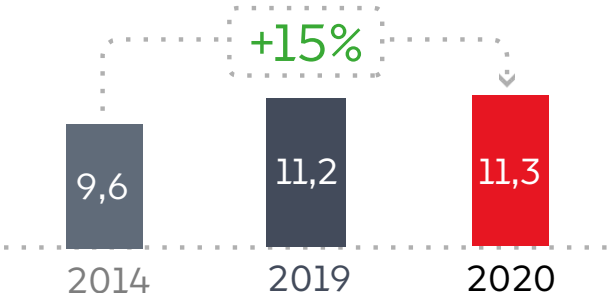
ACCESSIBILITY



The number of rail transport stations (metro, the MCC, the MCD), units



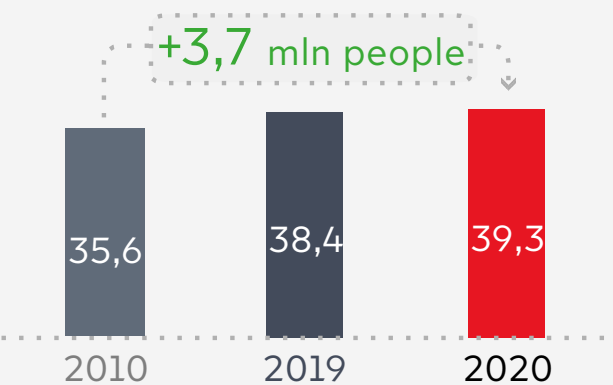
Proximity of metro stations, mln people, living away from metro spanning 2,2 km



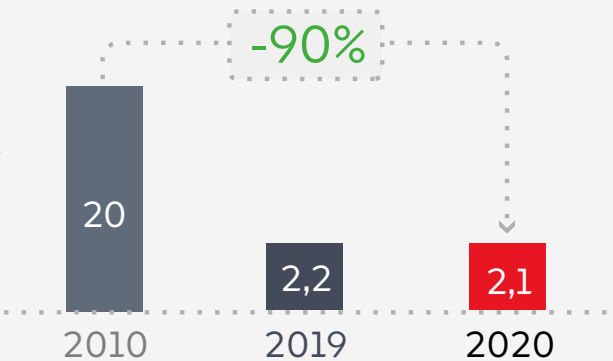
COMFORT



The number of passenger seats in public transport (including all modes of transportation), mln people daily



Average queueing time to buy a ticket during peak-hour (in metro, the MCC, the MCD), min



Moscow maintained momentum to develop metro and the MCD in 2020

FOR RAIL TRANSPORT PASSENGERS:

METRO, THE MCC,
THE MCD,
COMMUTER RAIL,
TRAMS



The Moscow Metro development

- +7** new metro stations
(+88 stations comparing to 2010, including the MCC)
- +580** thousand additional passenger seats thanks to new rolling stock and reduced headways

The MCD development

- 151** mln passengers from the launch of the MCD-1 and MCD-2
- +15** new commuter rail stations
- 18** mln free transfers from the MCD to the metro
- 100%** rolling stock renewal for the MCD-1 and MCD-2 – the newest rolling stock among European railway systems
- +3,43** mln new passenger seats daily thanks to the MCD launch
- 6** min is a minimal headway after the MCD launch (before the MCD launch the headways were up to 2 hours)
- up to 44** min saved thanks to the MCD integration into metro system

Development of passenger services

- The schedule of the Passenger Mobility Center was changed: working hours of the Moscow Metro – from 5:30 am to 1:00 am.
- New service zones: the MCD and surface transport
- Launch of a private passenger accounts and personalised Troika card (>270 000 users)
- Launch of the Moscow Metro chat-bot (>10 000 requests monthly)
- Piloting FacePay



The MCC development

- 519** mln passengers on the MCC in 4 years since the launch
- 100%** completed integration with radial directions of commuter railways
- +4** new transfers to the metro
- +5** new transfers to the MCD
- 4** min headway during peak-hours since 2019 (6 min in 2016, 5 min in 2017)

Rolling stock renewal

Metro train cars

- +551** new train cars Moskva (3 548 train cars since 2010, 63% rolling stock renewal)
- new trains Moskva-2020 on Lines 5 and 6 (335 train cars)

Commuter train cars

- +499** new train cars for commuter rail (3 550 train cars since 2010, 60% commuter rail rolling stock renewal)

Trams

- +70** new Vityaz-M trams (528 trams since 2010, 78% rolling stock renewal)
- +50** thousand additional passenger seats

FOR SURFACE TRANSPORT PASSENGERS:

BUSES AND E-BUSES



Rolling stock renewal

+1 392 new buses and e-buses in 2020
(11 858 new buses and e-buses since 2010)

100% bus fleet

- Moscow possesses the most modern bus fleet in Europe (4,7 years is the average age of a bus)



E-buses

+300 new e-buses
(x2 increase in the number of vehicles in 2020, 600 e-buses in total)

№ 1 European leader in the number of e-buses

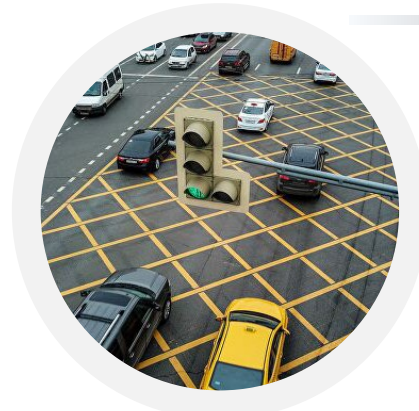
104 e-bus charging stations

x2 increase in the number of e-bus
(+24 new routes, 42 routes in total)



Smart crossroads

100% of major crossroads (470) regulated automatically in real time
from 5 to 15 minutes (20%) saved by 1,5 mln surface transport passengers



Bus stations opening

+2 bus stations
«Salarievo» и «Centralniy»

>1,2 thousand passengers a day

For passengers:

- comfortable waiting zones, cloak-rooms, cafes, mother & child facilities, ATM, Wi-Fi, modern navigation
- 6 bus stations in total



Infrastructure

+30 km of dedicated lanes in 2020
(381 km since 2010)

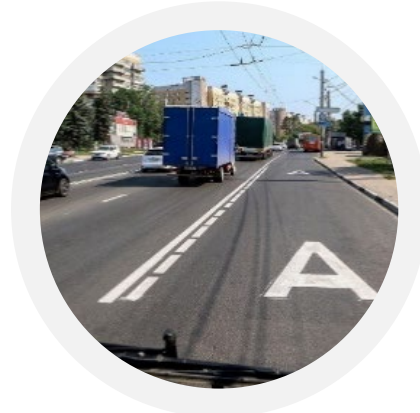
- since 2020 dedicated lanes operate only for public transport 24/7

+1 141 modern surface transport shelters (4100 in total)
(>34% (~958 thousand) passengers at modern shelters every day)

For passengers:

- Wi-Fi, USB-chargers, modern navigation, CCTV, information screens

>53 thousand repairs of surface transport shelters conducted in 2020



Moscow sharing services and taxi – № 1 in the world in the number of vehicles and development dynamics *



Car sharing


x250 times increased the number of shared vehicles since 2015
(from 100 to 25 000 by the end of 2020)

44 mln rides in 2020
(equal to 2019)

120 mln rides since the launch in 2015

>1 mln active users
(+12-15% every year)

1 shared car replaces up to 7-8 private cars
(equal to 180 000 private cars every day)

 **цодд** According to the Moscow Traffic Control Center

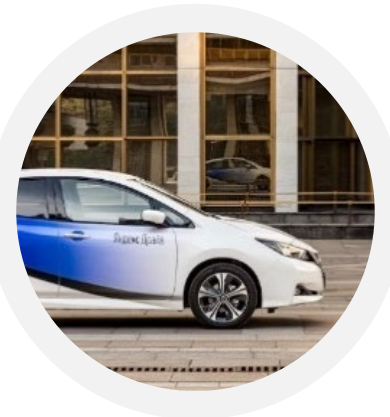
200 mln rubles of subsidies for purchasing new shared cars in Moscow in 2020
(252 mln rubles in total since 2018)

■ Car sharing fleet in Moscow is the most modern in Europe

E-sharing

20 e-vehicles fleet in 2020

+10 e-vehicles in car sharing in 2021



Taxi

+10,5 thousand new taxis
(70% of Moscow fleet renewal)

288 mln rubles of subsidies for purchasing new taxis in 2020
(0,9 bln rubles since 2012)

2,7 years is the average age of a taxi – the most modern fleet in Europe

80 thousand taxis operate every day on the streets of Moscow
(licensed in Moscow and the Moscow region)

x8 times increase in the number of legal taxis in Moscow since 2010

4 min – average waiting time
(5 min in 2019)

The number of taxi rides increased in 2020:

>1 mln rides a day
(+2% comparing to 2019)

13-15 taxi rides a day



NEW MOBILITY:

CAR SHARING AND TAXI

A COMFORTABLE CITY FOR DRIVERS:

ROAD NETWORK
DEVELOPMENT,
ROAD SAFETY,
STREET PARKING




Road network

- +124,5** km of new roads
- +25** new bridges, tunnels and overpasses
- +23** new pedestrian crossings
(1033 km of roads, 297 bridges, tunnels and overpasses, 254 pedestrian crossings since 2011)



Road situation

Despite of the growing number of vehicles:

- +170** thousand vehicles registered in the Moscow Transport Hub in 2020 (8,4 mln in total)
- 5%** decrease in road congestion in 2020 according to **TOMTOM** 


Road safety

- 14%** decreased the number of road accidents with injured people in 2020 compared with 2019
Decrease since 2010:
- 32%** road accidents with injured
- 51%** road accidents with fatalities
- ~2,5** thousand saved lives since 2010



Street parking

- +6 900** new parking slots, out of which **781** slots are reserved for disabled users (108,2 thousand slots on-street and off-street)
- +14 300** acting parking permits for large families and district residents in 2020 compared with 2019 (176 000 permits)*
parking priority for residents
- +13** Moscow districts added to the zone of residential parking

2,97 social risk rate in 2020
 according to the Decree of the President of Russia no more than 4 victims of road accidents by 2030 – already fulfilled

* 94,8 thousand for families with many children and 81,2 thousand for residents

Infrastructure development for pedestrians, bike sharing and kick sharing



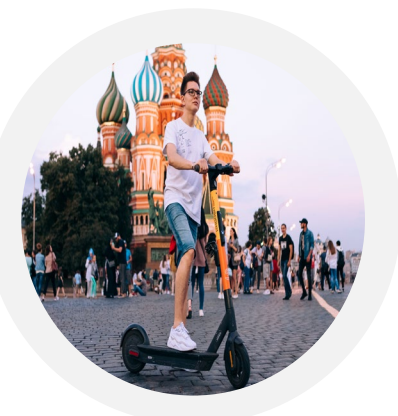
FOR PEDESTRIANS AND BIKERS:

BIKE SHARING AND E-KICK SHARING, PEDESTRIAN SPACES



Bike sharing and infrastructure

- +14%** bike sharing rides during the 2020 season (5,7 mln in total)
- +1000** new bikes (6,5 thousand in total)
- +134** new bike sharing stations (662 stations in total)
- +45** km of roads convenient for bikes (taking dedicated lanes into account – >900 km in total)
- +6** new temporary bike lanes in a seasonal format since 2020
- 30%** discount for bike sharing (since June 2020 until the end of the season)



Kick sharing

- x5** times more rides by e-kick sharing than in 2019, (2 mln in total)
- +2750** new e-kick scooters (6 thousand in total)
- +30** new districts with available sharing stations (>50 Moscow districts in total)
- +35%** active users in 2020 compared with 2019 (500 thousand in total)

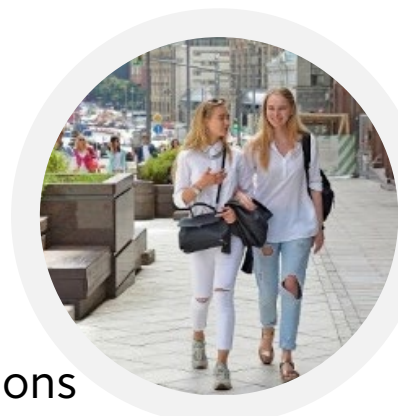


Pedestrians

- x2** times increased the number of pedestrian walks all over Moscow since 2010
- +10** streets, squares, avenues and public spaces reconstructed in 2020
- +8** km of redesigned pedestrian spaces

Crowdsourcing is a new format of communication with Moscow residents

- >2** thousand requests from residents accumulated and studied in the framework of the project, **262** residents' ideas realised in 2020
- What appeared in Moscow in 2020 according to residents' requests?



- +102** new pedestrian crossings
- +5** lots with improved pedestrian accessibility – pedestrian zones organized or redesigned
- +10** addresses with new bike parking installed (2 thousand bike parking stations for more than 10 thousand bikes)
- +5,4** km of new temporary bike lanes (6 temporary bike lanes in total)

Moscow ticketing system and the Troika transport card are the smartest in the world*

MOSCOW TRANSPORT SMART SERVICES

TICKETING,
BIOMETRICS,
MOBILE APPS,
DISPATCH CENTER



Ticketing

36 mln Troika cards purchased since 2013

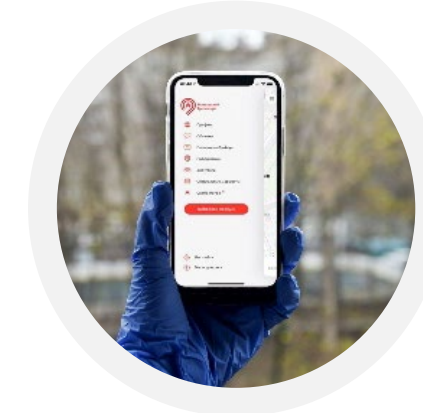
The launch of a private passenger account and personalised Troika cards

>270 thousand users

- Troika smart card launched in the Tula region

>180 thousand rides completed

- FacePay technology tests



Biometrics

100% metro stations equipped with biometrics

607 delinquents arrested by the Ministry of Internal Affairs September 1, 2020.**

The Moscow Metro Unified Dispatch Center

100% train dispatchers relocated to the UDC

-50% time needed to solve accidents

Mobile apps

>11 mln downloads of the Moscow Transport Complex mobile apps by 2020

Mobile apps' update in 2020:



Moscow Transport – a new app

- travelling and loading of transport in real time
- taxi and car sharing online-booking
- street parking map



Moscow Metro – a new app

- online management of Troika card balance
- ETA and train load in real time
- Chat-bot launch (>10 000 enquiries a month)



Moscow Parking – a new app

- payment and fines & evacuation appeals
- search for parking spaces for disabled
- search for evacuated vehicles
- private accounts for juridical persons
- parking payment at shopping centers



The Moscow Transport: 2020 in review

2010-2020

Metro and the MCC

+88 stations of metro and the MCC
+173 km of metro and the MCC lines
+3 548 train cars
(63% rolling stock renewed)



+7 metro stations
+17,9 km of metro lines
+551 metro train cars
New train Moskva -2020
on the Ring and Kaluzhsko-Rizhskaya lines
46 thousand rail sleepers changed
86,4 km of rail bars renewed
310 km cables changed
111 escalators repaired
+580 thousand additional passenger seats

New in 2020

2010-2020

Commuter rail and the MCD

+57 stations of commuter rails
+263 km commuter rails
+3 550 new train cars
(60% rolling stock renewed)
Key project the MCD -
new surface metro for Moscow and
the Moscow Region



+15 commuter rail stations the MCD
+499 new train cars for all commuter rails
100% rolling stock renewed
on the MCD-1 and MCD-2
102 km new rail ways installed
260 km overhead wiring renewed
+3,43 mln additional passenger seats due
to the MCD

New in 2020

2010-2020

Moscow parking

+108,2 thousand places
for Moscow parking
+176 thousand parking permits for
families with many children and
residents
+317 places for parking permits
holders



+6 900 new parking places, including:
+4 700 on-street parking
+2 200 places on guarded parking
+14 300 active permits for families with many
children and residents

New in 2020

2010-2020

Road network

Built and reconstructed:
+1 033 km of roads
+297 bridges, tunnels and overpasses
+254 pedestrian crossings



Built and reconstructed :
+124,5 km of roads
+25 bridges, tunnels and overpasses
+23 pedestrian crossings

New in 2020

2010-2020

Surface transport

+12 386 units of surface transport,
including:
+11 258 buses
(100% fleet renewed)
+600 e-buses
(new mode of transportation)
+528 trams
(78% fleet renewed)
+381 km of dedicated lanes



+1 462 units of surface transport, including:
+1092 buses
+300 e-buses
+70 trams
+30 km of dedicated lanes
+13,59 mln additional passenger seats
comparing to 2010

New in 2020

2010-2020

Bike infrastructure and scooter-sharing

+900* km of road network used
for bike lanes
+6 500 bikes
+6 000 e-scooters



+45 км km of road network used for bike lanes
For the first time **bike lanes in a seasonal format**
+1 000 bikes
+2 750 e-scooters

New in 2020

2010-2020

Moscow car-sharing and taxi

+25 500 car-sharing vehicles
+1 mln active users of car-sharing
55 000 permits for Moscow taxi



Maintaining the optimal amount of
Moscow car-sharing fleet
+10 500 new thousand taxi
(in total 148 thsnd. Taxi permits in Moscow
and the Moscow Region)

New in 2020

* Including dedicated lanes for public transport

→ The plans of Moscow
transport for 2021

Development of transport system: plans for 2021



Increasing safety

- Increase/decrease of speed on certain streets
- Detailed analysis of road accidents
- Tackling road rules violations
- Ban for transit freight at MKAD



Development of eco transport

- +400 e-buses
- +164 charging infrastructure for e-buses
- +30 new e-bus itineraries
- +10 e-car-sharing vehicles
- +200 charging stations for e-vehicles



Moscow metro rolling stock renewal by 68%

- +337 new metro train cars Moskva-2020 in 2021
- 100% renewal of the Ring line with the Moskva-2020 trains in 2021



Piloting of buses on demand in Troitsky and Novomoskovsky administrative districts

- Agile bus itineraries
- Transport from door to door



Development of bike infrastructure and sharing services

- +1 000 new bikes, including 500 e-bikes
- +67 stations of e-bike-sharing
- Up to 18 km temporary lanes
- +1 000 parking places for private vehicles
- +4 000 e-scooters



Accessible environment for low-mobility passengers

- Scaling of services by the Passenger Mobility Center on surface transport
- Improvement of accessibility of transport infrastructure for low-mobility passengers



Development of the Moscow metro and the MCD

- +8-11 new metro stations
- +11 commuter rail stations of the MCD, 6 of them after reconstruction and 5 new ones



Preparation for river transport launch

- Development of piers
- Construction of e-vessels for Moscow
- Payment by Troika card



Troika card unites Moscow and the Moscow Region

- Scaling of the eco-system of Troika card to the regions of Russia (including the Moscow Region)



Trip payment using Face Pay

- 100% stations equipped with facial recognition systems
- New additional method of payment



All Moscow transport in a single app

- 1st stage of launching mobile app based on MaaS
- Convenient routes and best prices
- Car-sharing, taxi and sharing services included
- Launch of virtual Troika card



Muscovites' participation in transport development

- +10 new pedestrian crossings
- >150 ideas will be realised in 2021
- Accumulation of new ideas