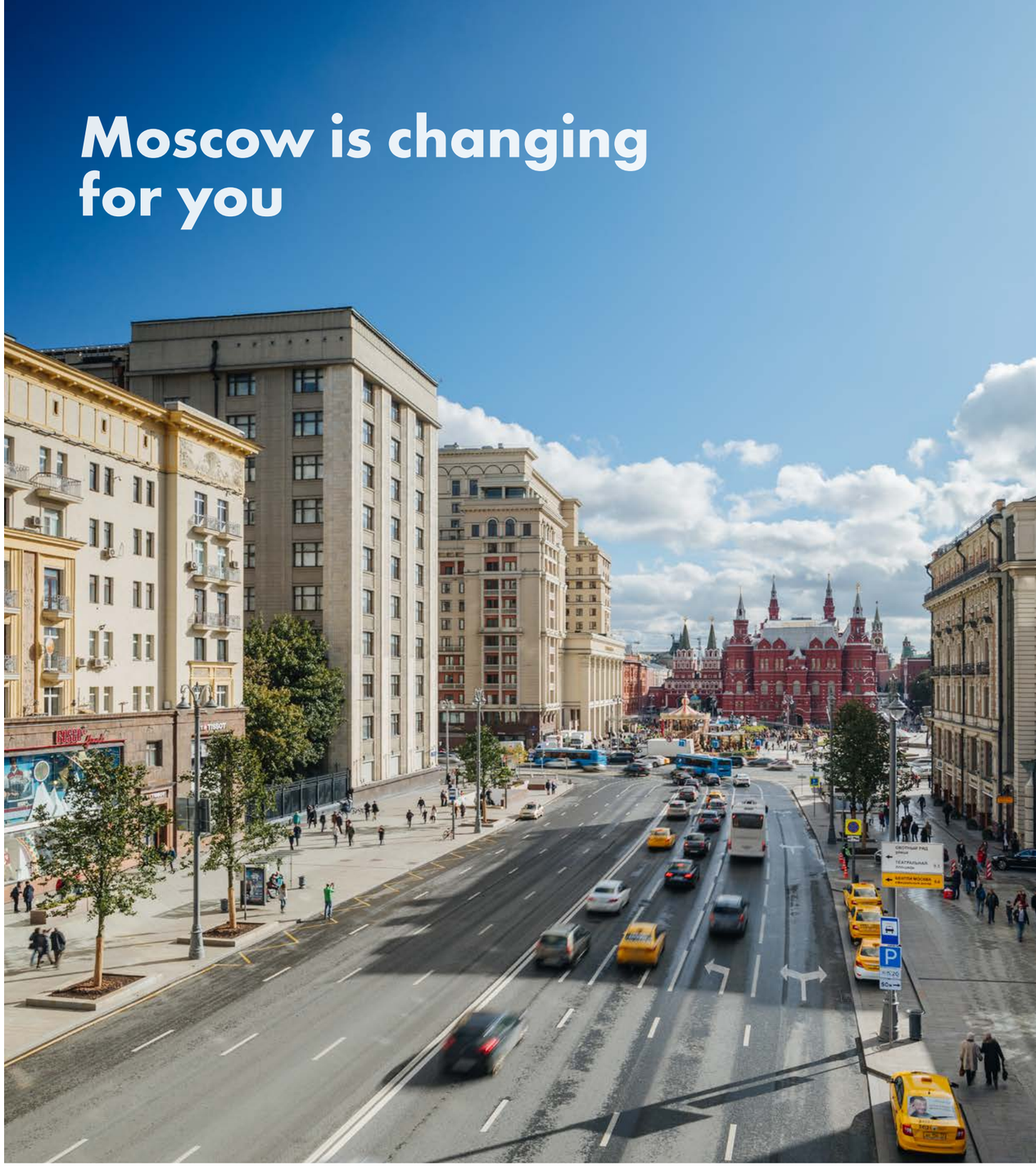
www.transport.mos.ru/en/
www.mos.ru/en/

Moscow is changing for you



Moscow Transport:
2010–2017 results and plans until 2023

Moscow Transport

www.mos.ru/en/

CONTENTS

Moscow is changing for the better

Dear friends,

In 2011, the Moscow Government developed an ambitious upgrade programme for the capital's transport infrastructure. We are now seeing the first results after eight years of our efforts – the growing popularity of public transport, reduced average trip duration in Moscow, increased average travel speed, and the decrease in the number of traffic incidents.

Moscow has become a safer and more comfortable city with enough space for pedestrians, passengers, motorists, and cyclists.

We are currently building a new transport system for the Moscow metropolitan area for decades ahead.

The system comprises the following mega projects: the Big Circle line and new radial lines to more distant parts of the city, the Moscow Central Diameters, four expressways, the Central Ring Road (CRR), and roads in the New Moscow.

We are continuing to replace the surface transport rolling stock and fleets, introducing electric buses while launching new passenger services and other important initiatives.

As a result, Moscow residents will be provided with a fundamentally new transport infrastructure which will improve mobility and comfort in the city while helping drive the capital's economic development. These are our plans for the upcoming years – and we will fulfil them without fail.

Moscow Mayor

Sergei Sobyanin

#1 city globally for comprehensive transport development[1]

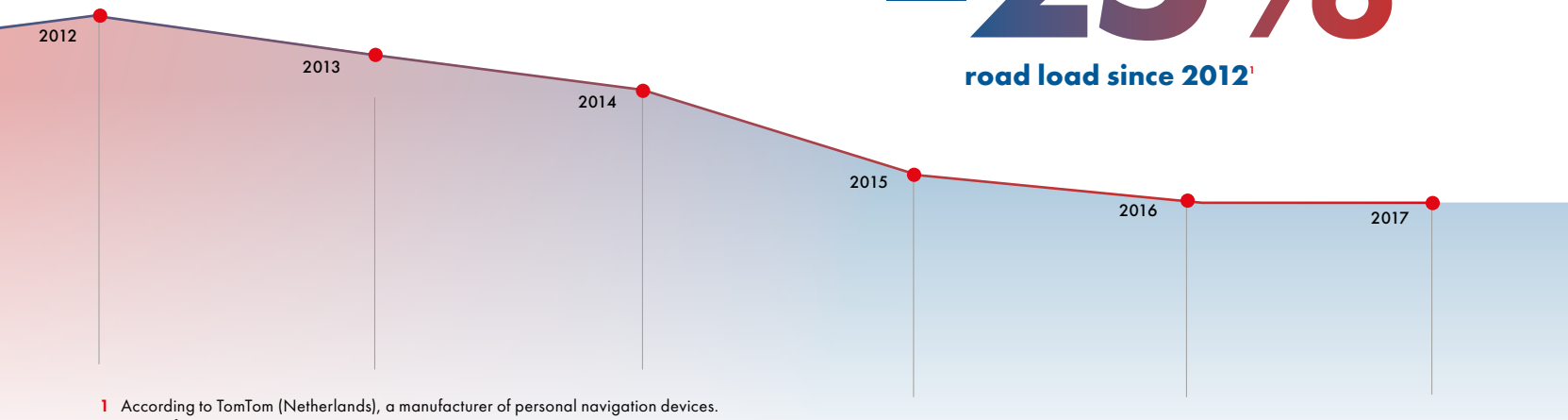
1 UITP Global Public Transport Summit (Montréal, Canada, 2017).

Accelerated strategy implementation and new challenges

Moscow is changing. The city is becoming busier, more active, and more mobile each year. We have all witnessed what it means for a city to be comfortable for its residents, so now Mostrans faces new tasks – to make Moscow even better, more comfortable, and environmentally friendly.

–25%

road load since 2012[1]



1 According to TomTom (Netherlands), a manufacturer of personal navigation devices.
2 Paying for trips.

About

70%

of residents choose public transport for daily travel around the city

+62%

growth in economically active residents[2] using public transport in 2017 as compared to 2010 (1.5 billion more trips)

Not so long ago, in 2010, upon exiting a metro station you would find yourself in the middle of a chaotic open-air market which led to a disorderly parking lot, rather than on the streets along which you can walk peacefully and safely. That is why a car became Moscow residents' favourite mode of transport – not only could it shield one from the city's uneasy ambience of those times, but it could also bring them to work, shops, or anywhere else. The number of cars consequently exceeded the quantity for which the historical street and road network was planned, and the city's public transport failed to meet modern requirements and was no longer popular. Moscow was associated with permanent discomfort and desperately needed change.

Now in 2018, Moscow is an open and friendly city. City residents using public transport have reached 70% of Moscow's population, more and more people are satisfied with the quality of public transport services, the amount of pedestrians in the city has tripled, and 25,000 trips are made on rental bicycles each day. We all like new, modern rolling stock, value-added passenger services, dedicated lanes, cosy bus stops, and convenient pavements and wayfinding signage.

But there is still much work to do. Reliance on cars is still a significant problem in Moscow, which should be addressed both through development and provision of a decent alternative, as the excessive number of cars has resulted in congestion and increased pollution.

We all want to live in a clean city and breathe fresh air, which is extremely difficult with 3.6 million cars filling the city roads on a daily basis. The reduction of cars driving daily in the city by 300,000 to 500,000 will help improve the quality of life of Muscovites.

So we have encouraged and will continue to encourage residents to use their cars wisely while we continue to provide affordable and comfortable public transport services comprising well-developed underground and surface metro system and road infrastructure, and a convenient network of surface transport services such as taxi services, urban bicycle rental, and short-term car rental (Moscow Car Sharing) services.

At the same time, the city's unified integrated transport system is becoming more flexible and takes each resident's needs into consideration.

Today, Moscow steadily follows its aim to develop all modes of healthy and eco-friendly transport. Electric buses – truly harmless to the environment – will be launched in 2018, and we will stop purchasing diesel buses altogether by 2021.

Do we want to see Moscow as a healthy and comfortable city? I believe every one of us should answer this question, not only the Moscow Government, but also the city residents. Our ardent wish is that Moscow residents live in the world's best city, and we will put in maximum effort so that it is comfortable, healthy, and convenient for all.

Deputy Mayor for Transport

Maxim Liksutov

Moscow Transport

HOW DID THE CITY'S PUBLIC TRANSPORT EVOLVE?

Moscow today[1]

KEY PUBLIC TRANSPORT COMPONENTS

SCOOTERS

2,950
scooters

BICYCLE RENTAL SYSTEM

430
rental stations

4,300
bicycles within the rental system

130
electric bicycles

CYCLING INFRASTRUCTURE

773 km
of bicycle paths and lanes

For details, see page 104

PEDESTRIANS

CYCLISTS

PUBLIC TRANSPORT PASSENGERS

PEDESTRIAN INFRASTRUCTURE

327
streets, squares, major routes, and public spaces modernised and reconstructed

311 km
length

1,800 hectares
total area

METRO

422 km[2]

246 stations[2]

770 trains

MOSCOW CENTRAL CIRCLE (MCC)

54 km

31 stations

42 Lastochka trains

19
metro transfer stations

6
railway transfer stations

SUBURBAN TRAINS

2,070 km[3]
of railway tracks

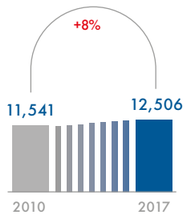
112 stations
within the city boundaries

10
routes

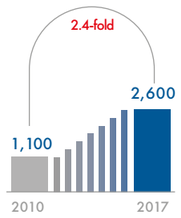
1 As at August 2018.
2 As at May 2018 including the MCC.
3 Railway track length within the Moscow Railway Hub.
4 As at July 2018.
5 Taxi cars registered in Moscow and the Moscow Region and operating in Moscow.

Moscow in figures

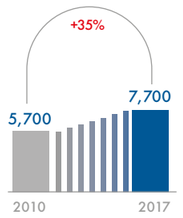
Population,[1] mln people



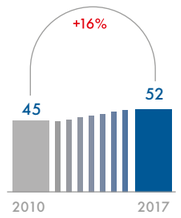
Area,[1] sq km



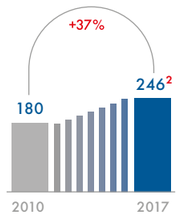
Vehicles registered in Moscow and the Moscow Region, thousand vehicles



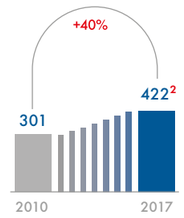
Average speed of private cars, km/h



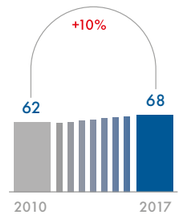
Metro and MCC stations, stations



Length of metro and MCC lines, km



Share of people using public transport,[3] %



Moscow

#1

in Russia by road safety

By

59%

fewer traffic accidents since 2010

422 km

Length of metro and MCC lines[2]

1 According to the Federal State Statistics Service (Rosstat).
2 As at July 2018.
3 Share of public transport in average passenger traffic (on working days).

Total traffic accidents, ’000

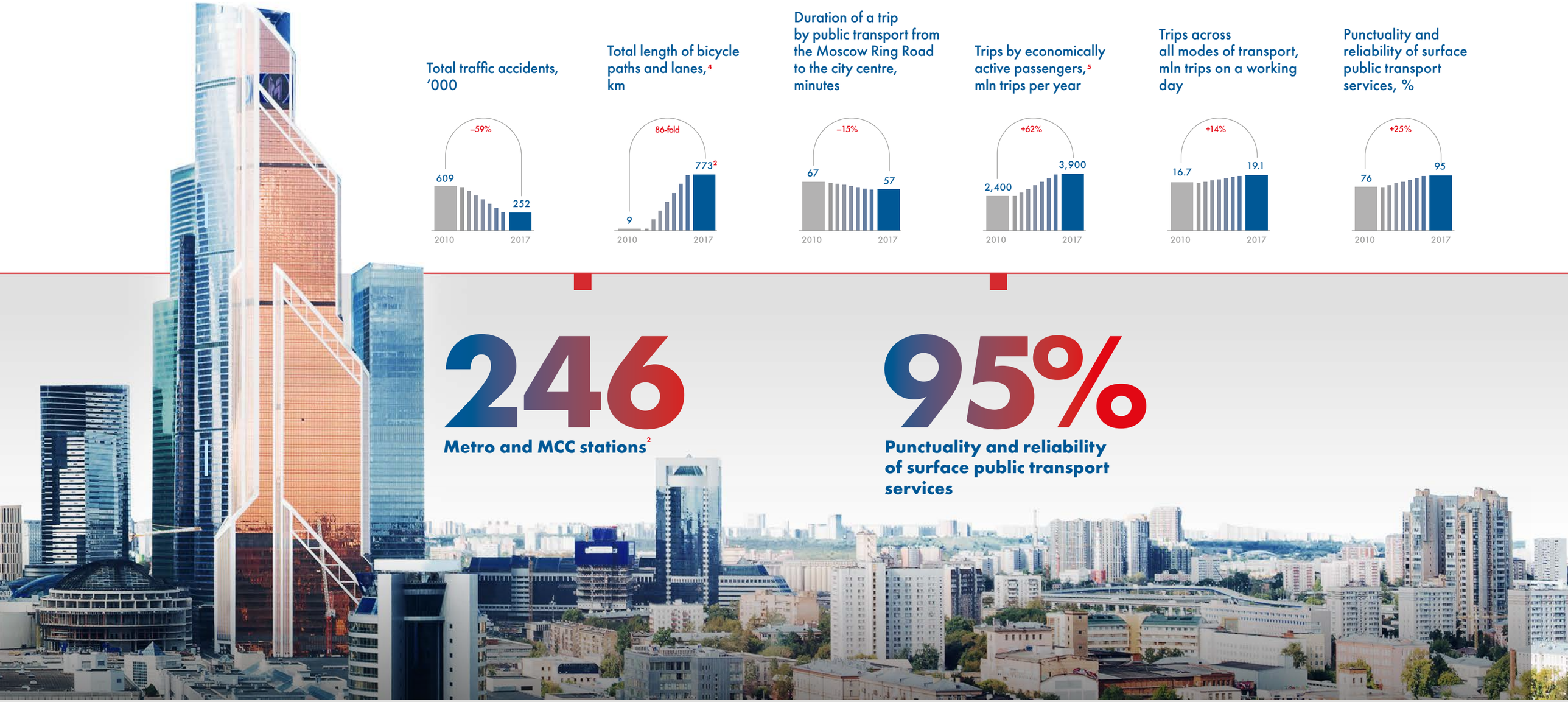
Total length of bicycle paths and lanes,[4] km

Duration of a trip by public transport from the Moscow Ring Road to the city centre, minutes

Trips by economically active passengers,[5] mln trips per year

Trips across all modes of transport, mln trips on a working day

Punctuality and reliability of surface public transport services, %



246

Metro and MCC stations[2]

95%

Punctuality and reliability of surface public transport services

4 Including dedicated lanes.
5 Paying for trips.

Transport organisational structure

>200,000 employees

of Moscow Transport focus on helping all residents and guests of the capital to move around the city quickly, comfortably, and safely

100 people

MOSCOW DEPARTMENT FOR TRANSPORT AND ROAD INFRASTRUCTURE DEVELOPMENT

PASSENGER SERVICE REGULATION

Metro
SUE Moscow Metro

53,000 people

Surface transport
- SUE Mosgortrans

31,000 people

- Commercial carriers under governmental contracts

3,500 people

Suburban rail services
- JSC Central Exurban Passenger Company
- JSC Moskovsko-Tverskaya Suburban Passenger Company
- LLC Aeroexpress

10 ,000 people

Taxi companies

100,000 people

Car-sharing companies

500 people

TRAFFIC MANAGEMENT AND FREIGHT LOGISTICS REGULATION

Road traffic
SPI Traffic Management Centre of the Moscow Government

2,900 people

Parking space
SPI Moscow Parking Administrator

2 ,000 people

CONTROL AND SUPERVISION

Across the street and road network
Moscow Administrative Road Inspection

450 people

On transport
State Public Institution (SPI) Organizator Perevozok

2,000 people

RESEARCH AND PROJECT ACTIVITIES

SUE MosTransProekt

400 people

TOP MANAGERS OF MOSCOW TRANSPORT

1

Alexander Polyakov
Director of SUE
MosTransProekt

3

Alexander Grivnyak
General Director of
SPI Moscow Parking
Administrator

5

Andrey Korneev
Deputy Head of the
Moscow Department
for Transport and Road
Infrastructure Development

7

Gamid Bulatov
First Deputy Head of the
Moscow Department
for Transport and Road
Infrastructure Development

2

Leonid Antonov
General Director of SUE
Mosgortrans

4

Yevgeny Adamov
Deputy Head of the
Moscow Department
for Transport and Road
Infrastructure Development

6

Dmitry Pronin
Deputy Head of the
Moscow Department
for Transport and Road
Infrastructure Development

8

Sergei Andreykin
First Deputy Head of the
Moscow Department
for Transport and Road
Infrastructure Development

10

Maxim Liksutov
Moscow Deputy Mayor in the Moscow Government, Head of the Moscow Department for Transport and Road Infrastructure Development

12

Elena Eremina
Advisor to the Head of the Moscow Department for Transport and Road Infrastructure Development, Press Secretary

14

Rudik Grigoryan
Head of the Moscow Administrative Road Inspection Service

9

Tatiana Malashenkova
Head of the Moscow Department for Control and Coordination of the Transport System Development

11

Viktor Kozlovsky
Head of SUE Moscow Metro

13

Pavel Pavlov
Head of State Public Institution Organizator Perevozok

15

Vadim Yuryev
Head of State Public Institution Traffic Management Centre of the Moscow Government

History of Moscow Transport

19th century

1847
The first mode of urban transport emerged – multi-seater horse-drawn carriages

1872
First temporary line for horsecars was constructed

1873
The first asphalt pavement in Moscow was completed, in Nikolskaya Street

1891
Horsecar routes were structured and a **single transfer pass** was launched for all destinations

1899
First electric trams were put in operation

20th century

1903
First projects **to build the Moscow metro** were developed

1907
The first taxi appeared in the city streets with a plate stating, "Cabman, rate by agreement"

1908
Bus services were launched to provide Muscovites easy access to the **countryside**

1924
The first scheduled bus route was launched

1929
The first suburban train was put into service

1930
The first traffic lights appeared at the corner of Petrovka Street and Kuznetsky Most Street

1933
The first Soviet trolleybus route was launched

1935
The first metro line was opened – from Sokolniki station to Park Kultury station with a branch to Smolenskaya station

21st century

1939

The first shuttle buses began transporting visitors of the All-Union Agricultural Exhibition

1954

The entire **Circle line** of the Moscow metro was opened

1956

The construction of the **Moscow Ring Road (MRR)** began

1972

The Moscow trolleybus network became **the world's longest** (1,253 km)

1975

100th metro station was opened

2002

The first **metro station outside of the Moscow Ring Road** – Bulvar Dmitriya Donskogo – was opened

The first **express train** was launched between the Paveletsky railway station and Domodedovo Airport

2003

The first section of the Butovskaya **light rail** line was opened

2009

The first low-floor buses, trolleybuses, and trams appeared on Moscow routes

The first Moscow Region metro station – Myakinino – was opened

2010

Sergei Sobyanin **became the Mayor of Moscow**

A project was launched to develop Moscow new transport system development strategy

Continue reading

HISTORY OF MOSCOW TRANSPORT: KEY INITIATIVES IN 2011–2017

2011

Unified **taxi standard** adopted

Dedicated lanes launched

Introduction of the **Intelligent Transport System** for automated traffic control

+3 metro stations[1]

2012

Development **of the traffic regulations compliance and control system**

Unified parking system launched

Freight transport movement control

+3 metro stations[2]

2013

Launch of the electronic **Troyka card** and new fare pricing options

Development of the street and road network – road construction and reconstruction projects

+6 metro stations[3]

Launch of the public bicycle rental system and development of **cycling infrastructure**

2014

A unified style was developed for Moscow transport and the citywide wayfinding system

Commencement of **MCC construction** and integration into the urban transport system

Large-scale **rolling stock and fleet replacement**

+2 metro stations[4]

1 Borisovo, Shipilovskaya, Zyablikovo.
2 Novokosino, Pyatnitskoye Shosse, Alma-Atinskaya.
3 Lermontovsky Prospekt, Zhulebino, Delovoy Tsentr, Park Pobedy, Lesoparkovaya, Bitsevsky Park.
4 Spartak, Troparevo.
5 Kotelniki, Tekhnopark.
6 Rumyantsevo, Salaryevo, Butyrskaya, Fonvizinskaya, Petrovsko-Razumovskaya.
7 Minskaya, Lomonosovsky Prospekt, Ramenki, Khovrino.

Passenger **service was launched at MCC** (31 stations)

A new commercial transport management model was launched: unified standards were adopted for all buses

+5 metro stations[6]

Digitalisation of Moscow Transport:

- The Innovation Centre was launched
- A smart safety system was introduced in the metro
- Electronic services for Muscovites were launched

Metro network expansion – **new stations opened**

2016

2017

The Magistral network was launched, connecting the entire city

+4 metro stations[7]

100% of the metro covered by a **Wi-Fi network**; Wi-Fi launched on all public transport

New-generation rolling stock launched for the metro (the Moskva train) and surface transport services (the Vityaz-M tram)

2015

Moscow car sharing system launched

City centre reconstruction and improvements under the **My Street** programme

+2 metro stations[5]

Launch of the Moscow Assistant – a mobile app assisting residents in complying with traffic rules

New surface metro stations for Moscow and the Moscow Region – Moscow Central Diameters

Construction of new metro stations, roads, and interchanges

PLANS FOR 2018 AND BEYOND

Environmental improvements:

- launch of electric buses,
- development of electric car infrastructure,
- replacement of public transport rolling stock and fleets with environmentally friendly alternatives.

2010 ⟶ 2017: WHAT HAS CHANGED?

Moscow is no longer a big city with the world's worst traffic jams. Since the peak level of road congestion in 2012, congestion has reduced by 25%.[1]

Compared with 2010, the average driving speed in the city throughout the day has increased

by 16% (to 52 km/h)

A city for motorists

For details, see page 116.

2010

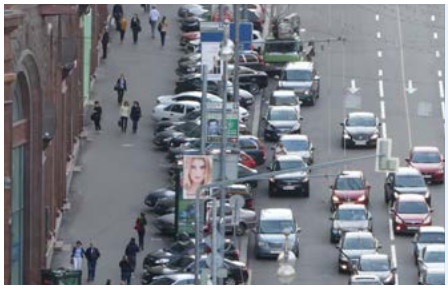
The universal Troyka card, which can be used to pay for public transport fares, bicycle rent, parking, and visits to museums and ice-skating rinks, was introduced. Paying for trips has never been easier, as the card can be topped up remotely.

For details, see page 89

2017

Modern, advanced, and comfortable public transport vehicles were launched on routes.

For details, see page 66



Parking situation has improved. The throughput and availability of parking spaces have tripled.

For details, see page 118

The city centre has become accessible and comfortable for people.

For details, see page 100

1 According to TomTom (Netherlands). www.tomtom.com

3.8 MILLION

Muscovites now live within a 10-minute walking distance of the metro

The share of residents living within access of metro stations via public transport has increased.

The 14th metro line – the Moscow Central Circle – connects districts in which about 500,000 Muscovites live.

For details, see page 50

2010

Waiting for transport has become comfortable, as new public transport stops have ticket machines, USB ports to charge mobile phones, and Wi-Fi hotspots. Online displays inform passengers of arrivals, and the citywide wayfinding system helps them find their way around the city easily.

For details, see page 110

2017

Moscow has one of the world's shortest taxi pick-up times. The average pick-up time during peak hours is 5 to 7 minutes.

For details, see page 114

2,000 new private carrier shuttle buses now operate instead of old and unsafe vans. 40% of passengers can now enjoy free travel and reduced fares that were previously unavailable on private shuttle vans.

For details, see page 64

Alternative modes of transport have been launched.

For details, see page 104

OUR GOAL IS TO HELP YOU

AVAILABLE

Moscow City Transport Development Strategy to 2020

page 22

9,416

new buses, trolleybuses, and trams put into operation since 2010

COMFORTABLE

11,000

cars within the Moscow Car Sharing System

FAST

66

new metro and MCC stations opened since 2010

EXCITING

REACH YOUR DESTINATION

773 km [1]

of bicycle paths and lanes established since 2010

1 Including dedicated lanes.

A city for everyone

page 98

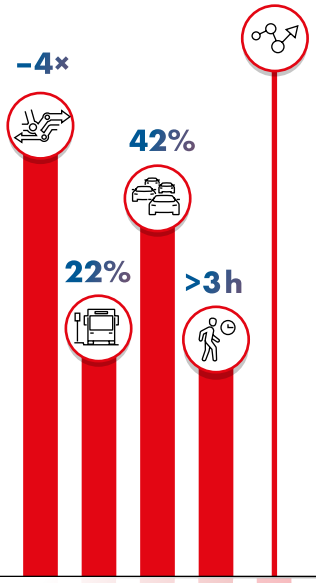
Contact Us

page 124

Moscow Transport Strategy

The Moscow City Transport Development Strategy to 2020 in place since 2011 has been designed by the Moscow Government with the help of research and expert communities drawing upon global best practices in transport and related infrastructure development. All solutions within the strategy were preliminarily assessed for their applicability to Moscow.

KEY CHALLENGES OF MOSCOW TRANSPORT IN 2011



DENSITY OF THE STREET AND ROAD NETWORK
two to four times lower compared with the world's largest cities

ALL PUBLIC TRANSPORT
bound for the city centre was 22% over capacity during morning rush hour

MOTOR ROADS
were over capacity by 42%

OVER THREE HOURS PER DAY
spent by 20% of Moscow residents on commuting

NO EFFICIENT SYSTEM
for controlling traffic and regulating the operations of private carriers

INCREASED RATES OF ROAD TRAFFIC ACCIDENTS AND FATALITIES

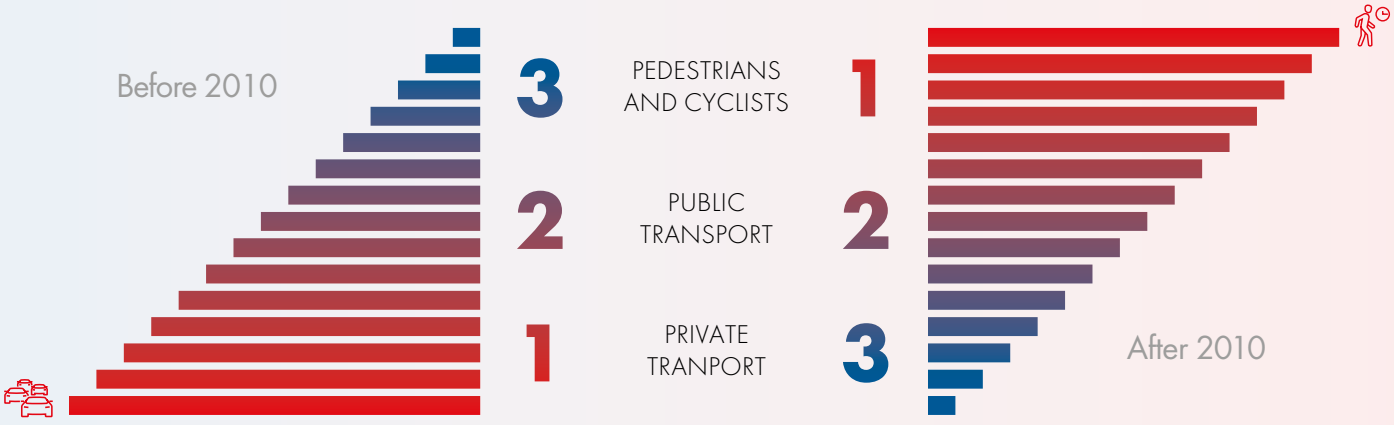
Before 2011

Our solution

Our strategy focuses on building a unified, integrated public transport system for Moscow residents and visitors to move around the city in a fast, comfortable, and safe way. To this end, we have substantially intensified building and reconstructing roads, expanding the metro network, and consistently replacing our passenger transport fleets with new vehicles while providing more space for pedestrians and cyclists. Having gained momentum in comprehensive development, our transport system has begun operating as a single organism.

Our Transport Strategy aims to build a unified reliable, sustainable, attractive, and safe transport system that provides comfortable urban mobility and caters for every passenger's needs, and offer a decent alternative to private car use.

How have our development priorities for the public transport system changed over time?



Development areas for Moscow public transport system

MORE COMFORT

- Advanced rolling stock and fleets
- Passenger information system
- Intermodal ticketing and fare pricing solutions
- Higher public transport capacity
- Wheelchair accessibility
- My Street, a programme for reconstructing and improving the street and road network

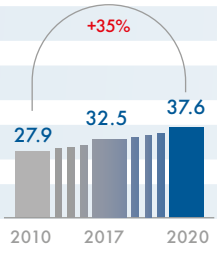
IMPROVED AVAILABILITY

- Extended and integrated metro, MCC, and suburban train lines
- Improvements to the city's taxi and short-term car rental services
- Construction of new and reconstruction of previously dismantled tram lines
- New transport hubs and park-and-ride facilities
- A unified parking system
- Construction of new roads and interchanges
- Further extension of the public transport route network
- Promoting alternative modes of transport

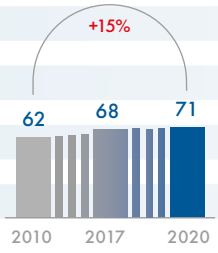
HIGHER SPEED

- Construction of new lines for the metro, MCC, and suburban trains
- Establishment of dedicated lanes for public transport
- Segregation of on-street tramways
- Optimised timetables and higher frequency of public transport services
- Intelligent Transport System (ITS) and Integrated Traffic Management System (ITMS) rollouts

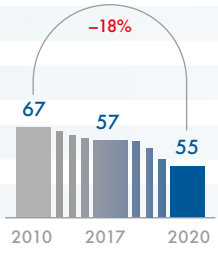
Increases in total capacity of public transport, million people per day



Share of people using public transport1,[1] %

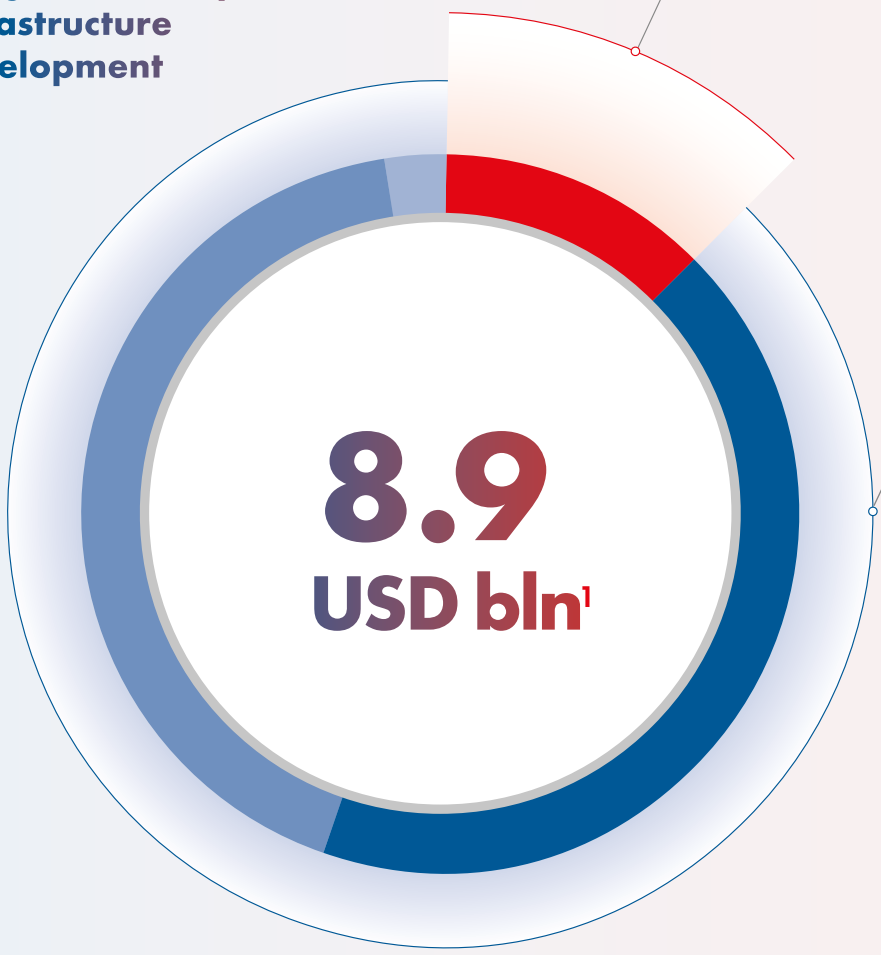


Average travel time on public transport,[2] minutes



1 In average total trips on working days.
2 From residential districts near the Moscow Ring Road to the city centre during morning rush hour.

Moscow's 2017 budget for transport infrastructure development



SUPPORTING PROGRAMMES

12% (USD 1.1 bln)
surface public transport, car parks, transport hubs, wayfinding, cycling and pedestrian space, and traffic management

INFRASTRUCTURE INITIATIVES

43% (USD 3.9 bln)
Metro: construction of new lines and stations, replacement of the rolling stock and renewal of the metro infrastructure, etc.

42% (USD 3.7 bln)
Street and road network: construction and reconstruction of the road network, engineering structures, etc.

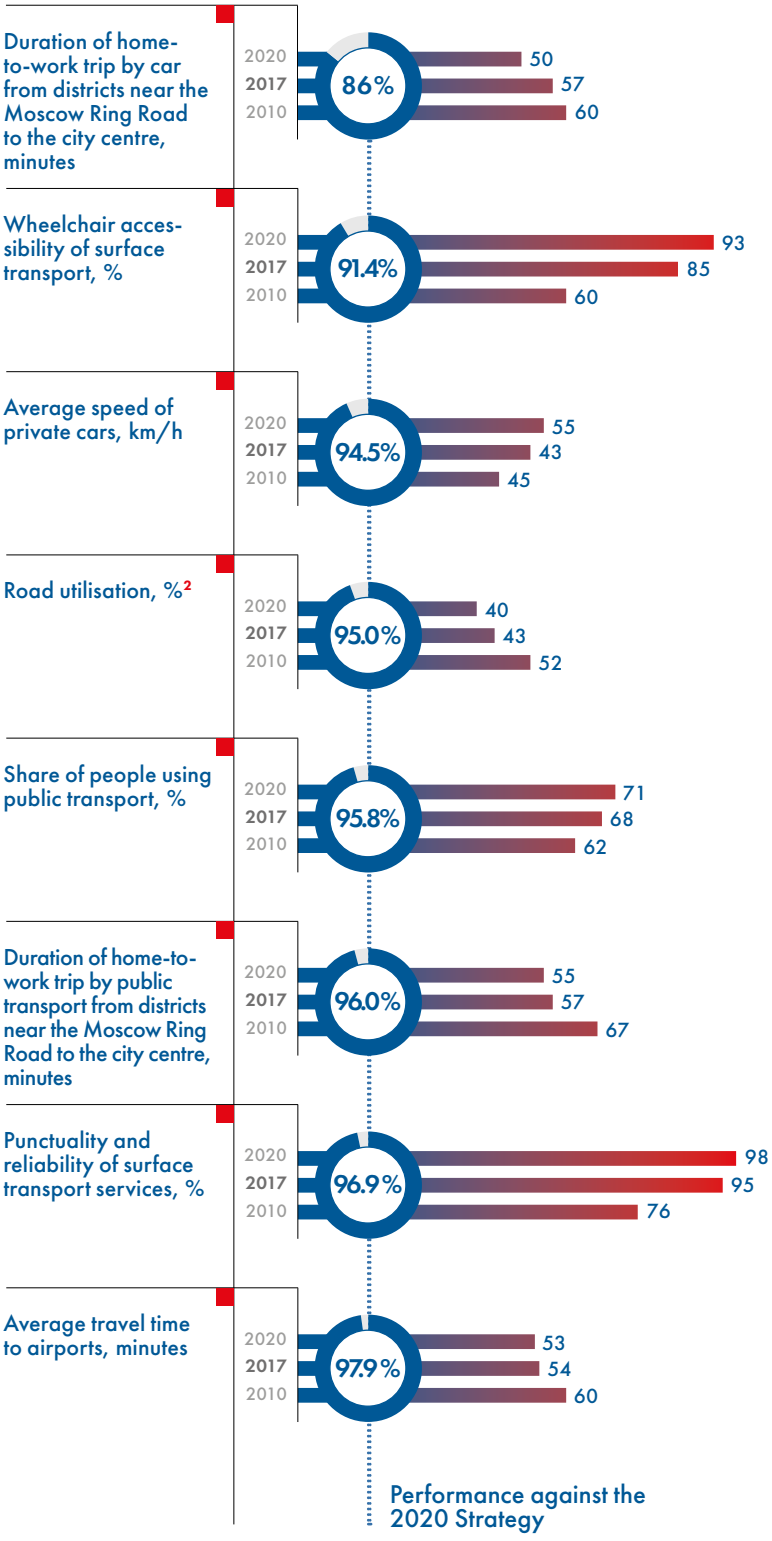
3% (USD 0.3 bln)
Rail transport: construction of additional main tracks, infrastructure improvements, etc.

The Moscow Government allocates over **USD 8.6 billion** annually to improve the availability of transport services to Muscovites and address urban mobility issues

In absolute terms, the 2018 budget will be twice as large as it was seven years ago. About USD 9.4 billion has been allocated for the Transport System Development programme in 2018. A significant amount, although these expenses are absolutely necessary for a dramatic enhancement in the city's transport system and improved mobility for pedestrians, motorists, and passengers on public transport.

Sergei Sobyanin
Moscow Mayor

PERFORMANCE AGAINST 2020 TRANSPORT STRATEGY TARGETS



While three years still remain until the completion of Moscow City's National Programme, Transport System Development, our performance against the targets for key performance indicators covering strategy implementation is already close to 100%.

Accelerated programme implementation

Performance against key targets is close to

100%

A transport strategy to 2023 is currently under development

1 All amounts expressed in roubles are translated at the USD/RUB weighted average exchange rate for 2017.
2 According to an independent expert review by TomTom (Netherlands).

TRANSPORT SYSTEM DEVELOPMENT IN 2010–2017 AND PLANS UNTIL 2023

Metro and MCC

- **+66** new metro stations (including 31 MCC stations)[1]
- **+110 km** of rail lines (including 54 km of MCC lines)
- **+1,950** new metro train carriages (40% of the fleet replaced)
- **210** new carriages for MCC

2010–2017

2018–2023 PLANS

- **+58** stations
- **+135,5 km** of metro lines
- **+3,242** new carriages (82% of the fleet replaced)
- **+50** new carriages for MCC

Suburban rail services

- **+104.5 km** of additional main tracks
- **+2,152** new carriages (39% of the fleet replaced)

2010–2017

2018–2023 PLANS

- **+ 1,832** new carriages (74% of the fleet replaced)

Moscow Central Diameters:

- **446 km** of new surface metro lines for Moscow and areas outside Moscow
- **211** stations

Unified parking system

- **80,000** paid parking spaces
- **10,000** parking spaces at park-and-ride facilities near metro and railway stations

2010–2017

2018–2023 PLANS

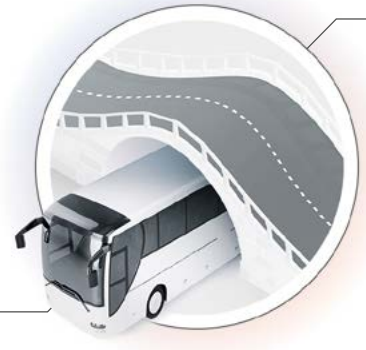
- **+5,000** parking spaces at park-and-ride facilities
- **An updated version** of the Moscow Parking mobile app
- **Building a unified parking system** in Moscow with multistorey car parks – even more convenient for motorists

Road network[2]

Construction and reconstruction of:

- **695 km** of roads
- **199** bridges, tunnels, and overpasses
- **199** pedestrian crossings

2010–2017

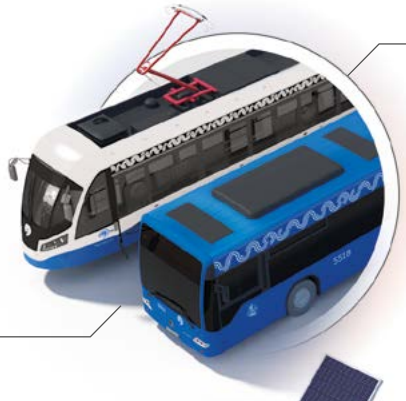


2018–2023 PLANS

New road framework:

- **The Central Ring Road and four expressways:** South-East, North-East, and North-West expressways, and Southern Lateral Road

Surface public transport services



2010–2017

- **+9,416** new buses, trolleybuses, and trams (90% of the fleet replaced)
- **290 km** of dedicated lanes established[1]
- **237 km** of tramways to be reconstructed (55%)

2018–2023 PLANS

- **+6,000** new vehicles (including **1,800** electric buses)
- **+63 km** of new dedicated lanes
- **+152 km** of new tram tracks will be reconstructed,
- **+85 km** of new tramways (a total of 520 km of tramways by the end of 2023)

Cycling infrastructure

2010–2017

- **773 km**[3] of bicycle paths and lanes
- **430** bicycle rental stations
- **4,300** bicycles[1] within the rental system
- **900,000** users[1] of the bicycle rental system

2018–2023 PLANS

- **+450** new bicycle rental stations
- **+4,500** bicycles within the rental system
- **Over 2 million** users of the bicycle rental system

Moscow car sharing and Moscow taxi services

2010–2017

Car sharing:

- **11,000** cars within the system
- **15 operators**
- **1.5 million** registered users

Taxi services:

- **47,000** Moscow taxis

2018–2023 PLANS

- **Over 15,000** new cars within the car sharing system[4]
- **Renewal** of the Moscow Taxi fleet and maintaining an optimal number of taxis for the city

+10%
(4.3 bln trips)
growth planned by 2020

3.9 bln
trips per year
made by economically active passengers in 2017

1 As at July 2018.
2 According to the Moscow Complex of Urban Planning Policy and Construction.
3 Including dedicated lanes for public transport.
4 The project is fully financed through private investments.

Moscow transport system
as seen by researchers and experts

Lomonosov Moscow State University
www.msu.ru/en/
www.indexmsu.ru/en/

GLOBAL URBAN TRANSPORT DEVELOPMENT INDEX[1] (2018)

The Index was developed in 2016 to compare large cities' urban transport systems in terms of quality, availability, road safety, freight logistics performance, and environmental impact. The Index is calculated annually and is based on 72 indicators for the period from 2010 to 2017.

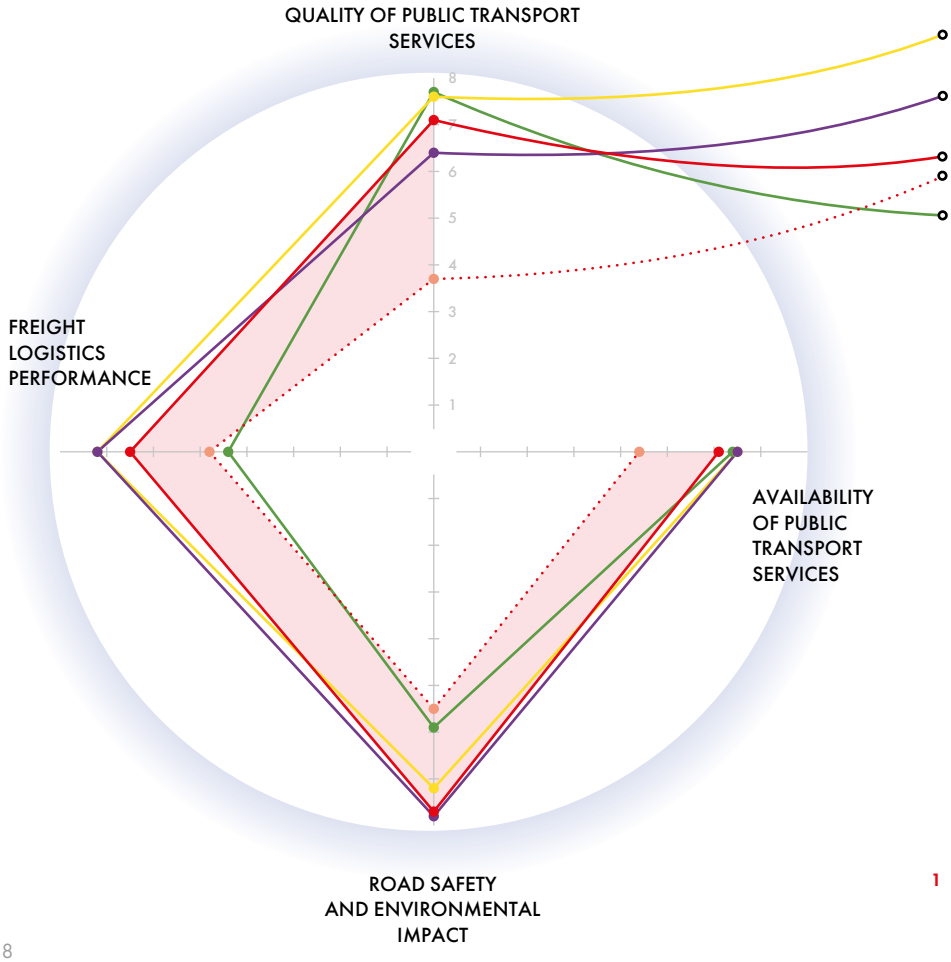
Research findings about Moscow

Moscow tied with London at 2nd to 3rd place in 2017 – a strong contrast to its 8th position in 2010.

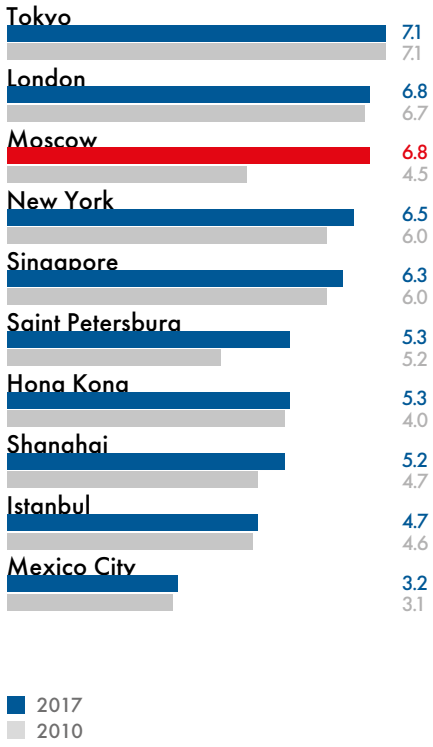
The city's index grew ahead of others across the globe between 2010 and 2017 – an average absolute growth of over 6-fold.

#3 globally

Transport Infrastructure Development Dimensions



Transport Development Index



1 The Index is calculated annually and was developed in 2016.

Learn more about the research findings

Lomonosov Moscow State University
www.msu.ru/en/
www.indexmsu.ru/en/

RUSSIA'S URBAN TRANSPORT DEVELOPMENT INDEX[1] (2018)

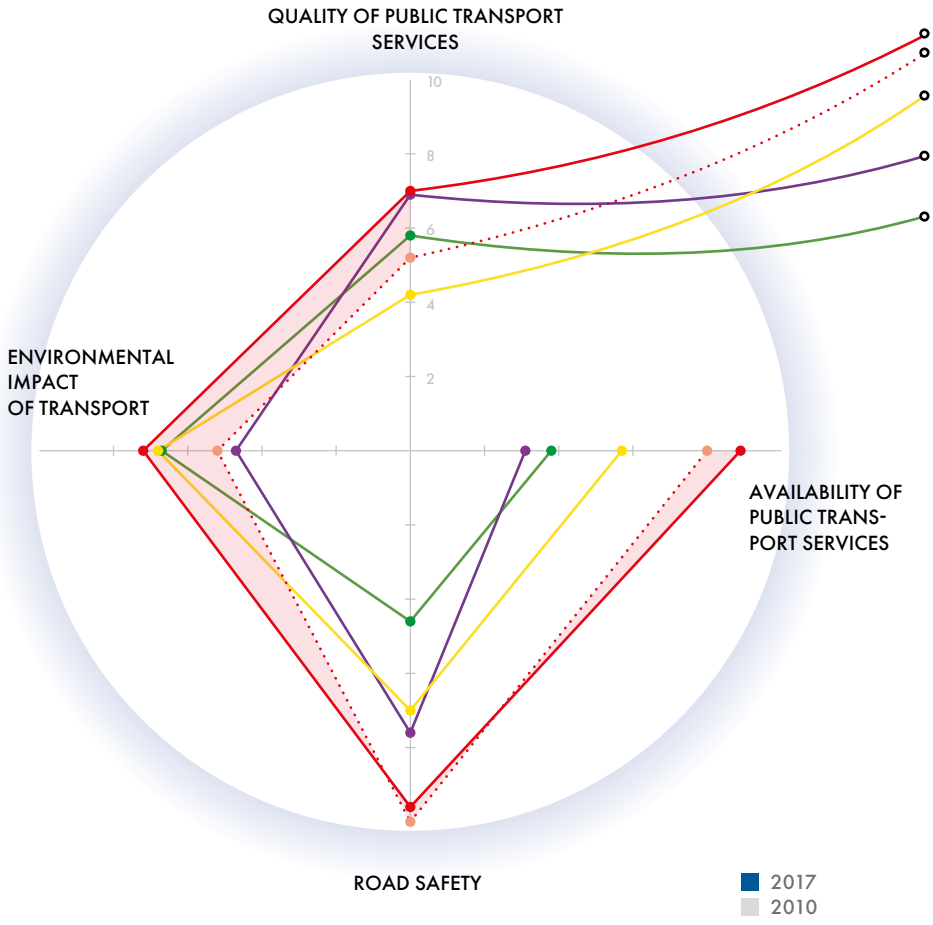
The Index was developed in 2016 to assess the quality, availability, safety, and environmental impact of transport. The Index is calculated annually and is based on 55 indicators for the period from 2010 to 2017.

Research findings about Moscow

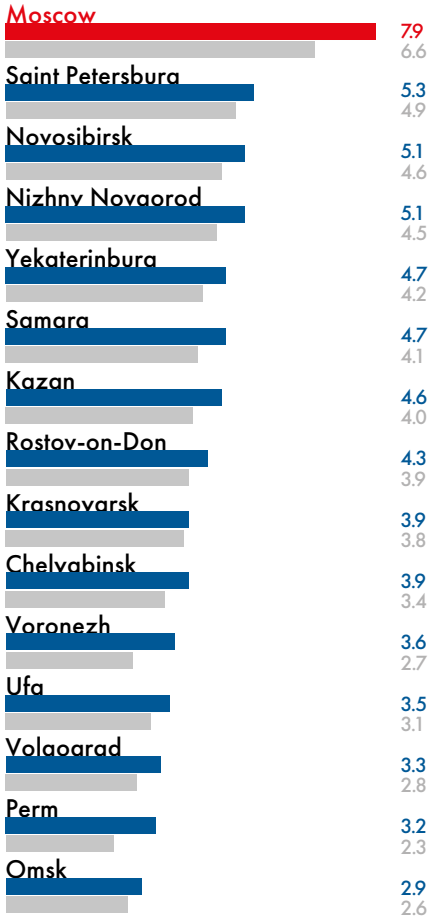
For the past eight years, Moscow has been Russia's leading city in transport development, with an absolute growth of its development index 2.5 times higher compared with the average growth posted by other cities with over one million residents.

#1 in Russia

Transport Infrastructure Development Dimensions



Transport Development Index



Moscow transport system as seen by researchers and experts

McKinsey&Company

www.mckinsey.com

ELEMENTS OF SUCCESS: THE URBAN TRANSPORT SYSTEMS OF 24 GLOBAL CITIES

An independent research by McKinsey & Company covering the urban transport systems of 24 cities across the globe. The benchmarking is based on a comprehensive set of objective indicators and detailed analyses of residents' satisfaction with their local public transport.

Research findings about Moscow

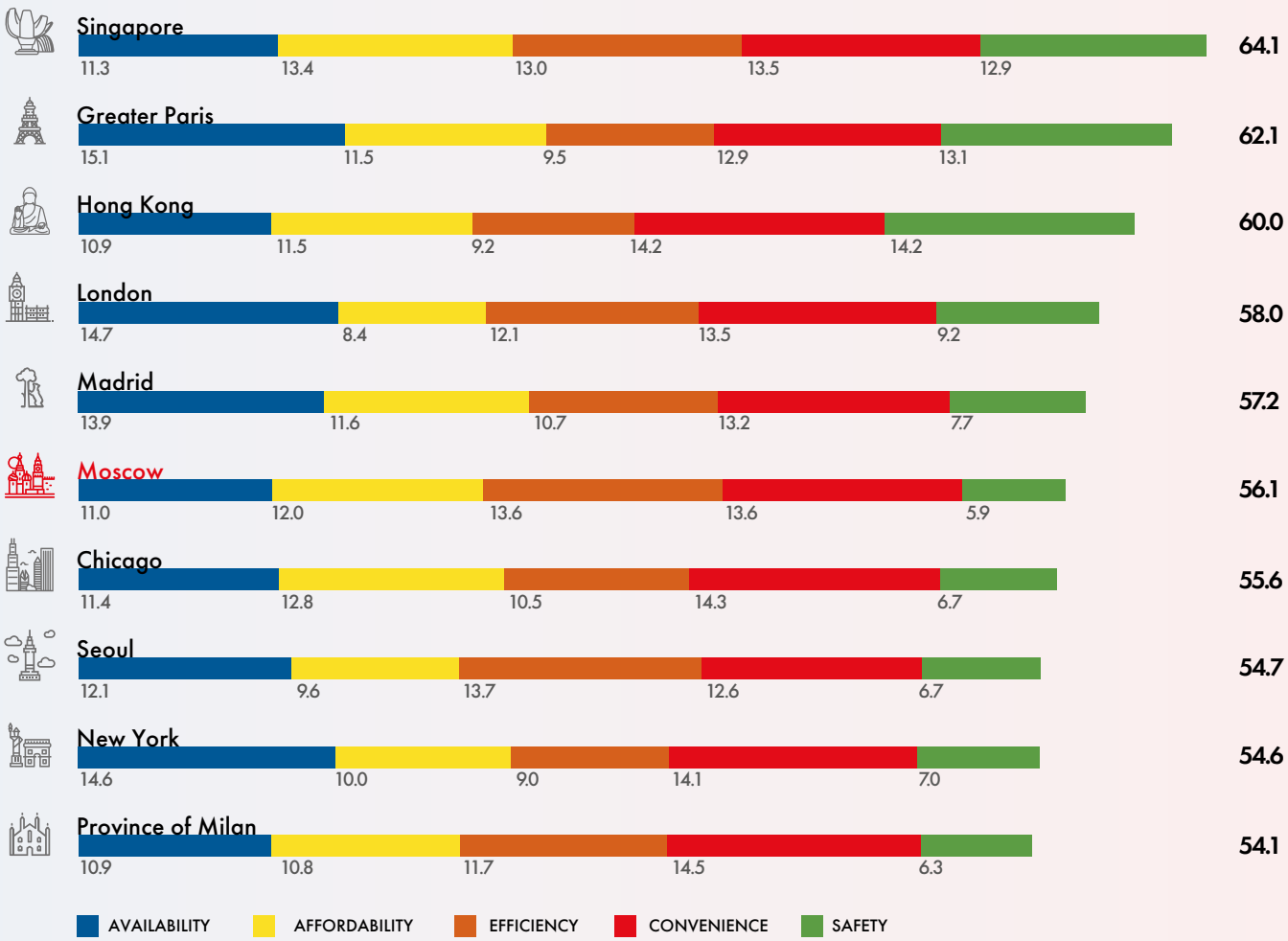
The comprehensive benchmarking ranks Moscow 6th in the world among 24 cities, on the level of London, Madrid, Chicago, and Seoul.

Our city demonstrates the highest rate of improvement – in 2010, it would have been ranked 20th among large cities in developing countries.

In public transport ranking, Moscow is positioned 4th, behind only Hong Kong, Singapore, and the Greater Paris region.

#6 globally

Overall transport ranking by objective indicators



Learn more about the research findings

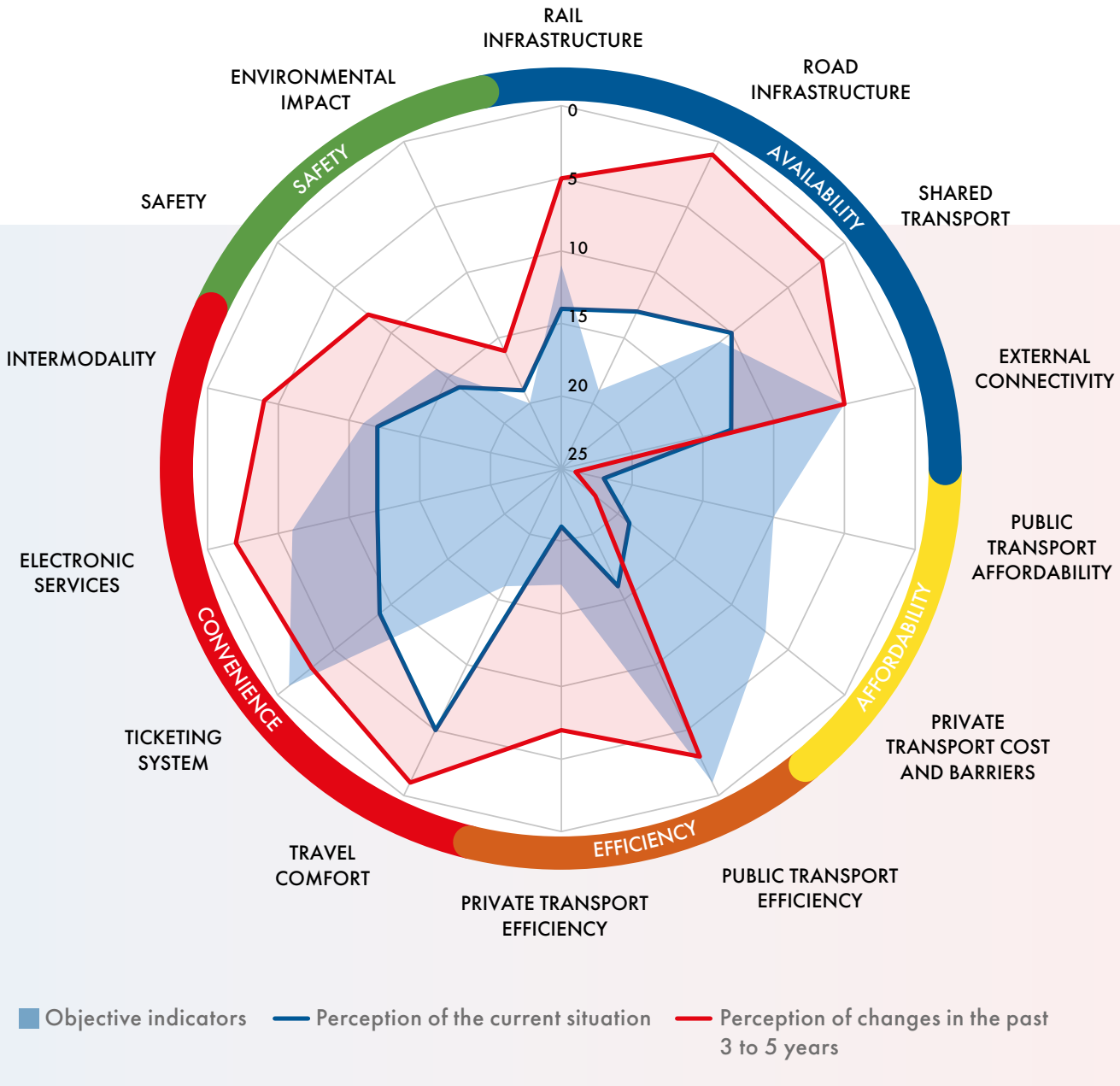
Moscow residents' perception of Moscow public transport

Muscovites highly appreciate changes to their public transport in recent years, although their level of satisfaction is still generally lower than that of residents in other leading cities.

The satisfaction is highest for travel comfort, convenience of the ticketing system, electronic services, and intermodality, as well as the availability of shared transport.

Moscow residents' perception towards the improvements in private transport efficiency and environmental impact is fair overall, but they generally undervalue achievements in affordability and efficiency of their public transport system.

Moscow rankings by selected metrics



Moscow's transport system as seen by researchers and experts

TOMTOM

www.tomtom.com

TOMTOM TRAFFIC INDEX (2018)

TomTom, a global manufacturer of personal navigation devices, publishes an annual ranking of cities by congestion levels, covering almost 400 cities across six continents.

Research findings about Moscow traffic

After a peak in 2012, Moscow's traffic congestion level declined by 25%.

According to a momentum case for the city's road infrastructure, Moscow's road congestion without a transport strategy would have increased 26% [1] by 2018.

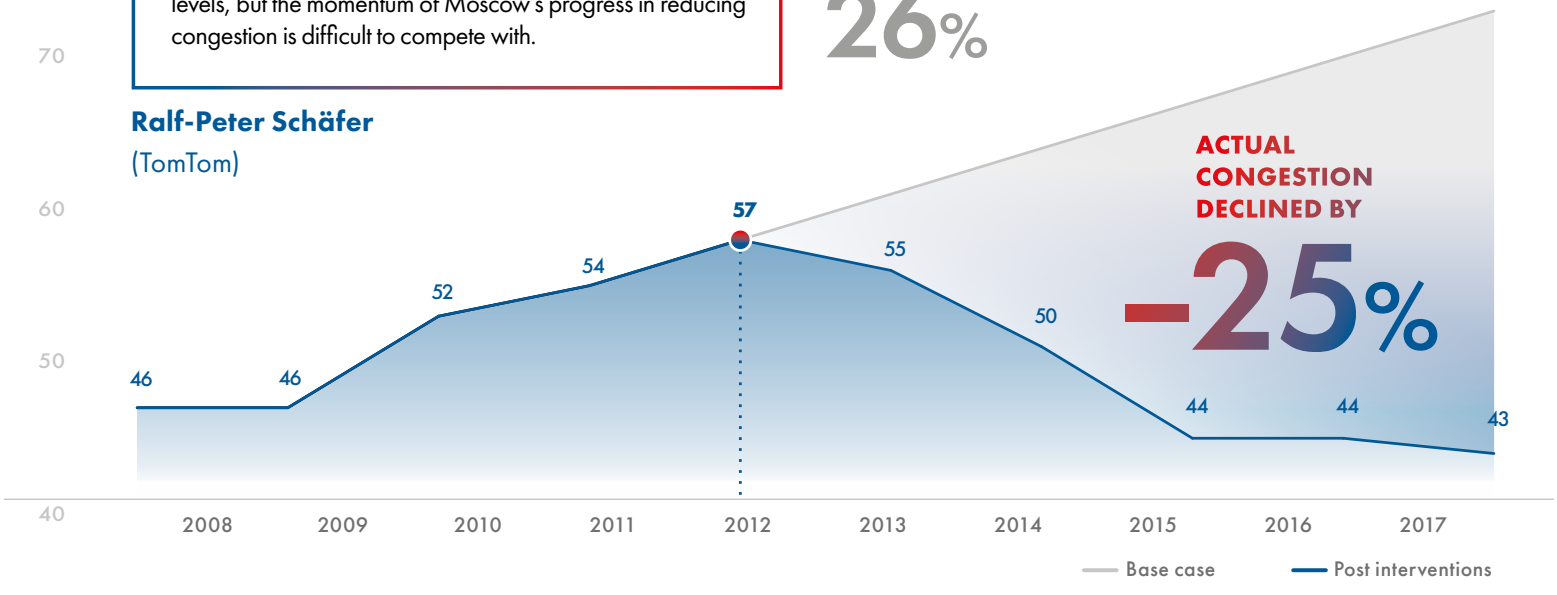
The overall level of traffic congestion in Moscow declined by 1% year-on-year in 2017 to 43%.

Evening rush hour congestion declined from 94% in 2016 to 91% in 2017.

Many cities are working to improve their traffic congestion levels, but the momentum of Moscow's progress in reducing congestion is difficult to compete with.

Ralf-Peter Schäfer
(TomTom)

Extra travel time due to traffic jams, %



DRIVERS AT PLAY

- Large-scale construction of new roads, interchanges, and metro stations
- Introduction of integrated traffic management
- Improvements to public transport performance
- Public transport movement control
- Intelligent Transport System
- Unified parking system

1 Forecast by the Traffic Management Centre.

Learn more about the findings of TomTom's research

Learn more about the findings of PwC's research

pwc

www.pwc.ru/en

HUMAN DIMENSION IN THE URBAN ENVIRONMENT (2018)

The research considers the quality of life and consumption of resources in 14 global cities and is based on spatial and statistical analyses, as well as a survey that covered 7,000 respondents (about 500 respondents in each city). Six indicators were used to compare levels of public transport infrastructure development and the day-to-day availability of different modes of transport.

Research findings about Moscow transport

Due to its balanced transport development approach, Moscow is ranked among the top 3 cities, just behind large cities in the United States.

Moscow's ranking by the integral index places it among the leading cities for transport infrastructure convenience.

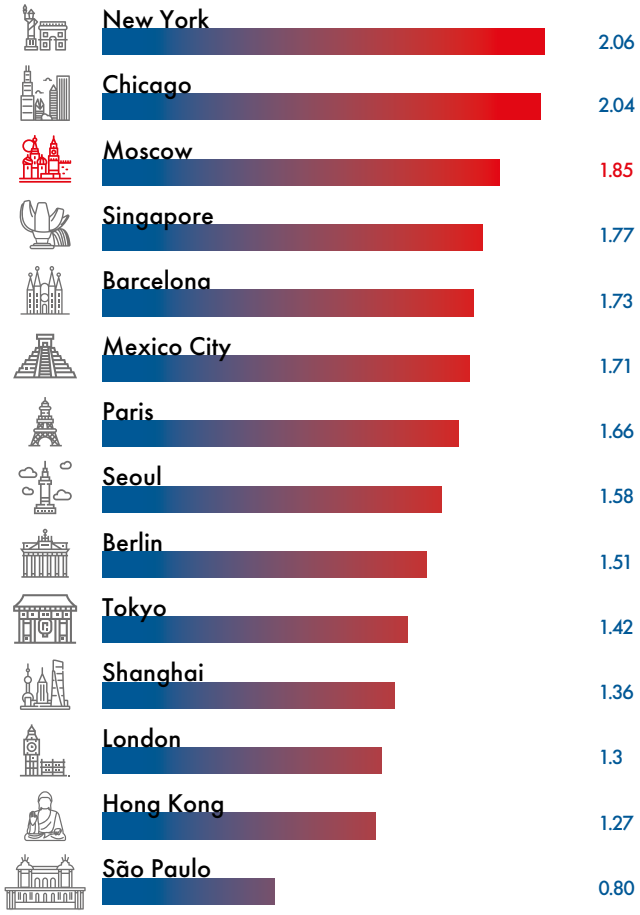
#3 globally

Moscow's key advantages compared to other cities

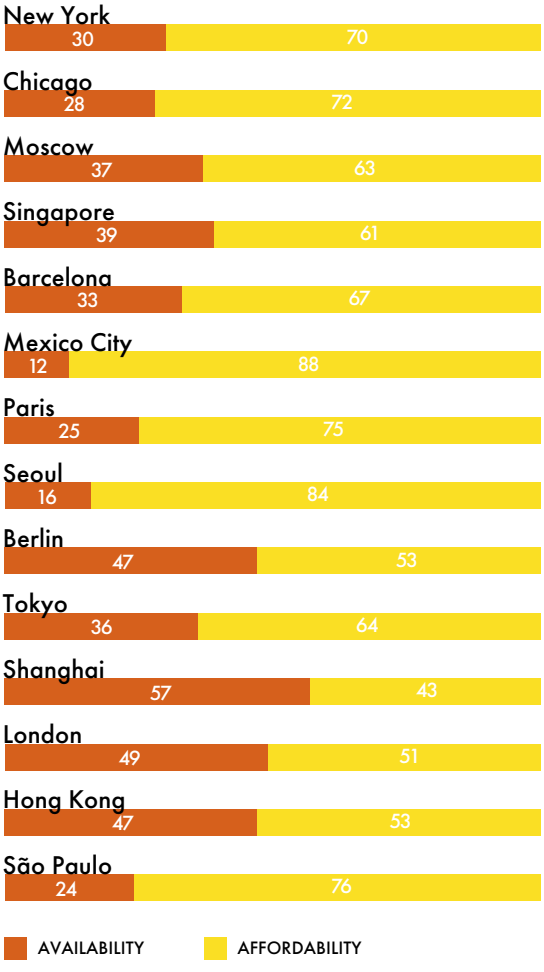
AFFORDABILITY

MULTIMODALITY

Overall score



Indicator weight in overall score



Awards

Paid parking system

2010–2015

BRITISH DESIGN & ART DIRECTION (D&AD) UK
dandad.org

The custom Moscow Sans font for the Moscow wayfinding system

★ **WIRELESS BROADBAND ALLIANCE** Singapore
awards.wirelessglobalcongress.com

Best Wi-Fi Deployment in a City or Public Area (Free Wi-Fi in Moscow Metro)

★ **PEOPLE'S CHOICE BRAND AWARDS** Russia
narodnayamarka.ru

The universal Troyka travel card

2016

SUSTAINABLE TRANSPORT AWARD USA
staward.org

Moscow received honorable mention in recognition of visionary achievements in sustainable transport and urban mobility.

INTERNATIONAL TRANSPORT FORUM France
www.itf-oecd.org

At the summit of the International Transport Forum, an intergovernmental organisation with 59 member countries, Moscow was awarded the Transport Achievement Award in Leipzig, Germany, for its exemplary approach to improving traffic conditions, including the launch of its Unified Parking System, development of public transport, innovative ticketing system, and development of cycling infrastructure, car sharing and other initiatives. The ITF jury recognised the "impressive achievement in improving the overall traffic conditions in Moscow" and "the effectiveness of consistent, coordinated initiatives and transport policy actions that facilitated the remarkable change".

Magistral route network

Moscow Central Circle

2017

UITP 9-12 JUNE STOCKHOLM 2019 GLOBAL PUBLIC TRANSPORT SUMMIT

★ **UITP** Belgium

uitpsummit.org

Moscow was awarded a special recognition at the 62nd Global Public Transport Summit for the comprehensive development of its transport system, particularly:

- integrated urban transport policy
- extension and modernisation of the Moscow Metro network
- upgrade of the surface transport network

> *In the last five years, Moscow has gone through an upgrade of its surface transport network, an extension and modernisation of its metro network, and the reconstruction and completion of the Moscow Central Circle. The Unified Parking System, launch of a cycling infrastructure, and introduction of pedestrian zones are also part of Moscow's achievements.*
>
> **UITP**

TOMTOM

★ **TOMTOM** Netherlands

www.tomtom.com

In 2016, Moscow became the TomTom Traffic Index Parking Award winner. Historically a city renowned for appalling traffic congestion, Moscow's drivers have benefited from the implementation of a new intelligent transport system, combined with major changes in parking policy.

> *The advanced parking management system established across Moscow helped reduce the time spent searching for parking by 65% and had a significant effect on reducing congestion.*
>
> **TomTom**

SUSTAINABLE TRANSPORT AWARD

★ **SUSTAINABLE TRANSPORT AWARD** USA

staward.org

Moscow was awarded an honourable mention for the reorganisation of city space, improved pedestrian environment, and the launch of the Magistral route network and the Moscow Central Circle.

Current and future mega projects

HOW DO YOU IMAGINE THE CITY OF TOMORROW?

Moscow Central Diameters

For details, see page 38

Metro and MCC

For details, see page 42

Roads

For details, see page 52

Surface transport

For details, see page 56

Rolling stock

For details, see page 66

2018 FIFA World Cup

For details, see page 76

Digitalisation

For details, see page 80

Moscow Central Diameters

Mega project for the immediate future

Suburban train diameter routes will connect radial routes and offer higher quality transport services for 8.2 million residents of Moscow and the Moscow Region. The first two diameters will be launched in 2019–2020.

MOSCOW CENTRAL DIAMETERS – THE SURFACE METRO FOR MOSCOW AND THE MOSCOW REGION

All over the world, suburban trains are becoming part of the metro system. We have a similar vision. Our plan is to build cross-cutting diameters lines, enabling suburban commuters to transit through the entire city without exiting at railway stations, travelling with the same speed, frequency, and comfort that the metro offers and with the same ticket used for both the metro and suburban train.

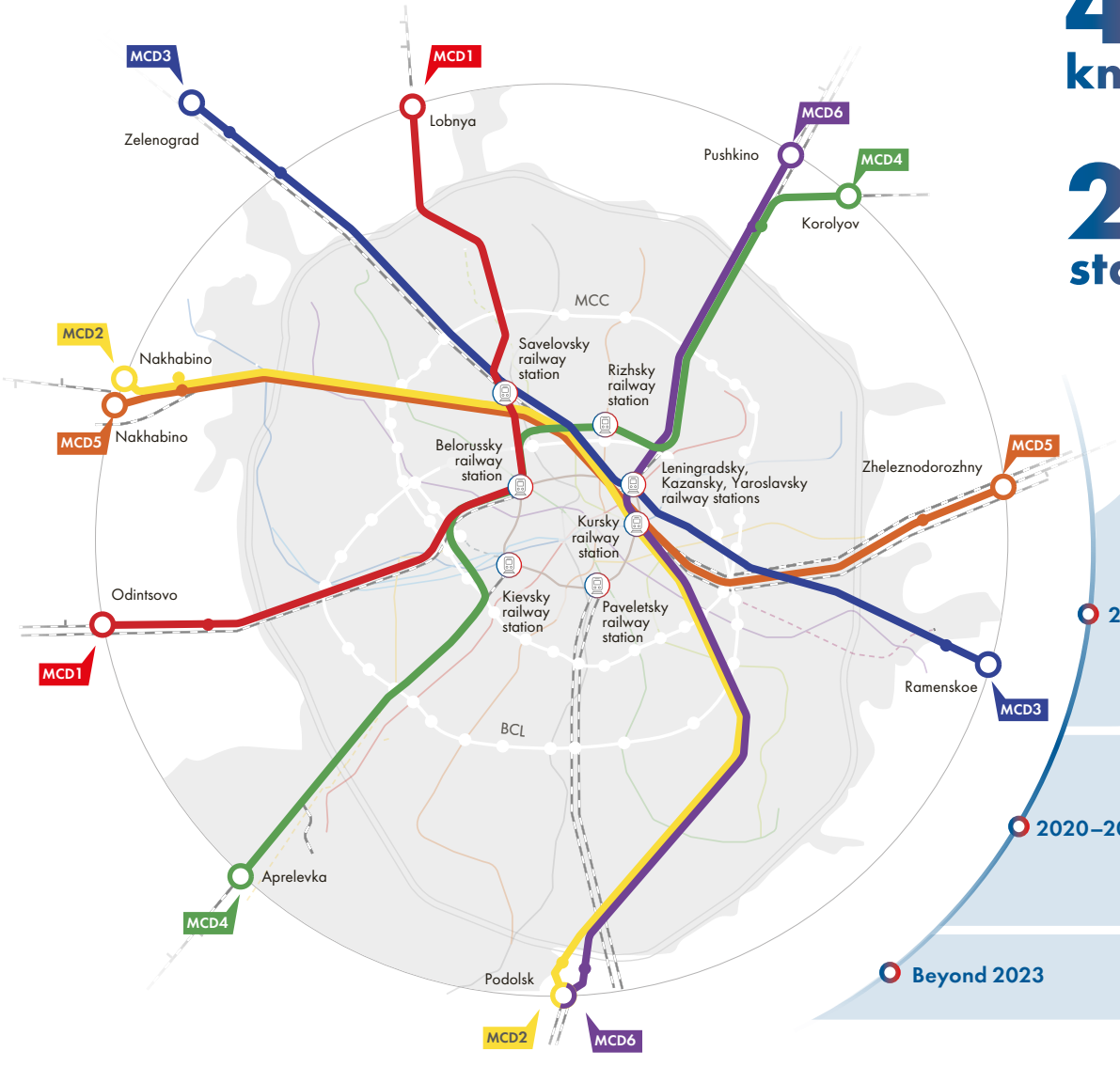
Sergei Sobyanin
Moscow Mayor

MCDs – THE SURFACE METRO FOR MOSCOW AND THE MOSCOW REGION

The project will be jointly implemented by the Ministry of Transport of the Russian Federation, JSC RZD (Russian Railways), the Moscow Government, the Moscow Region Government, and the passenger carrier JSC Central Exurban Passenger Company.

446 km

211 stations



2019–2020

2020–2023

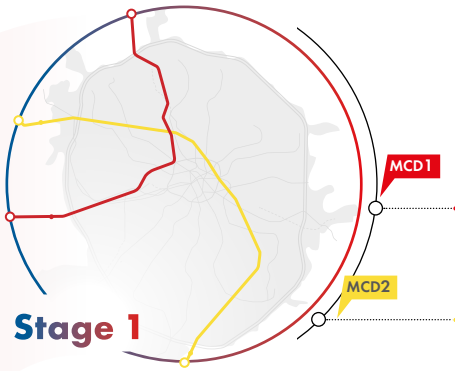
Beyond 2023

MCD FEATURES[1]

	Length, km	Stations	Transfer points	Passenger traffic, mln passengers per year	Passenger seats, thousand per day

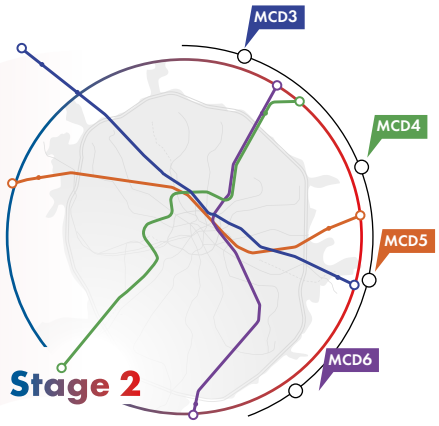
The first stage involves the establishment of two MCD routes:

- **MCD1:** Smolensko-Savelovsky (Odintsovo – Lobnya)
- **MCD2:** Kursko-Rizhsky (Nakhabino – Podolsk)



Stage 1

MCD1	52	28	12	42.9	403
MCD2	80	38	15	48.6	486
Total	**132**	**66**	**27**	**91.5**	**889**



Stage 2

- **MCD3** Zelenograd – Ramenskoe
- **MCD4** Korolyov – Aprelevka
- **MCD5** Nakhabino – Zheleznodorozhny
- **MCD6** Pushkino – Podolsk

What are the benefits of MCDs?

- **A twofold** reduction in travel time
- Improved railway infrastructure service for **8.2 million people**
- **About 2.28 million** additional passenger seats per day
- **5%** to **10%** reduction in the metro load
- **25%** reduction in railway terminals' load
- **6-minute** intervals between trains during peak hours
- **5:30 am–01:00 am** – the same operating hours as the metro and MCC

- Transfers to urban transport
- Comfortable trains
- User-friendly navigation
- Payment with the Troyka card
- No afternoon break in the train schedule

Stage 3

- **Other potential MCDs**

Detailed map

1 Preliminary estimates.

Unprecedented metro and MCC development rates

The Moscow metro is being built at an unprecedented rate. Over 88% of the capital's residents now live within access of metro stations via public transport (compared with 70% in 2010). By 2023, new metro lines and stations will come to remote districts with low transport availability.

Moscow metro

#1 globally

in network development rates

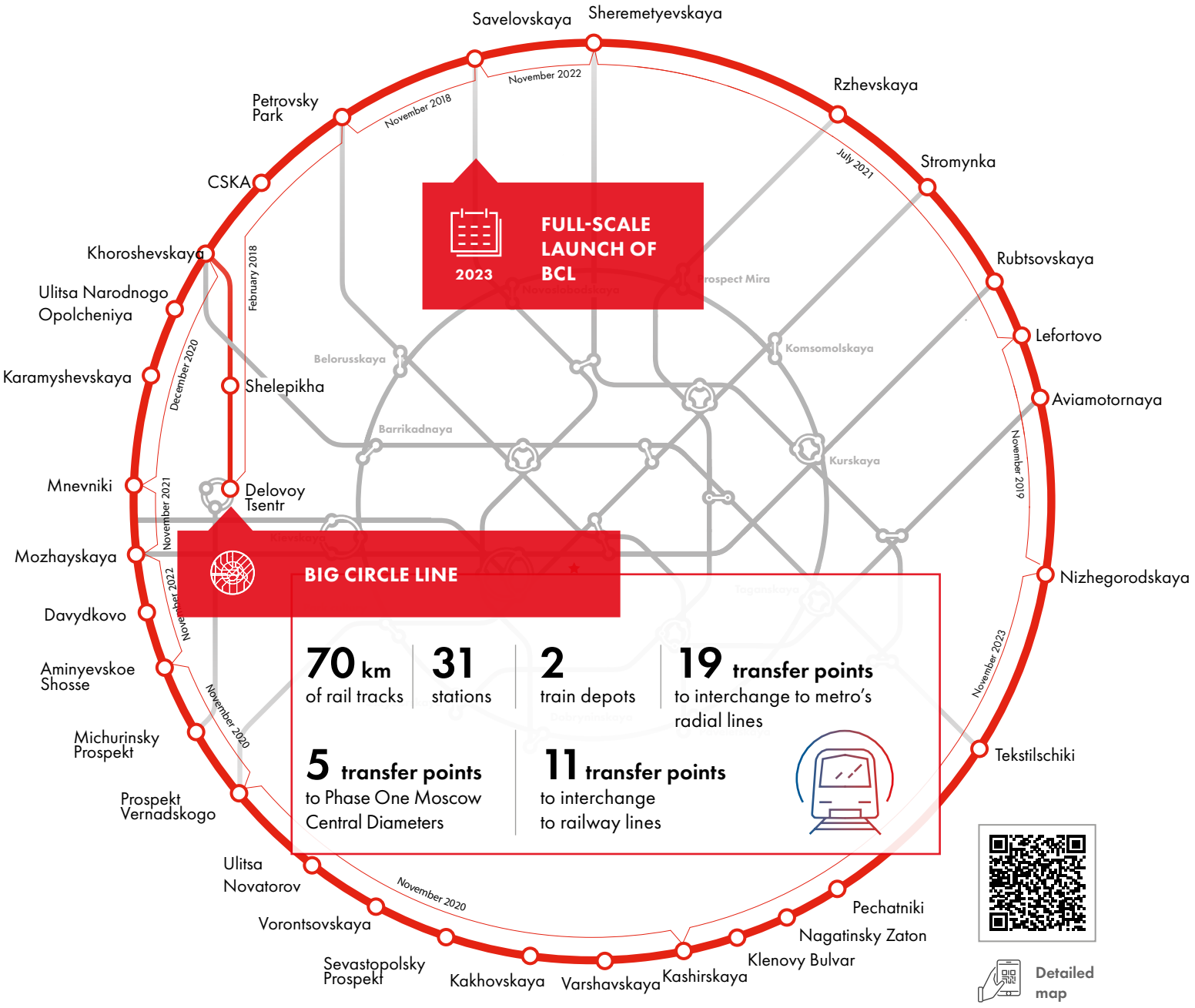
8.9 mln people

daily passengers

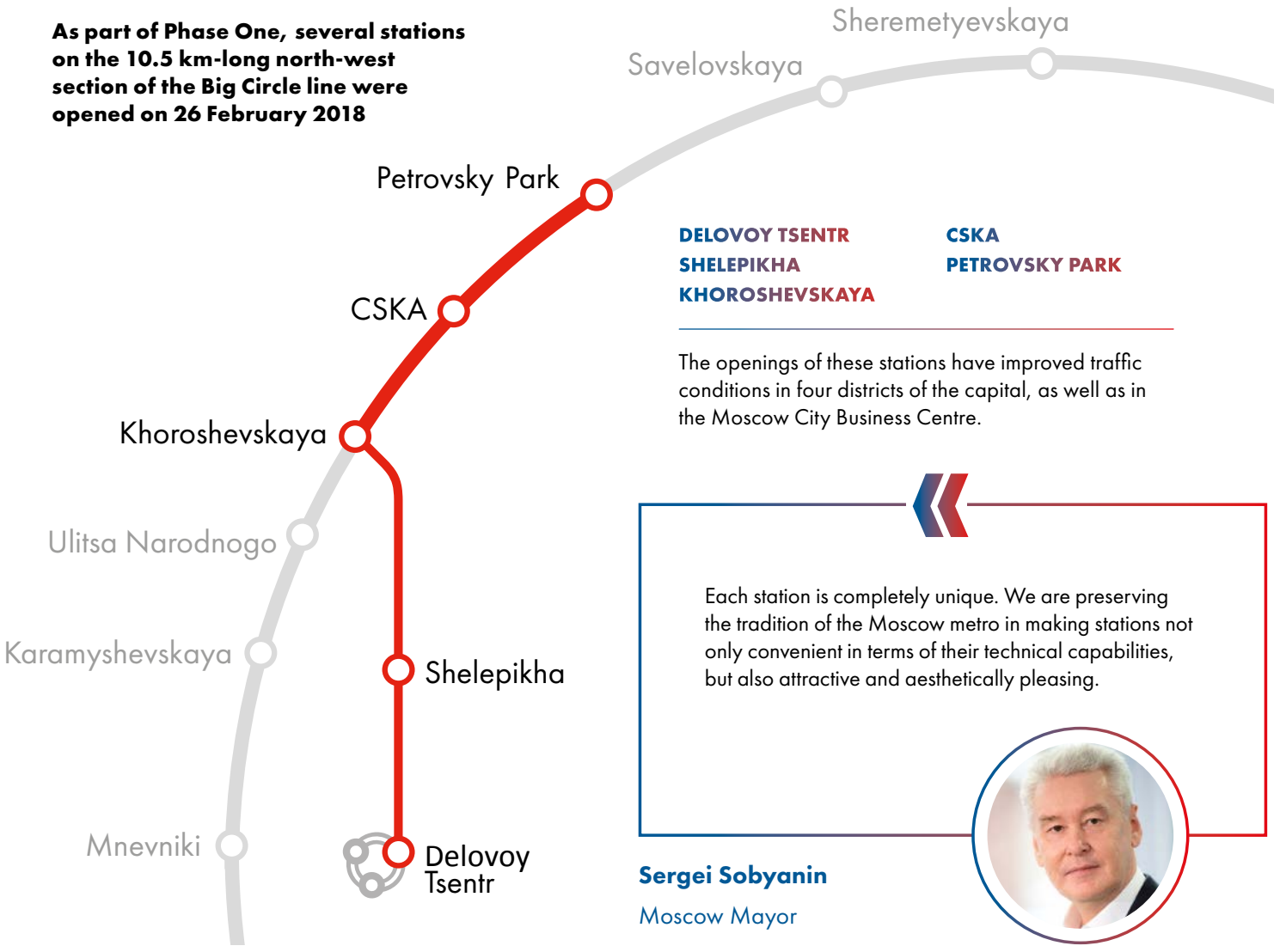
METRO'S BIG CIRCLE LINE

Moscow Metro

The Big Circle line (BCL) is the largest project in the entire history of metro construction in Russia. Once completed, it will be the longest metro circle line in the world, ahead of the second loop line of the Beijing subway (57 km).



As part of Phase One, several stations on the 10.5 km-long north-west section of the Big Circle line were opened on 26 February 2018

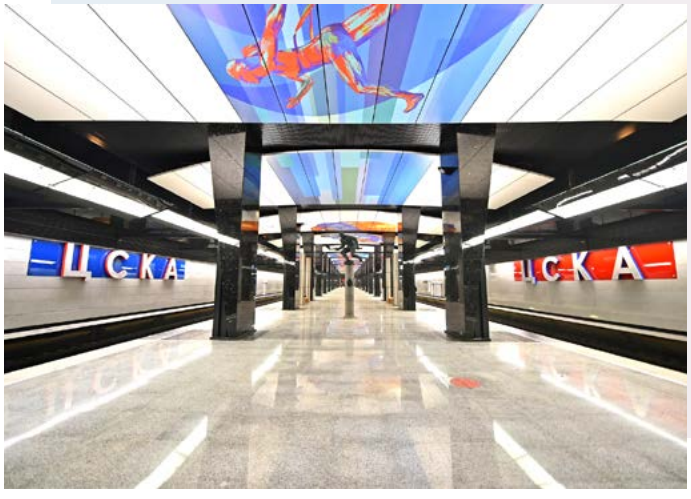


DELOVOY TSENTR
SHELEPIKHA
KHOROSHEVSKAYA
CSKA
PETROVSKY PARK

The openings of these stations have improved traffic conditions in four districts of the capital, as well as in the Moscow City Business Centre.

Each station is completely unique. We are preserving the tradition of the Moscow metro in making stations not only convenient in terms of their technical capabilities, but also attractive and aesthetically pleasing.

Sergei Sobyanin
Moscow Mayor



Most of the stations on the Big Circle line will be low-depth, enabling passengers to descend to the train and exit at their destination more quickly. Travel times will be reduced.

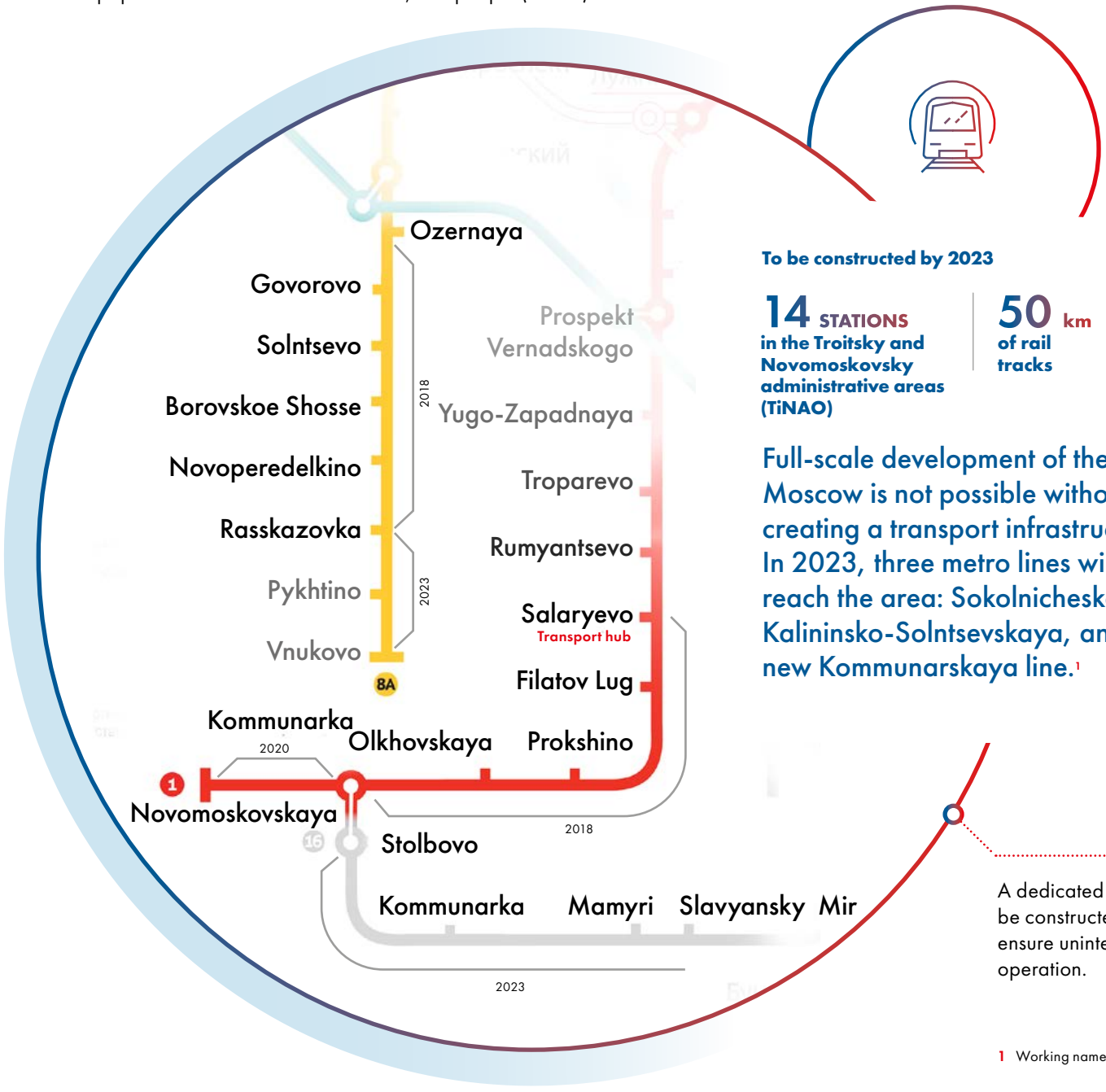
Source: Moscow Complex of Urban Planning Policy and Construction.

THE METRO TO NEW MOSCOW

Moscow Metro

In July 2012, Moscow expanded 2.4 times when the current Troitsky and Novomoskovsky administrative areas became part of the city.

At the time of incorporation, the areas that became part of the new territory of Moscow (so-called «New Moscow») had fewer than 250,000 permanent residents, while at present their population has reached almost 340,000 people (+ 36%).



To be constructed by 2023

14 STATIONS in the Troitsky and Novomoskovsky administrative areas (TiNAO)

50 km of rail tracks

Full-scale development of the New Moscow is not possible without creating a transport infrastructure. In 2023, three metro lines will reach the area: Sokolnicheskaya, Kalininsko-Solntsevskaya, and the new Kommunarskaya line.[1]

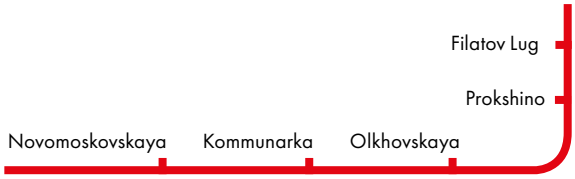
A dedicated depot will be constructed here to ensure uninterrupted train operation.

1 Working name.

Sokolnicheskaya line

Sokolnicheskaya was the first metro line to extend to the New Moscow. Currently, two stations are operating in that area, Rumyantsevo and Salaryevo, opened in 2016.

Four more stations on the Sokolnicheskaya line are to be constructed in the Troitsky and Novomoskovsky administrative areas (TiNAO) by the end of 2018. Novomoskovskaya station is scheduled for opening in 2022.




Govorovo station

1st

metro line to be extended to New Moscow

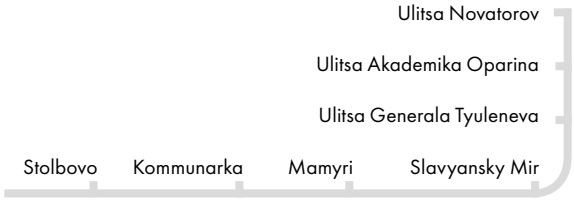

Olkhovskaya station

Kalininsko-Solntsevskaya line

A new radial line, Solntsevskaya, at 10 km long, was launched in 2017 and connected five stations between Delovoy Tsentr and Ramenki. Going forward, this line will extend to Vnukovo airport, which will be the first airport in Moscow with its own metro station.

Kommunarskaya line[1]

A projected radial line extending from the Big Circle line to the Novomoskovsky administrative area, as well as to a planned administrative and business centre in the settlement of Kommunarka. The first section will be 15.6 km long and will include the following stations:



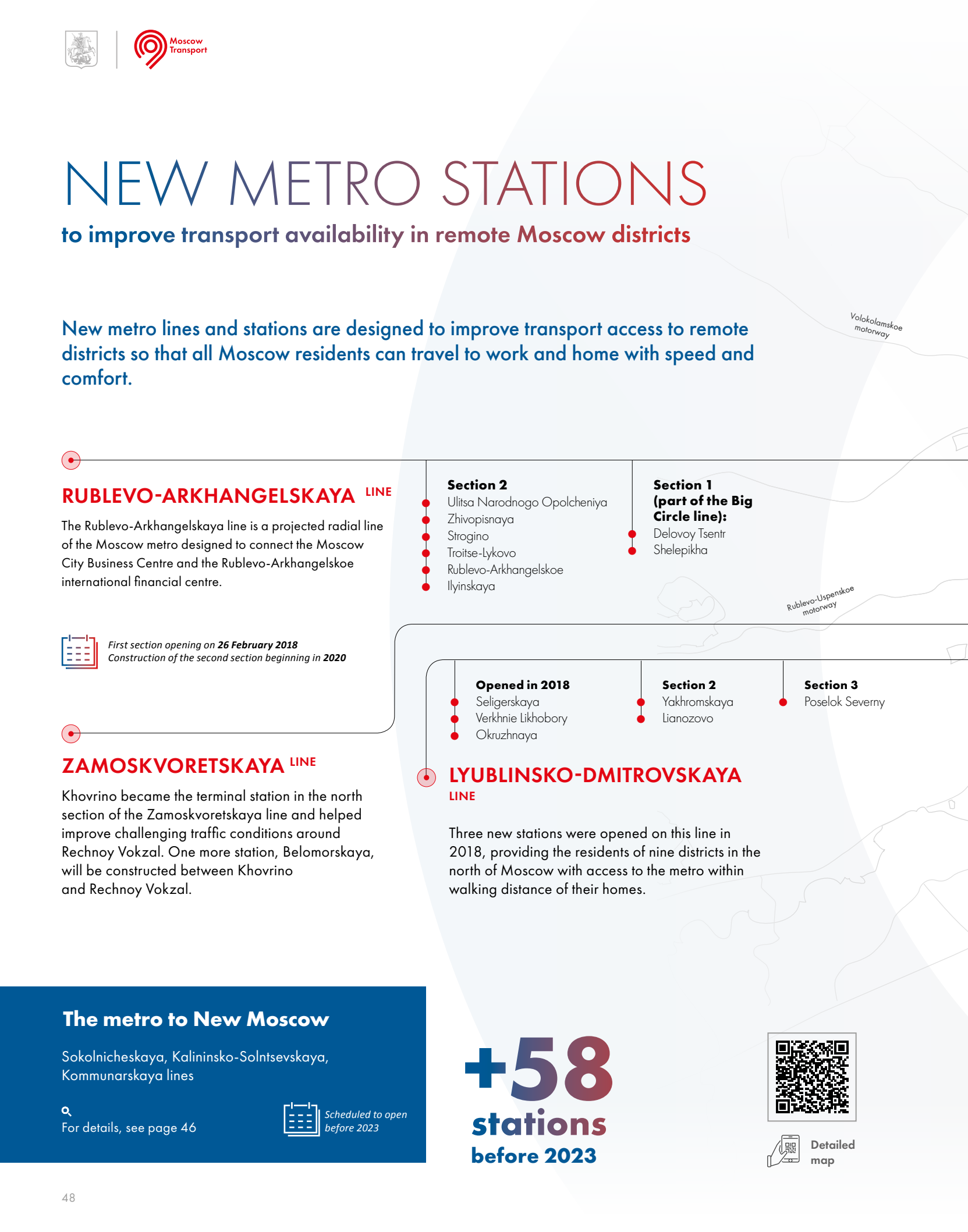

Kommunarskaya line

Source: Moscow Complex of Urban Planning Policy and Construction.

NEW METRO STATIONS

to improve transport availability in remote Moscow districts

New metro lines and stations are designed to improve transport access to remote districts so that all Moscow residents can travel to work and home with speed and comfort.



RUBLEVO-ARKHANGELSKAYA LINE

The Rublevo-Arkhangelskaya line is a projected radial line of the Moscow metro designed to connect the Moscow City Business Centre and the Rublevo-Arkhangelskoe international financial centre.

*First section opening on **26 February 2018***
*Construction of the second section beginning in **2020***

Section 2
- Ulitsa Narodnogo Opolcheniya
- Zhivopisnaya
- Strogino
- Troitse-Lykovo
- Rublevo-Arkhangelskoe
- Ilyinskaya

Section 1 (part of the Big Circle line):
- Delovoy Tsentr
- Shelepikha

ZAMOSKVORETSKAYA LINE

Khovrino became the terminal station in the north section of the Zamoskvoretskaya line and helped improve challenging traffic conditions around Rechnoy Vokzal. One more station, Belomorskaya, will be constructed between Khovrino and Rechnoy Vokzal.

LYUBLINSKO-DMITROVSKAYA LINE

Three new stations were opened on this line in 2018, providing the residents of nine districts in the north of Moscow with access to the metro within walking distance of their homes.

Opened in 2018
- Seligerskaya
- Verkhnie Likhobory
- Okruzhnaya

Section 2
- Yakhromskaya
- Lianozovo

Section 3
- Poselok Severny

The metro to New Moscow

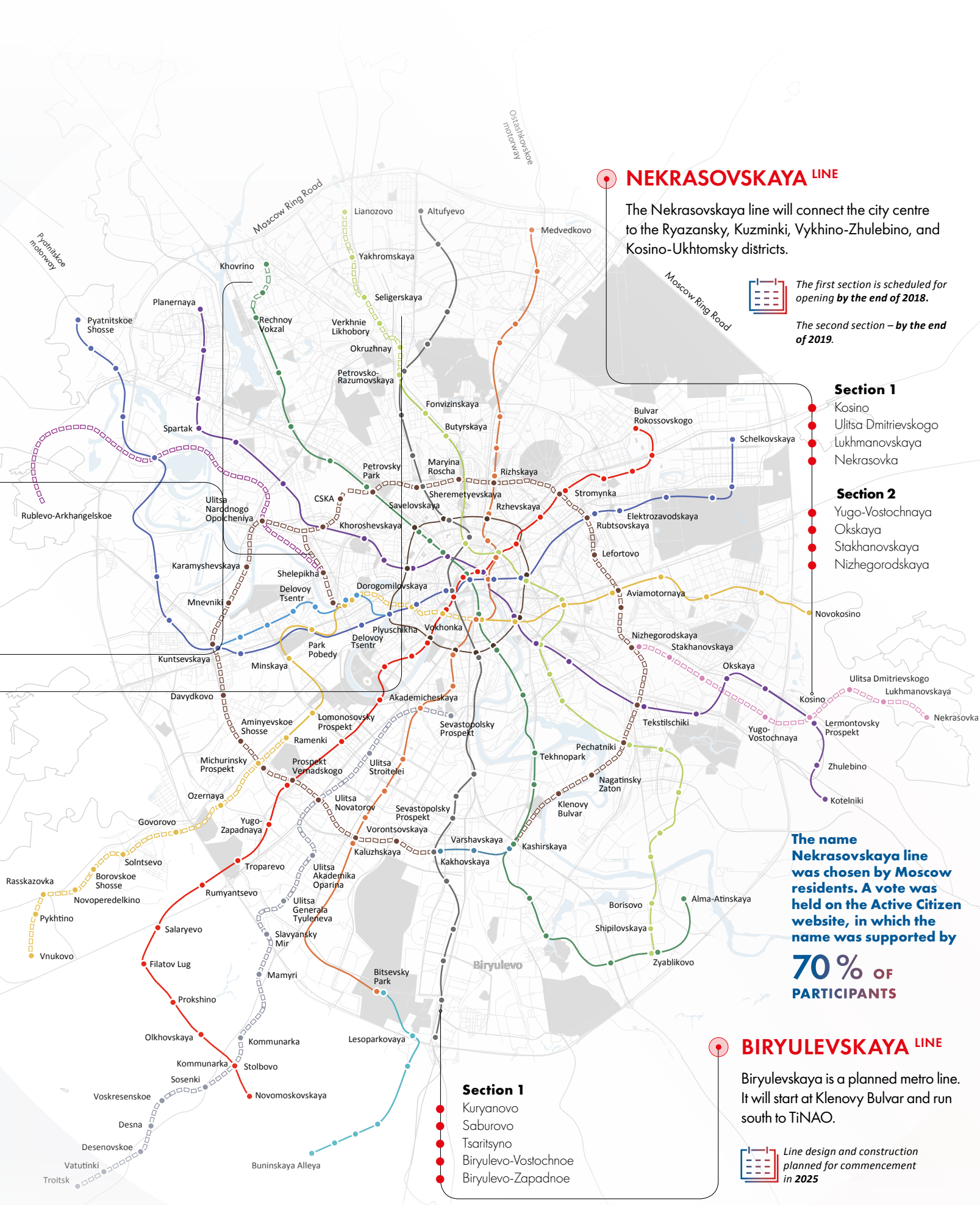
Sokolnicheskaya, Kaliningsko-Solntsevskaya, Kommunarskaya lines

For details, see page 46

Scheduled to open before 2023

+58 stations before 2023

Detailed map



NEKRASOVSKAYA LINE

The Nekrasovskaya line will connect the city centre to the Ryazansky, Kuzminki, Vykhino-Zhulebino, and Kosino-Ukhtomsky districts.

*The first section is scheduled for opening **by the end of 2018.***

*The second section – **by the end of 2019**.*

Section 1
- Kosino
- Ulitsa Dmitrievskogo
- Lukhmanovskaya
- Nekrasovka

Section 2
- Yugo-Vostochnaya
- Okskaya
- Stakhanovskaya
- Nizhegorodskaya

The name Nekrasovskaya line was chosen by Moscow residents. A vote was held on the Active Citizen website, in which the name was supported by

70 % OF PARTICIPANTS

BIRYULEVSKAYA LINE

Biryulevskaya is a planned metro line. It will start at Klenovy Bulvar and run south to TiNAO.

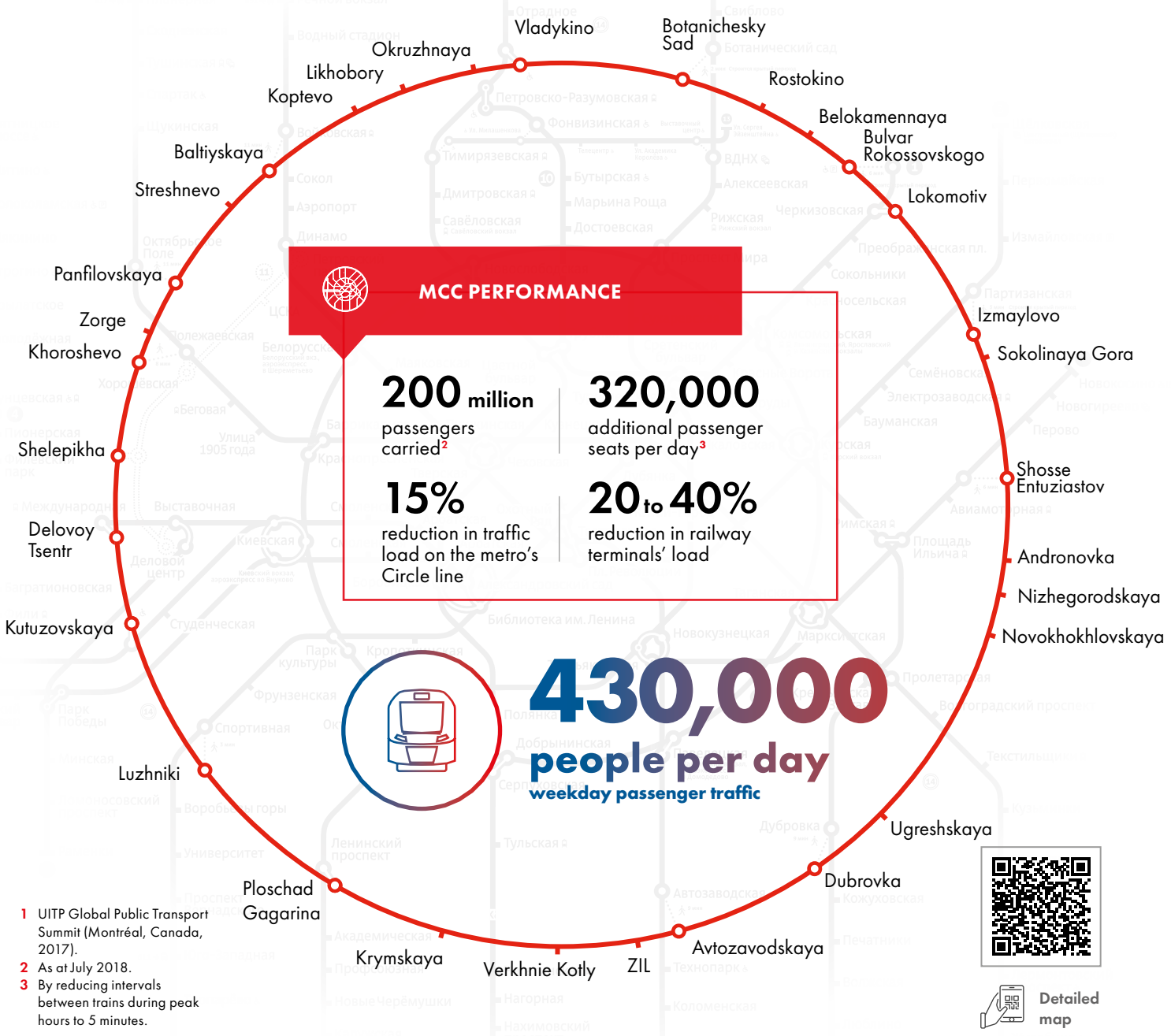
*Line design and construction planned for commencement in **2025***

Section 1
- Kuryanovo
- Saburovo
- Tsaritsyno
- Biryulevo-Vostochnoe
- Biryulevo-Zapadnoe

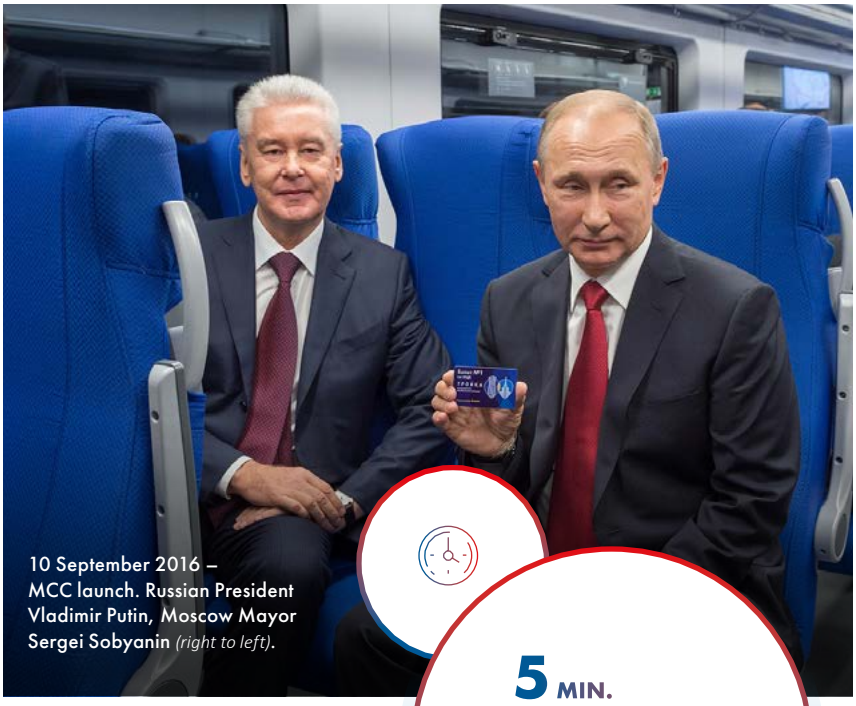
Source: Moscow Complex of Urban Planning Policy and Construction.

MOSCOW CENTRAL CIRCLE

The Moscow Central Circle (MCC) is a mega project by the Moscow Government and Russian Railways. It began carrying passengers in September 2016 and improved transport availability in 26 Moscow districts. MCC is recognised as the world's best passenger transportation project of 2017[1].



1 UITP Global Public Transport Summit (Montréal, Canada, 2017).
2 As at July 2018.
3 By reducing intervals between trains during peak hours to 5 minutes.



10 September 2016 – MCC launch. Russian President Vladimir Putin, Moscow Mayor Sergei Sobyanin *(right to left)*.

5 MIN.
interval between trains during peak hours (reduction to 4 min. is planned)

MCC's length

54 km

31 stations

19 transfer points
to the metro (+ 1 in the future)

6 transfer points
to interchange to suburban rail transport (+ 4 in the future)

31 transfer points
with transfers to surface transport

Special attention is paid to MCC's accessibility to reduced mobility passengers

19
special lifts
at 11 transport hubs

A dedicated ticket office at each station

Pay gates widened to allow wheelchair access

Tactile tiles at all stations

An ambitious road construction and reconstruction programme

Over 40% of the budget allocated for the development of transport and road infrastructure in Moscow are spent on construction and reconstruction of the street and road network.

1,300 km

of new roads between 2011 and 2023

About 700 km

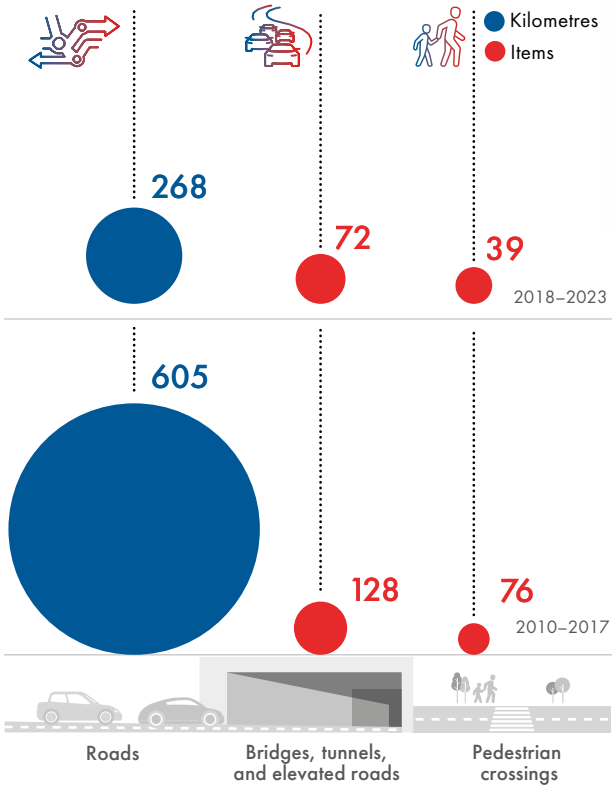
of roads constructed and reconstructed since 2011

MOSCOW'S NEW MOSCOW ROAD FRAMEWORK

DESIGN SCHEME

Detailed map

Road construction in Moscow is being carried out at record-breaking speed



Road construction

Four expressways running across Moscow, the Central Ring Road, and outbound motorways will collectively expand the road network of the capital and the Moscow metropolitan area by about 2,000 km. The underground and surface metro, along with new major roads, will shape Moscow's new, modern transport framework, radically transforming traffic conditions in the capital and the Moscow metropolitan area.

Sergei Sobyanin

Moscow Mayor

Development prospects

1,300 km
of new roads[1] between 2011 and 2023 (700 km completed)

530 km
of Central Ring Road by 2025: 34 interchanges and 278 bridges, overpasses, and elevated roads

200 km
of new roads for New Moscow

1 Construction and reconstruction of new and existing roads between 2011 and 2023.

Source: Moscow Complex of Urban Planning Policy and Construction.

New convenient surface transport

Surface transport is becoming increasingly more popular each year, and the passenger traffic is fast approaching that of the metro.

7.6 million trips

by surface transport per day

90 %

of land vehicles replaced

THE MAGISTRAL NETWORK

Magistral is a network of surface transport routes connecting the city centre to remote districts. Phase One of the network was launched in 2016, and Phase Two on 7 October 2017.

The new route network helped dramatically cut waiting times for buses in the city centre, from 16 minutes to 3–5 minutes, with 14.5 km of dedicated bus lanes introduced in Moscow's centre specifically for routes within the network. These initiatives have enabled fast and easy travel to and around the city centre by bus, trolleybus, or tram without any transfers.

Route types within the Magistral network

HIGH-FREQUENCY routes are the longest, connecting the city centre with residential districts. Frequency: 5–10 min.

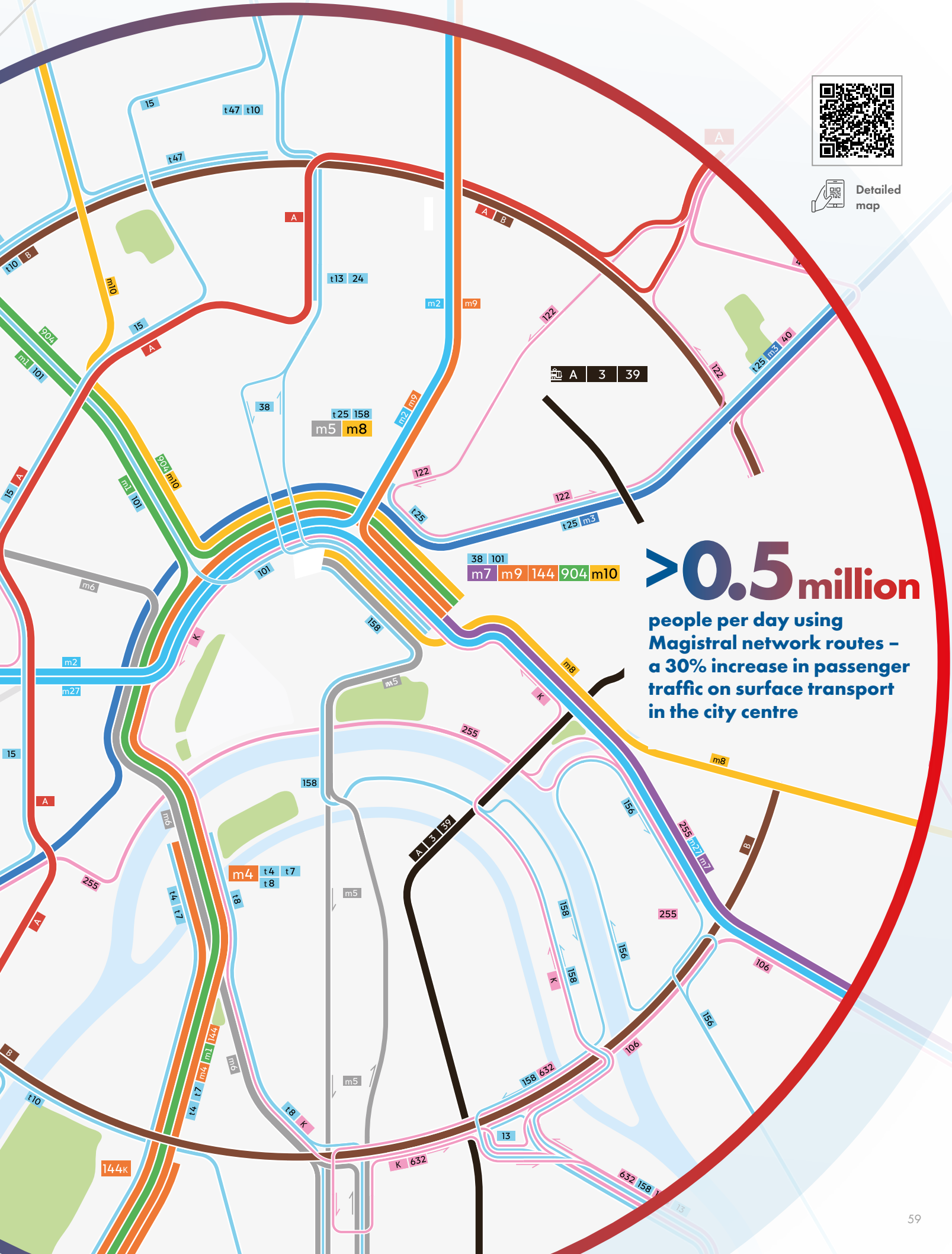
19 high-frequency routes

LOCAL routes are shorter and connect Moscow districts to the city centre. Frequency: 10–15 min.

16 local routes

SPECIALISED routes take passengers to social infrastructure facilities (hospitals, My Documents offices, etc.). Frequency: up to 30 min.

8 specialised routes


Detailed map
>0.5 million
people per day using Magistral network routes – a 30% increase in passenger traffic on surface transport in the city centre

NIGHT ROUTE NETWORK

The city centre never sleeps. Night-time surface transport routes connect the centre with Sheremetyevo airport and residential districts located close to the Moscow Ring Road. They allow Moscow residents to travel in the city as the rhythm of their lives requires.

Mosgortrans

4,920 PASSENGERS[1] carried each night

64 BUSES

5 TRAMS

287 km total length

12 BUS ROUTES

1 TRAM ROUTE (as at July 2018)

27% of the city covered by the night route network

15 min. on routes serving the Garden Ring

n1 m1 n6 n3 15 B n4 n7 n2 n5 3 308 n11

n11 n2 n1
m1 n6 n3
n5 n7 n4
3 15 308
B

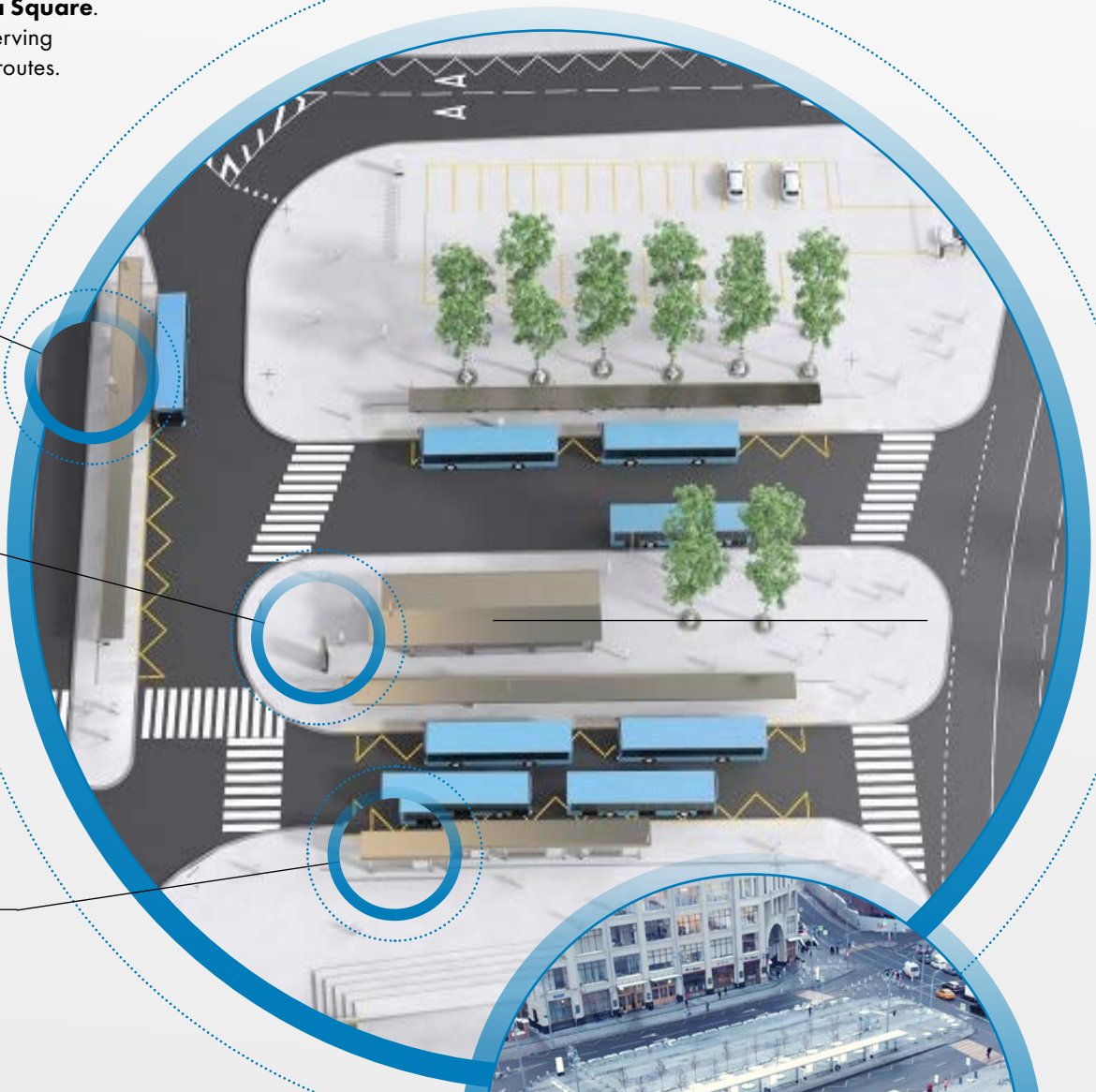
Detailed map

1 As at August 2018.

TRANSPORT HUB IN

SLAVYANSKAYA SQUARE

A major transport hub, Kitay-Gorod, has been set up **in Slavyanskaya Square**. It operates around the clock, serving 12 day routes and seven night routes.



- Sheltered waiting area

- Arrivals display
- Wi-Fi
- USB ports
- to charge mobile phones
- Specially-designed wayfinding pylons

- Numbered stops
- Signs
- Network map

160,000

daily passengers using routes originating at the Kitay-Gorod transport hub

DEDICATED LANES

Dedicated bus lanes prioritise public transport on the roads. They can also be used by school buses, ambulances and other emergency vehicles, cyclists, and registered taxis.[1]

Dedicated lanes enable passengers to reach any destination in Moscow faster and estimate their travel time more accurately. Reverse dedicated lanes are set up in some streets in the city centre – Solyanka, Bolshaya Lubyanka, Sretenka, and Vozdvizhenka, whereby passengers can exit on traffic islands with pedestrian crossings leading to both sides of the road.

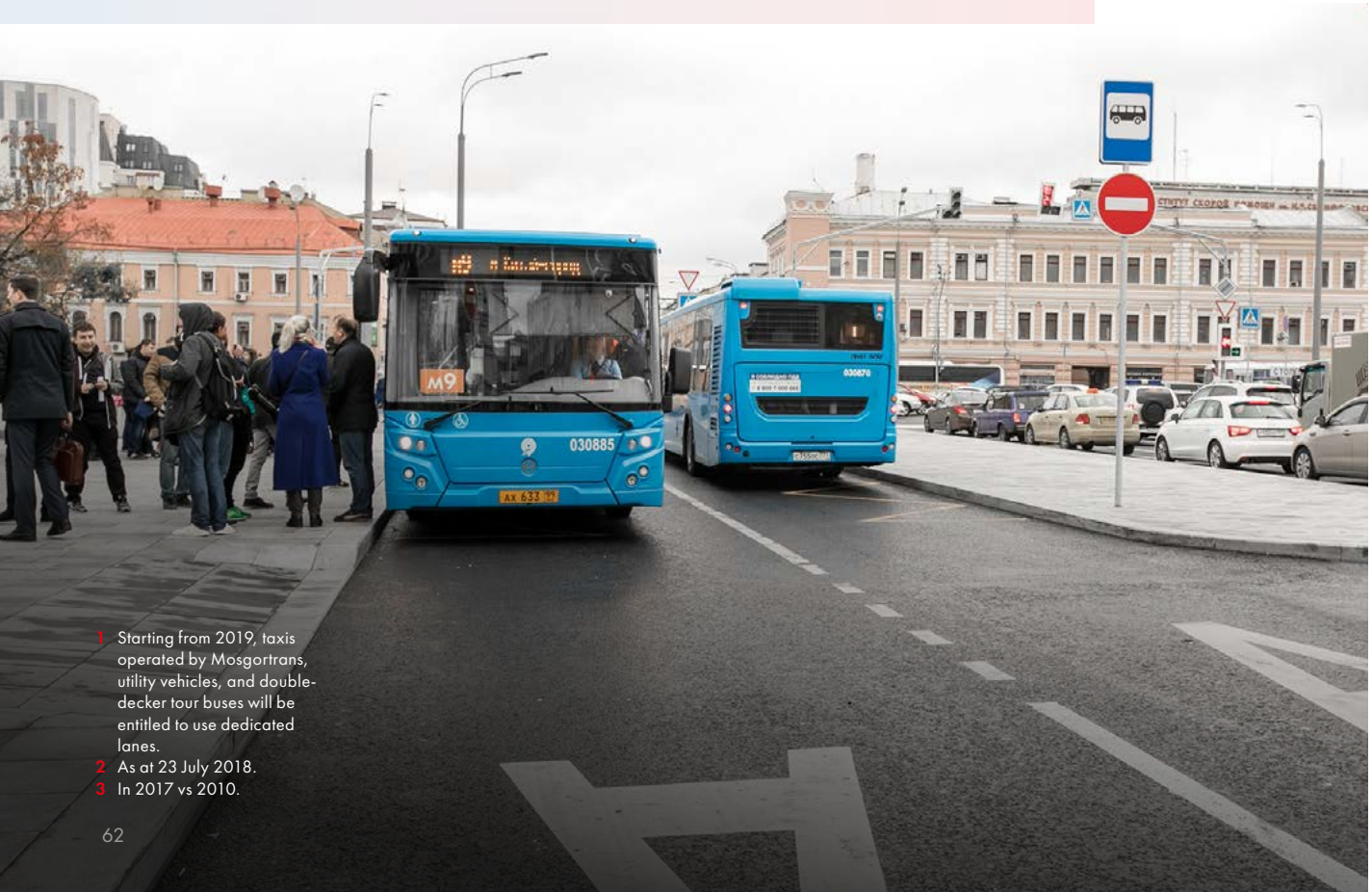
Improved public transport performance

290 km²
total length of the 43 lanes launched since 2011

+12%
passenger traffic increase on routes using dedicated lanes

+15%
increase in the speed of public transport

–30%[3]
road accidents involving surface public transport



1 Starting from 2019, taxis operated by Mosgortrans, utility vehicles, and double-decker tour buses will be entitled to use dedicated lanes.
2 As at 23 July 2018.
3 In 2017 vs 2010.

Over

2.8 million

trips per day in dedicated lanes

A SINGLE STANDARD OF SERVICE

for Moscow residents on surface public transport

Moscow pioneered a surface passenger transport reform in Russia to ensure high quality of passenger services.

Buses operated by commercial carriers can be small, medium-sized, or large depending on the passenger traffic on a particular route.

2,000

buses operated by commercial carriers serve 214 routes[1]

1 As at June 2018.

Improvements brought by the new model

- ☑ **New buses** introduced on all routes
- ☑ Fares are paid using a **unified ticketing system** providing reduced fares
- ☑ Vehicles are **Euro 5** compliant
- ☑ Service quality is **monitored by the Moscow Government**
- ☑ Buses are **wheelchair accessible**
- ☑ **Speed limits and traffic rules** are complied with
- ☑ **Air conditioning units** installed

From

To

About 1 million

daily passengers on commercial buses

Unified standard of quality, safety, and cost of surface passenger services

In the near future, the new transport management model will be extended to the New Moscow

22
new routes
operated under the new model will be launched in New Moscow

13
routes
will be launched by the end of 2018

9
routes
will be launched by the end of 2019

118
commercial buses
will be launched

For **254,000**
people
(76% of TiNAO residents) transport availability will improve

Record-high rolling stock and fleet replacement

Moscow has been consistently replacing its public transport rolling stock and fleets.

The goal is to shift to modern, fast, energy-efficient, environmentally friendly, comfortable, and inclusive vehicles.

Moscow

#1 globally

in terms of public transport rolling stock and fleet replacement rates

–20%
reduced maintenance costs due to life-cycle contracts[1]

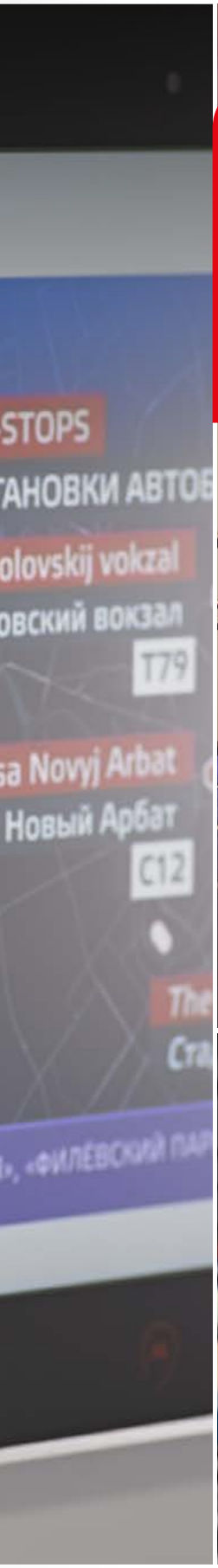
All rolling stock is Russia-made

Modes of transport	Delivered in 2010–2017 (actual)	Replaced in 2010–2017
Metro	**1,950** CARRIAGES	40%
Surface transport	**9,416** VEHICLES	90%
Suburban railways	**2,152** CARRIAGES	40%
Taxi[2]	**72,000** CARS	100%
Car sharing	**11,000** CARS	100%

1 These contracts provide for product procurement and subsequent maintenance and repair throughout each product life-cycle, as well as disposal if necessary.
2 Moscow and Moscow Region taxis operating in Moscow.

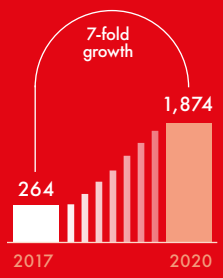
MOSKVA METRO TRAIN

Launched in April 2017

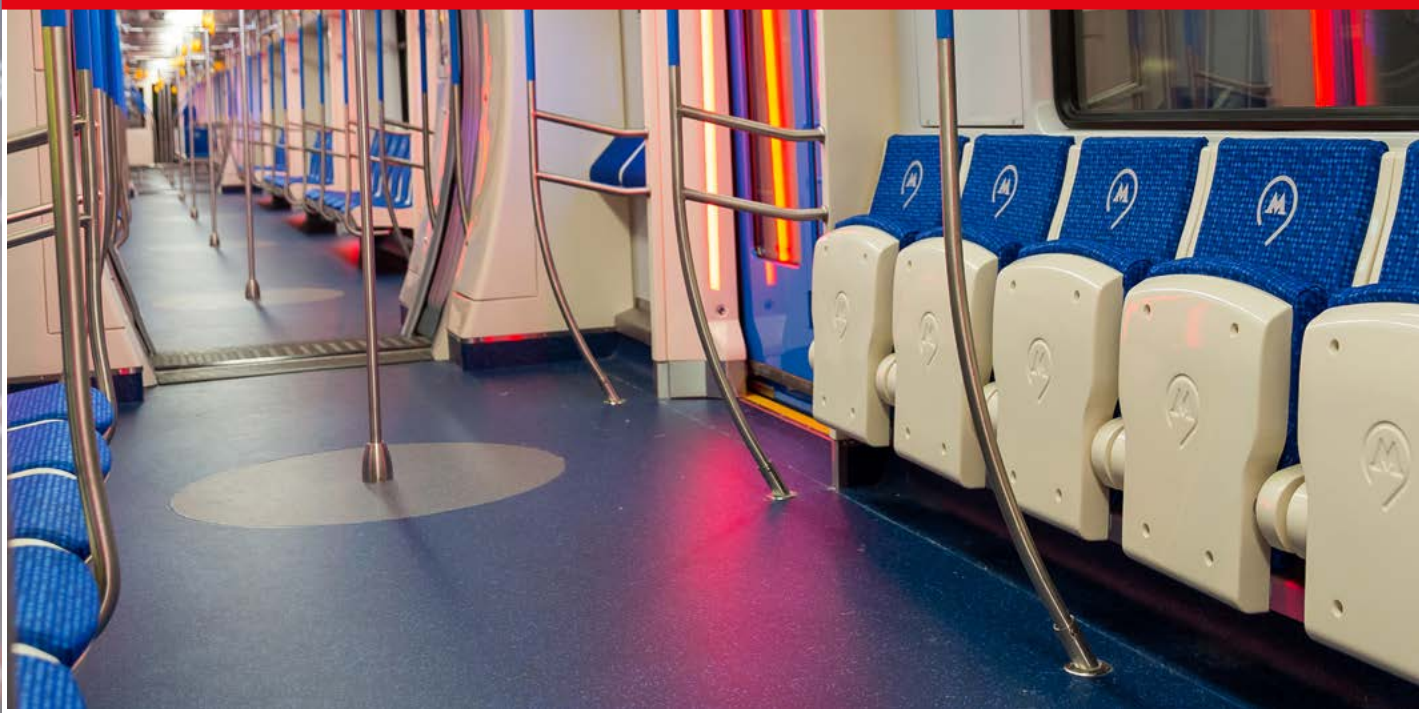


In 2017, the first next-generation trains were launched on the Tagansko-Krasnopresnenskaya line, which is one of the busiest lines in Moscow, carrying about 1.2 million passengers each working day.

These trains were also launched on the Kaluzhsko-Rizhskaya line in May 2018. In July, a modification of the Moskva train enabling operation on surface sections was launched on the Filyovskaya line.



+1,610
NEW MOSKVA CARRIAGES



Country of origin	**Russia**
Capacity	**1,524 passengers (+1%)**
Noise pollution	**70 dBA (–28%)**
Wider doors	**+15 cm (+10%)**

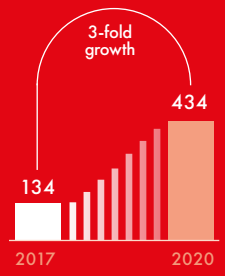
- Wheelchair accessible
- Dedicated area for bicycles and prams
- Walk-through layout
- Emergency gangway
- Specially shaped handrails and hand poles
- Audio-visual announcements
- Climate control
- Digital displays with journey planning capabilities
- USB ports to charge mobile phones
- Adaptive lighting: cold lights in the morning and warm lights in the evening
- Wi-Fi

VITYAZ-M TRAM

Launched in March 2017

In 2017, 134 new Vityaz-M trams arrived in Moscow. The trams run on routes in northeast, east, and central Moscow.

In January 2018, the new trams were also launched on the Novokonnaya Ploschad – Nagatino route connecting central to south Moscow.



+300
VITYAZ-M TRAMS

Country of origin	**Russia**
Length	**27.5m (+46%)**
Capacity	**185 passengers (+36%)**
Noise pollution	**75 dBA (–12%)*** * Silent running bogies
Number of doors	**6*** * 30% faster passenger boarding and alighting

- Low floor
- Wheelchair accessible
- Walk-through layout
- Wide doors
- Multimedia announcements on board
- Climate control
- USB ports to charge mobile phones
- Energy-efficient lighting
- Wi-Fi connection
- No turnstiles

MCC'S NEW LASTOCHKA TRAIN

The high-tech Lastochka trains with an improved carriage layout operating on the MCC became even more comfortable in 2017.

42
LASTOCHKA TRAINS RUNNING ON THE MCC TODAY

Country of origin	**Russia**
Capacity	**1,500 passengers**
Maximum speed	**160 km/h**
Service life	**40 years**

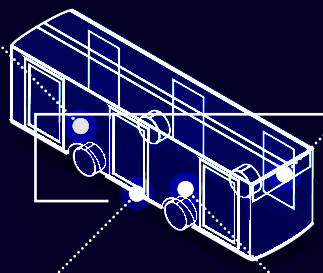
- Climate control
- Wheelchair accessible
- Low noise pollution
- Bicycle and pram racks
- Walk-through layout
- Wi-Fi connection
- Charging points for mobile phones
- Digital displays
- Toilet facilities with composting toilets
- Air curtains on doors
- Energy-efficient lighting

ELECTRIC BUS

is the most advanced and environmentally friendly surface passenger transport in the world.

To be launched \ in September 2018

- Vibrant images decorate **the sides of the electric buses** to set them apart from older buses as a new, environmentally friendly mode of transport
- **Wide LED colour destination indicator** displays to help passengers see their bus from afar

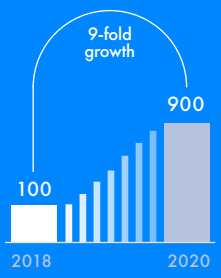


Specially designed for Moscow

- **Neon lights** emphasising the attractive design of the bus
- **LCD monitors displaying bus route information for** a more convenient trip, added as a new, visible navigation feature

Electric bus is an environmentally friendly, fast, comfortable, and safe mode of transport. The first electric buses will be launched in September 2018, and from 2021, Moscow will only purchase electric buses to replace its bus fleet.

FREE TRAVEL on electric buses between 3 September and 3 October



900
ELECTRIC BUSES
will run on routes by the end of 2020

- Moscow Transport branded design
- A light indicator turns from yellow to blue when the bus is being charged

Ultra-rapid charging stations for electric buses

600 V
input VDC

≤ 500 A
maximum input current

–40 to +40 °C
ambient temperature range

Country of origin	**Russia**
Capacity	**≥ 85 passengers**
Maximum speed	**75 km/h**
Service life	**15 years**[1]
Length	**12 m (as a bus)**
Seating	**≥ 30 (+70%)**
Travel distance on one charge	**40 km**
Charging time[2]	**Between 2 min. (10% charge) and 24 min. (100% charge)**
Energy consumption	**≥ 1.4 kWh/km**
Noise pollution	**–30%**[3]
Operating costs	**–10%**[4]

- Low floor
- Wheelchair accessible
- Braille signage for visually impaired passengers
- Wide doors
- Climate control
- Air curtains at doors
- USB ports to charge mobile phones
- Media system
- Energy-efficient lighting
- Wi-Fi connection

1 Under life-cycle contracts.
2 At the ultra-rapid charging station en route.
3 Compared with conventional buses.
4 Total costs vs trolleybus costs.

Transport services for the 2018 FIFA World Cup

Eleven Russian cities hosted the 2018 FIFA World Cup. Twelve of the sixty-four matches were held in Moscow, including opening, semi-finals and finals matches at the Grand Sports Arena of the Luzhniki Stadium.

> It is an incredible, amazing World Cup. This couple of years I said that the 2018 World Cup will be the best for all time. Now I can say it again, being convinced that this is the best world championship in history.

Gianni Infantino
FIFA President

TRANSPORT MANAGEMENT DURING 2018 FIFA WORLD CUP

The organising cities' obligations stipulated in the Agreement between FIFA, the Russia 2018 Organising Committee, and the Moscow Government were met in full.

KEY TRANSPORT MANAGEMENT PLAN ACTIVITIES

Free public transportation services
were provided for the spectators, volunteers, FIFA officials, police officers from other regions, and accredited journalists

Accreditation for local residents and legal entities
enabling travel to the homes and workplaces located around stadiums and the FIFA Fan Festivals.

Regional transport management
of passenger services from the Traffic Management Centre

11 new express shuttle routes
for fans (147 buses)

Developing and implementing temporary traffic schemes
in areas surrounding the World Cup venues

Night services on the metro, MCC, and surface transport
on late kick-off game days (45 routes and shuttles)

Taxi accreditation
(33 companies and 4,832 cars)

5,000,000
free travel was provided during the World Cup:

3,800,000
by metro and the MCC

1,000,000
by surface transport (including shuttles)

200,000
by Aeroexpress and suburban trains

>40,000 employees

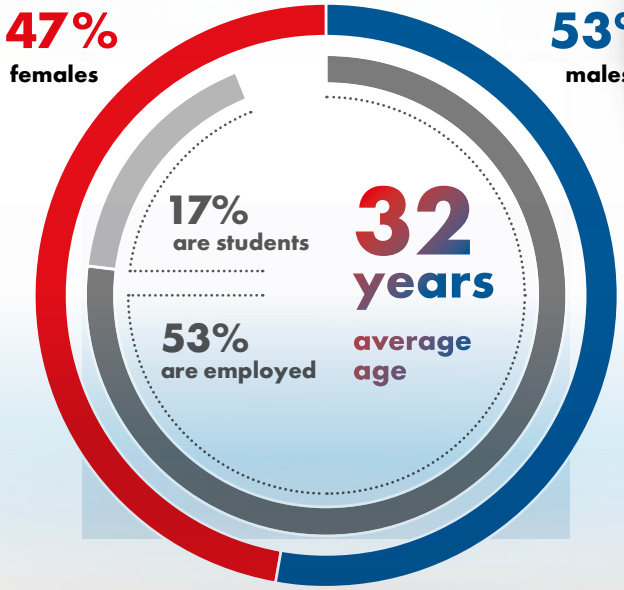
of Moscow Transport provided transport services to World Cup guests

8,000 employees

of security service and the Administration of Internal Affairs on the Moscow Metro protected the public in the metro

No major incidents on public transport

Demographics of match visitors in Moscow[1]



MOSCOW WAS THE FIRST GLOBALLY TO BROADCAST FOOTBALL GAMES IN THE METRO

>60
matches broadcasted live

>20 million
viewers

Moscow Transport employees thoroughly prepared to provide services to the World Cup guests hailing from dozens of countries. Over 800 English speaking employees helped guests in the metro. The Moscow Transport service centres and transport hotline helped guests in English, German, French, Spanish, and Chinese.

All Moscow Transport apps were translated into English. English language training was provided to:

- about 5,000 taxi drivers
- about 600 surface transport and metro line controllers
- 240 free shuttle drivers.

>90%
of Russian fans were satisfied with the overall organisation of the World Cup[1]

98%
of foreign guests were satisfied with the overall organisation of the World Cup[1]

1 According to the Innovation Centre.

Digitalisation of Moscow transport

The new opportunities offered by big data analytics and machine learning are opening up bright prospects for Moscow transport in the 21st century. Moscow is at the forefront of change as it embraces the most advanced technologies and the best national and international innovations.

24/7

operation of the Traffic Management Centre's control centre

100%

of the city covered by the Intelligent Transport System

TRAFFIC CONTROL

An Intelligent Transport System (ITS) has been operating in Moscow since 2011. It initially covered 30% of the city, and has now reached 100%. The ITS is a comprehensive monitoring system for traffic control and public transport operation.

The amount of data generated daily by the transport system is comparable to that of a major bank's transaction volumes.

–34%
reduction in road fatalities (down to 2.9 deaths per 100,000 residents) from 2010

–59%
reduction in traffic accidents from 2010

+16%
increase in the average traffic speed from 2010

In 2013, a control centre was launched at Moscow's Traffic Management Centre to analyse data received from the equipment installed across the city – traffic speed sensors, adaptive traffic lights and road safety cameras, controlled CCTV cameras, and GPS/GLONASS sensors on public transport.

The Traffic Management Centre receives over 350 million data packages per day from various locations, including:

80 mln
trips

45 mln
speed measurements from sensors

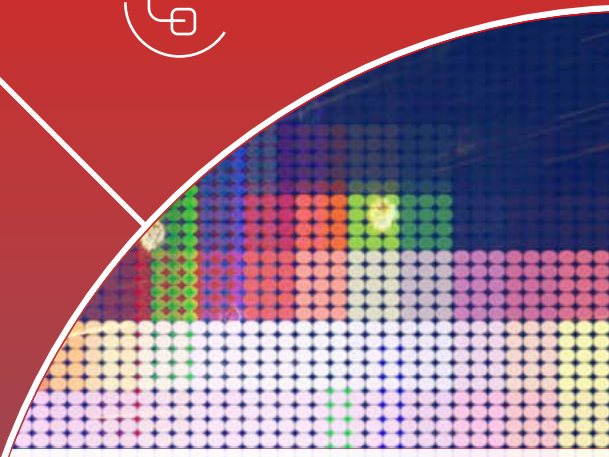
Over 60 mln
vehicle telematics data entries in the Regional Navigation and Information System (RNIS)

2,059
CCTV CAMERAS

40,000
TRAFFIC LIGHTS

3,700
DETECTORS

1,943
PHOTO AND VIDEO RECORDERS

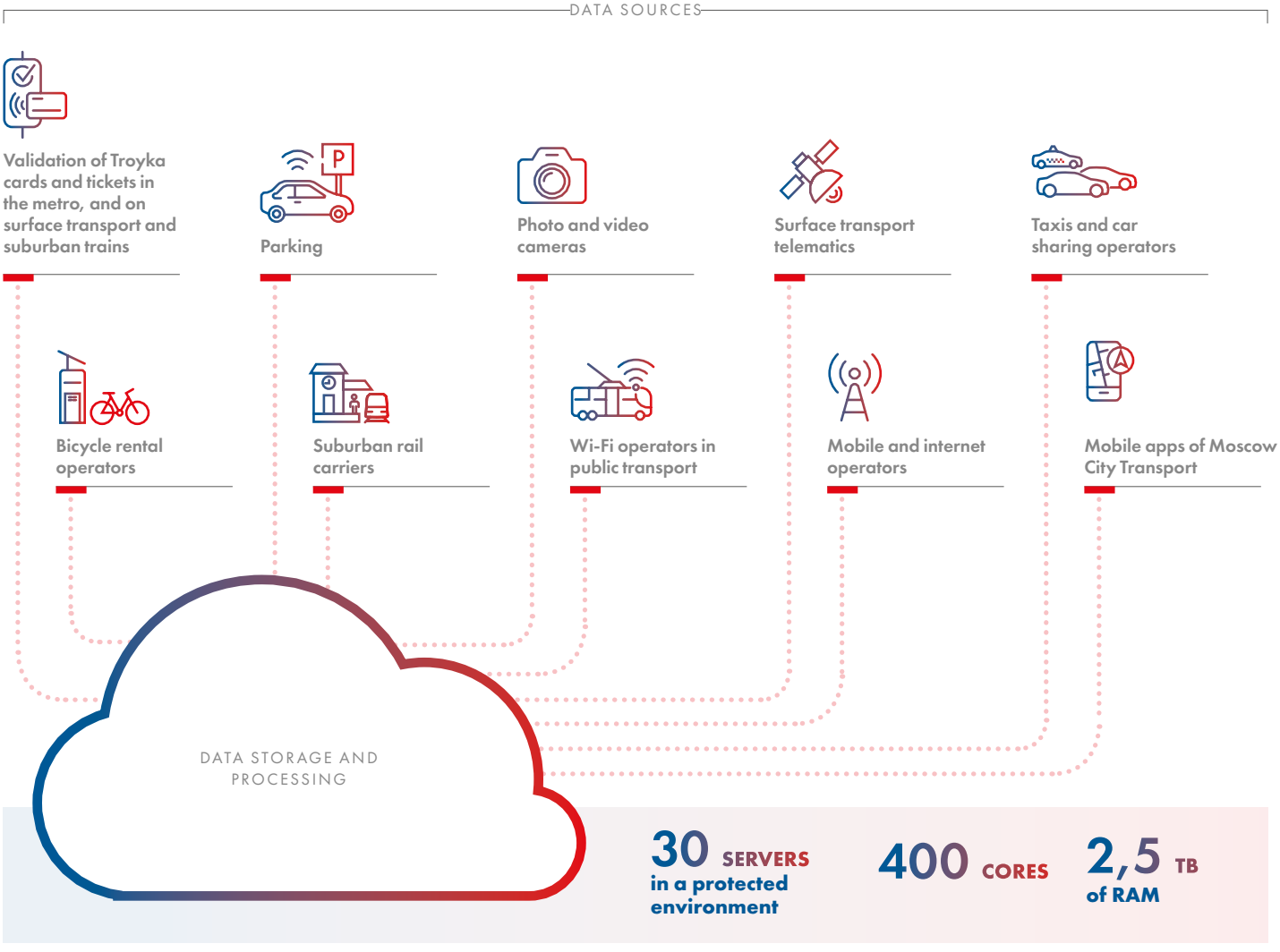


Moscow's Intelligent Transport System tracks 10,000 land vehicles, over 72,000 taxis, and 11,000 cars within the car sharing network.

The control centre at Moscow's Traffic Management Centre is the largest in Europe.

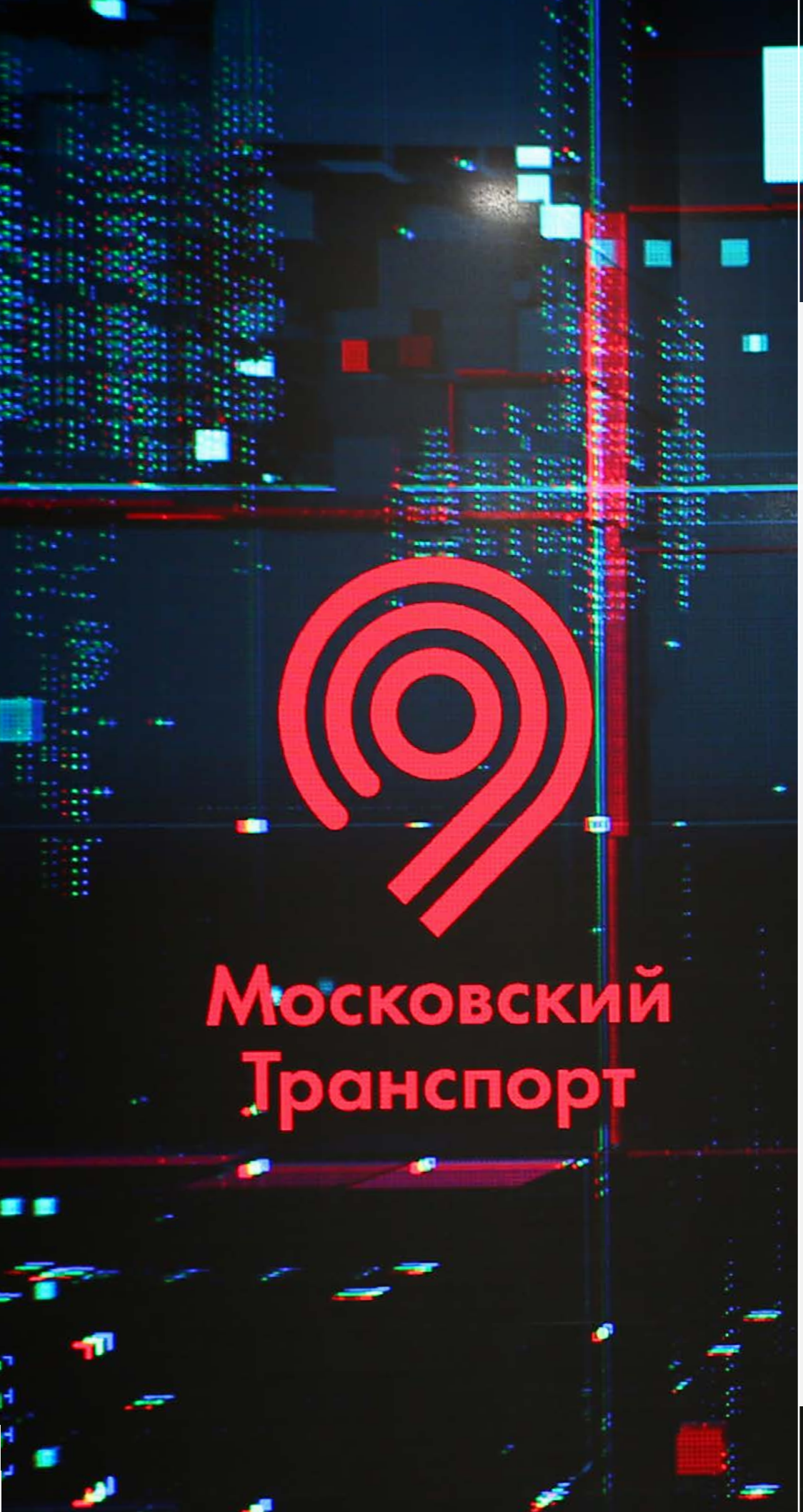
INNOVATION CENTRE

The Innovation Centre was established in 2017 to improve the quality and benefits of processing big data.



END PRODUCTS

- Advanced analytics
- Reports and data visualisation
- Personalised communication with users



Objectives of the Innovation Centre

☑ Personalised communication with Moscow residents

- Information about events in the city
- Route recommendations
- Advice in difficult situations
- Feedback collection

☑ Consolidation of transport system data

- A single platform for data collection, storage, and processing
- Ensuring data security and protection

☑ Preparation of analytical reports

- Building a powerful analytics toolset as well as credible, high-quality models
- Using analytics to make transport-related decisions

☑ Testing and adopting modern innovative technologies

- Innovative communication channels with city residents (social networks, apps, messengers)
- Monitoring new trends
- Introducing new technology to the transport system

COMPREHENSIVE SAFETY ON TRANSPORT

The Moscow Government's comprehensive programme ensures the safety and full-scale protection of all passengers aboard public transport.

SURFACE TRANSPORT

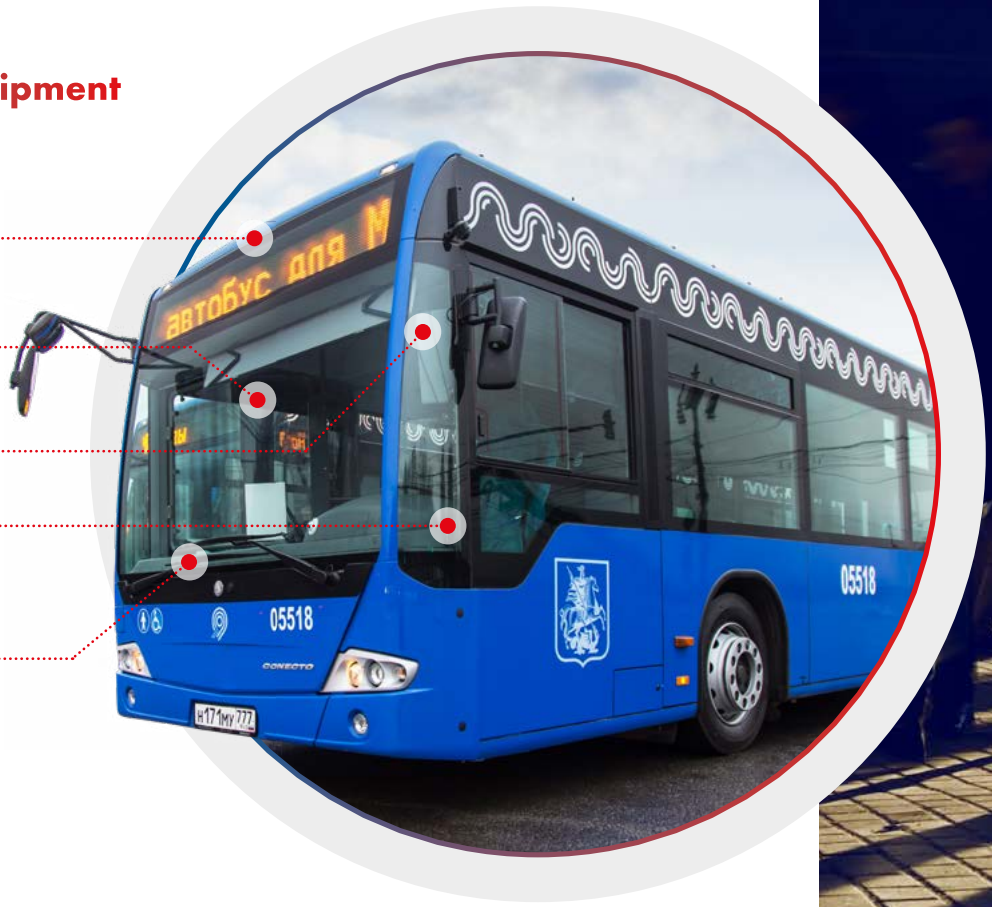
Surface transport vehicles are consistently being equipped with modern engineering and technical equipment and systems assuring transport safety, including photo and video recording and transfer of images or streaming videos at a dispatcher's request. Vehicle locations are tracked and geo-referenced using the GLONASS system, enabling dispatchers to respond immediately to an incident and send assistance.

100%

of surface transport vehicles are equipped with GPS/GLONASS systems as well as both external and onboard CCTV

Set of safety and security equipment installed in a Mosgortrans passenger vehicle

- Smoke and heat detectors
- Automated passenger traffic control sensors and controllers
- CCTV microphone
- Panic button
- Onboard NAV/COM station
- Onboard VHF NAV/COM radio
- 3G modem
- Dashcam
- Video cameras (forward facing, reversing, driver facing, and compartment cameras)
- Fuel level sensors



METRO

The Transport Safety Management Centre was opened in 2017. It receives data from all CCTV cameras in the metro and has access to the cameras on the MCC.

Currently more than 7,700 Safety Service employees are on duty at metro stations and entrances. Emergency call points are installed at all stations.

and security checkpoints with specialised equipment for detecting prohibited items and substances are set up at metro entrance halls.

A comprehensive approach adopted in 2017 enabled a 35% year-on-year decrease in the number of crimes occurring in the metro, while the number of administrative violations fell 21% year-on-year.

10 x
faster metro employee response times to incidents due to the new system

Over 42 mln
(up 90% year-on-year)
luggage items inspected in 2017

Over 250,000
(up 30% year-on-year)
dangerous items detected in 2017

17,300 CCTV CAMERAS
are installed in the Moscow metro

- **3,900** on trains
- **3,500** on platforms
- **1,230** on escalators

2,500
in underpasses and in adjacent areas

5,700
in entrance halls

500
in train depots, substations, and ventilation shafts

Smart CCTV system

5,700 smart CCTV cameras:

- IP cameras for situational and general surveillance
- Machine vision cameras with threat recognition functions

Cameras can identify crowding, unusual activity, disorderly behaviour, lost property, and trespassing and help the Transport Safety Management Centre dispatchers make prompt decisions. Video stream data are stored in a specifically built 11 PB data centre.

PASSENGER SERVICES

Moscow transport offers state-of-the-art passenger services on par with leading global transport systems.

Free Wi-Fi on public transport (MT_FREE)

MT_FREE is Europe's largest single-login access Wi-Fi network on public transport. It covers all metro trains, surface transport rolling stock and fleets, new surface transport stops, the MCC, as well as Aeroexpress trains and terminals. Passengers can benefit from a seamless Wi-Fi experience when interchanging between different modes of transport.

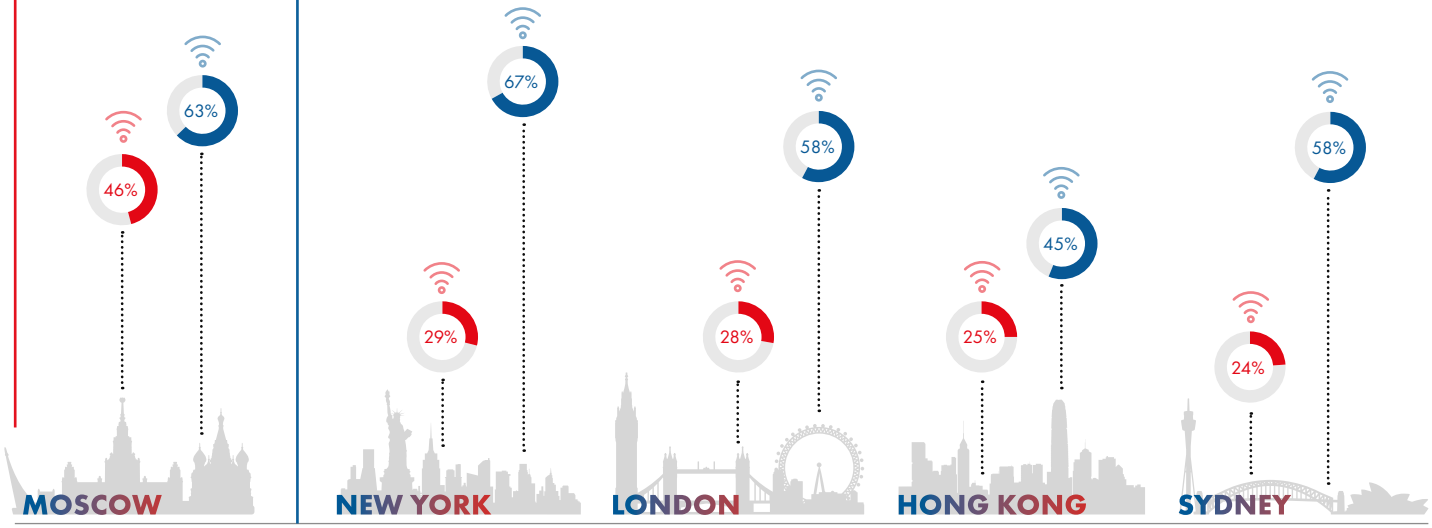
4 MLN

WI-FI SESSIONS on Moscow transport every day

The public transport Wi-Fi network is more popular in Moscow than in other large cities

Moscow's public transport Wi-Fi network is one of the best globally in terms of connection speeds and user-friendliness

- Share of passengers using Wi-Fi as their preferred connectivity option when travelling by public transport
- Share of passengers satisfied with the Wi-Fi connection quality on public transport



Source: Wireless Broadband Access (WiBB) for the Digital Economy study by Ernst & Young (EY).

Universal travel card: Troyka

The Troyka card can be used to travel by any mode of public transport, rent bicycles, and visit museums and ice-skating rinks around Moscow, with 88% of passengers using Troyka as their preferred fare payment method. Since June 2018, Troyka users on the Wallet plan can benefit from a loyalty programme and get bonuses and discounts in stores, pharmacies, restaurants, dry cleaners, private clinics, beauty salons, cinemas, and with other partners, as well as free travel on public transport.

The Troyka – Strelka integrated travel card allows travel on both urban and suburban transport, and the Troyka – Podorozhnik travel card is valid in both Moscow and Saint Petersburg.

OVER 19 MLN

TROYKA CARDS

issued since launch

MOSCOW METRO

#1

GLOBALLY

by the offered range of ticketing and fare pricing options

Variety of payment options

Moscow Metro passengers can choose the most convenient method of payment:

- Troyka card
- Social card
- Contactless bank cards (PayPass and PayWave)
- Mobile ticketing
- Bank cards via Android Pay, Apple Pay, and Samsung Pay
- QR codes (piloted at four metro stations)

INTERACTION WITH MOSCOW RESIDENTS

An ongoing dialogue with each passenger is helping improve the performance of Moscow Transport

Moscow Transport mobile apps

Mosgortrans
For details, see page 110

Mosgorpass
For details, see page 110

MosMetro
For details, see page 112

Velobike
For details, see page 107

Moscow Assistant (Pomoschnik Moskvy)
For details, see page 103

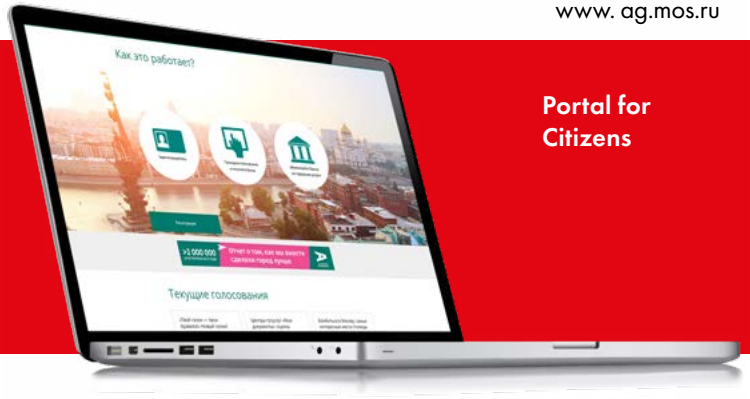
Moscow Parking
For details, see page 119

3.5
MLN DOWNLOADS
total for all Moscow Transport mobile apps

Active Citizen

Active Citizen is a project developed on behalf of Moscow Mayor Sergei Sobyanin, launched in April 2014. Moscow residents have voted on multiple transport-related matters using a dedicated portal.

www. ag.mos.ru



Portal for Citizens

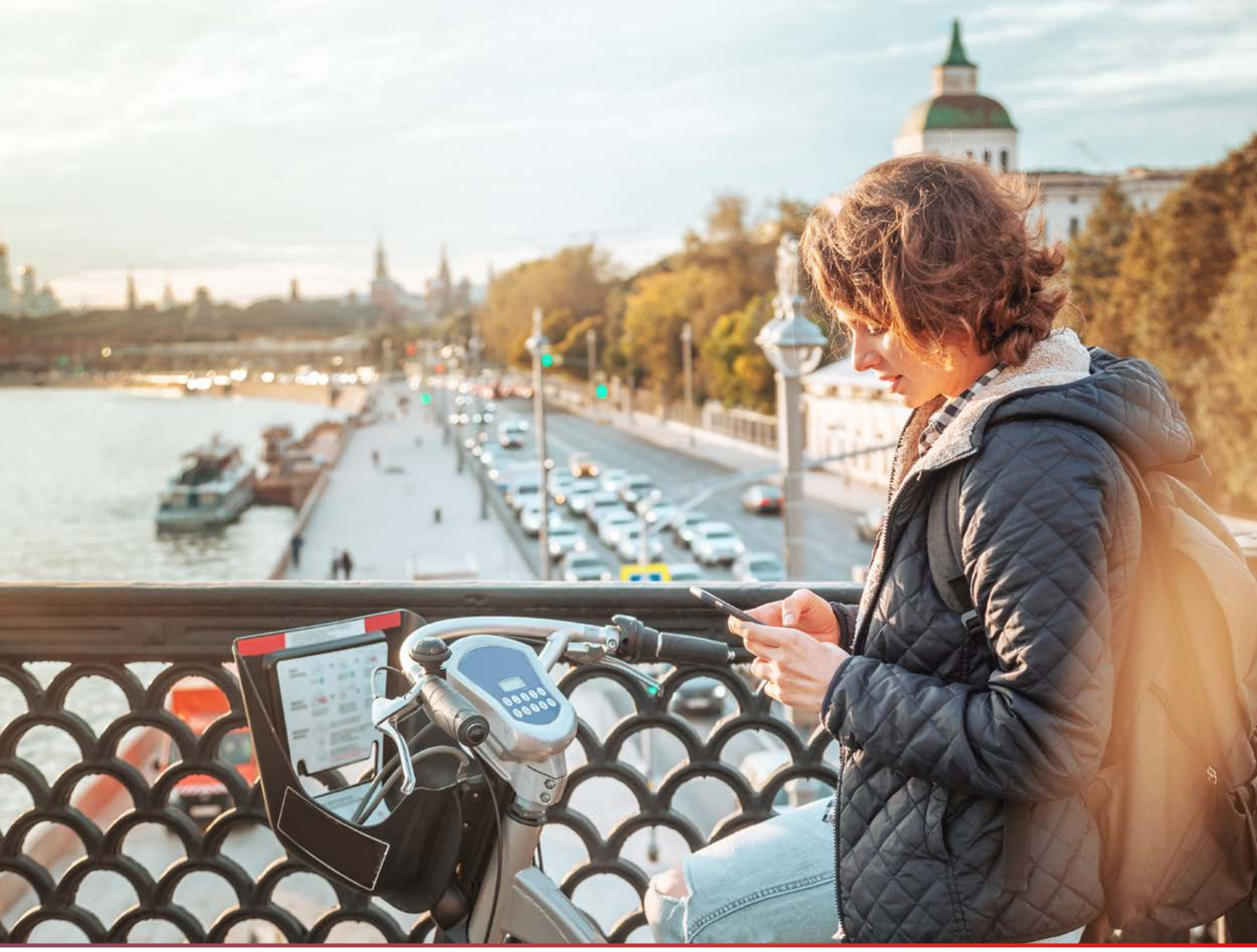
Major voting results:

- Selecting the colour pink for the new metro line under construction in 2014 and choosing its name – Nekrasovskaya in 2018
- A total 480,900 Moscow residents chose the name for the Moscow Central Circle project in a two-stage voting process in 2017
- Reducing the number of announcements on escalators in the Moscow metro
- Naming the next-gen Moskva train
- Selecting the locations for new pedestrian zones in the Zamoskvorechye District

OVER 45
transport-related topics discussed on the portal since 2014

116
transport innovations rated by Moscow residents

For contact details, see page 124



No project is implemented without collecting opinions from Moscow residents. Moscow has two service centres processing over 5,000 queries, suggestions, and requests via phone calls, emails, or personal contacts every week. We also handle all suggestions and requests submitted in social media.

Moscow Deputy Mayor for Transport

Maxim Liksutov

Moscow Transport in social media

Social media is key to maintaining a dialogue with Moscow residents, allowing them to leave opinions and ask Moscow Transport (MT) staff questions.

SOCIAL FOLLOWING[1]

@transportmos	@DtRoad	@mostransport	@mostransport	@mostrans	@DtRoad
78,185	24,000	16,100	12,710	7,431	3,600

381
Average daily unique visitors on MT's VKontakte page

5,160
Average monthly reach of MT's Instagram post

1,343
Average monthly reach of MT's Facebook post

144
Average monthly reach of MT's Odnoklassniki post

1 Followers across all social media as at 28 June 2018.

A PATH TO THE FUTURE

Global development outlooks for urban transport

Electrification and the environment

Electric car sales are stimulated by incentives and subsidies for car owners, such as reduced battery costs and environmental restrictions. According to the International Energy Agency (IEA), the number of electric cars doubled in 2017 to above three million worldwide. After 2020, the United States, EU, and China will introduce stricter requirements on car energy efficiency, thereby further driving sales upwards.

42 -FOLD

(up to 125 million vehicles)

in the number of electric cars by 2030 worldwide has been forecast by the IEA

CAR-SHARING MODELS

Car sharing is the short-term rental of cars for travel within the city

P2P car sharing is a platform for car owners to rent their cars out to other people for a short period of time

A taxi aggregator is a mobile and/or online platform for finding licensed taxis for one-off trips

Shared mobility

Taxi aggregators, car sharing, and other services that increase mobility are gaining market shares across the world.

Internet of Things

Uninterrupted vehicle connectivity enables remote software updates and transmission of road traffic information to increase road safety.

Autonomous (self-driving) transport

Self-driving vehicles save time for private car owners, reduce costs, and are changing the parking laws in large cities.

450

MILLION USERS

make 25 million trips a day using Didi Chuxing, a Chinese taxi aggregator

75%

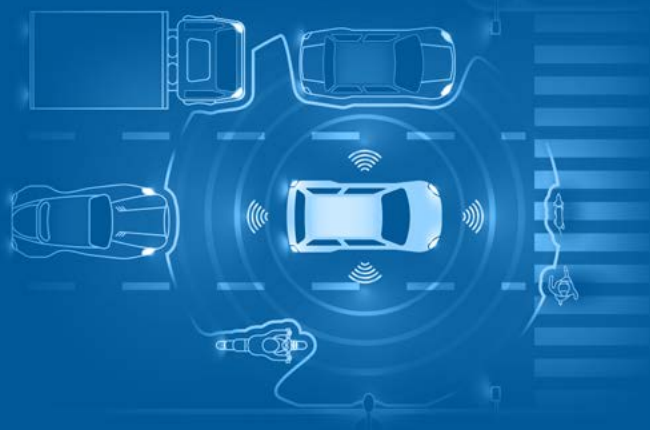
CAR OWNERS

support automatic data transfers to car manufacturers

Under particular urban projects, fully autonomous vehicles will be hitting the roads as early as 2020

HOW WILL AUTONOMOUS CARS CHANGE URBAN LIFE?

- A self-driving car can perform tasks while the owner is elsewhere, such as picking up food from a supermarket or children from school, or transporting small cargoes.
- One car can be shared by many people to minimise unproductive downtime.
- It can be parked far from home or work to reduce the use of car parks and related costs for car owners. When needed, the car will drive to the specified address on its own.
- The resulting free space around the city can subsequently be used for walking zones, bicycle paths, parks, and garden squares.



Stages of smart city evolution in transport and urban mobility

INITIATIVES

2011

Intelligent Transport System	**100%** coverage of the city by the Intelligent Transport System
Electronic card Troyka	**10** top-up methods
Car parking payment system	**8** car parking payment methods
A traffic violation management system	**Automatic** registration of violations
Taxi ordering	Pick-up time of up to **5–7 minutes** during peak hours

2014

Command centre at the Traffic Management Centre	**24/7** operation
Automation of traffic and transport control	Smart traffic lights, smart CCTV cameras, 100% GPS/GLONASS coverage on surface transport
Wi-Fi on public transport	**100%** of public transport vehicles covered
Mobile apps	**6** Moscow Transport mobile apps
Public control over compliance with traffic rules	**Moscow Assistant** app

RESULTS

Smart mobility – a set of next generation solutions for travelling as quickly, comfortably, and safely as possible.

Active Citizen	The voice of Moscow residents is at the heart of our decisions significant for the city's way of life
Public bicycle rental system	System automation
Car-sharing system	**72,000** taxis **11,000** shared cars
Passenger interfaces	Over **10** feedback channels
Automated monitoring of transport and infrastructure condition (self-diagnostics)	Moskva metro train
Advanced fare payment methods on public transport	Over **9** ticketing options

- Use of big data – Innovation Centre
- Smart City 2030 digital development strategy
- Facial recognition
- Autonomous transport
- Promoting car sharing
- Process automation and robotics

2018+

Biometrics

Biometrics is a method for recognising and authenticating people based on their physiological and behavioural profiles.

MOSCOW
Metro CCTV with facial recognition

LONDON
Pilot palm vein scanning project for card readers

ISTANBUL
Fingerprint-based check-in at the airport

SHANGHAI
Voice control of ticket machines

JINAN
Facial recognition check-in when boarding a train

WHERE IS BIOMETRICS ALREADY USED ON TRANSPORT?

EXAMPLES OF USE

Fingerprinting
- Smartphone protection
- Touch and pay (Sberbank)

Palm vein pattern
- Identification of school students to pay for services
- Metro pay-gates

Face
- Identification of wanted criminals in a crowd
- Mood recognition (Amazon)

Gait and other movement patterns
- Smartphone user identification (by movement rhythm)

Voice
- Identification at ticket machines
- Equipment voice control

Retina
- ATM identification
- Next-generation passports

Speech
- Speech-to-text
- Identification through call centres

Personality
- Career guidance
- Behaviour correction

A city for everyone

WHAT JOURNEY WILL YOU HAVE AROUND THE CITY TODAY?

The Moscow Government hears the voice of every Moscow resident

For pedestrians

For details,
see page 100

Independent

For cyclists

For details,
see page 104

Exciting

For details,
see page 108

Available

For details,
see page 116

Comfortable

A city for pedestrians

All large and advanced cities prioritise pedestrians, and Moscow is no exception. Some years ago, pedestrians had to edge their way around cars parked along narrow pavements in the city centre. Moscow has undergone a dramatic change since then.

2–7x

increase in pedestrian traffic due to comprehensive street improvement programmes

327

streets, squares, major routes, and public spaces modernised and reconstructed


M10

TRAVELLING AROUND THE CITY

Pedestrian zones

327
streets, squares, major routes, and public spaces modernised and reconstructed

311 KM
total length

– WHAT IS THE MOST POPULAR WALKING AREA?

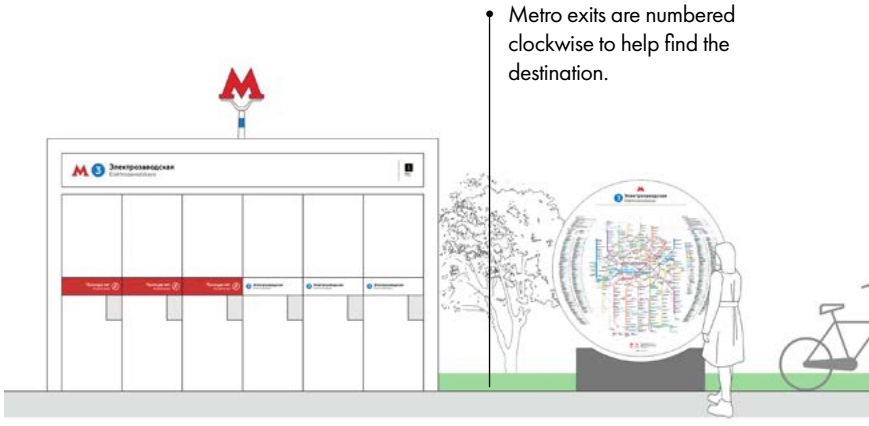
– Moscow has 40 pedestrian-only streets and squares, and over 200 pedestrian zones. The Yakimanskaya Embankment is the most popular walking area. Apart from walking space, pedestrian zones also host multiple public events. They serve as venues for fairs, festivals, and sports competitions such as the Moscow Marathon.

The 10 longest improved streets

1. Tverskaya
2. 1st Tverskaya-Yamskaya
3. Novoslobodskaya
4. Novy Arbat
5. Bolshaya Nikitskaya
6. Bolshaya Ordynka
7. Bolshaya Yakimanka
8. Bolshaya Polyanka
9. Taganskaya
10. Myasnitskaya

Citywide wayfinding system

The citywide wayfinding system helps Muscovites and tourists select routes and easily navigate around the city throughout their journey.



My Street programme

150
of new transport schemes completed as part of reconstruction efforts

1,800 HE
total area covered by improvements

>7,000 TREES
planted

– WHY SHOULD PAVEMENTS BE REPAVED AND ROADS DUG UP IN THE CITY CENTRE?

– If we want to make Moscow a smart and safe city, temporary inconveniences are as inevitable as in any other kind of repair. The My Street programme in Moscow primarily aims to capture the interests of all traffic stakeholders, including pedestrians, cyclists, motorists, and passengers of public transport taxis. As a result, we benefit from road safety and smartly organised walking spaces with wide pavements, trees and bushes, and new, comfortable, and attractive street furniture.

250,000
have already installed Moscow Assistant, the city's official transport app

960,000
VIOLATION registered

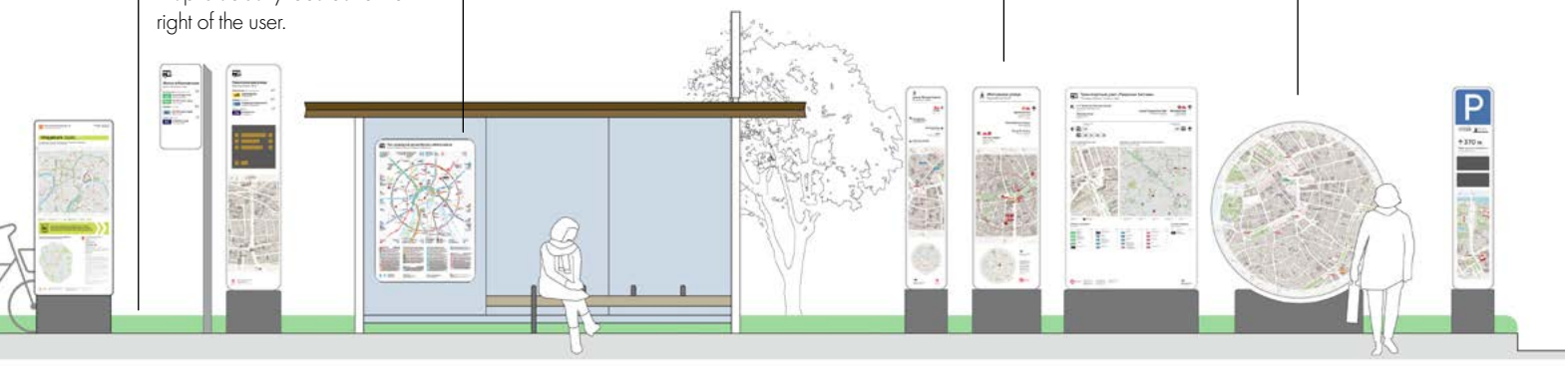
USD 24
MILLION in fines charged

– WHAT SHOULD BE DONE WITH DRIVERS WHO PARK ON THE PAVEMENT?

– If you see a car parked on the pavement, a lawn, pedestrian crossing, or under a no waiting/no stopping sign, you can use the Moscow Assistant app on your smartphone to take a photo of the violation and submit it via the app.

Full information on the Moscow Assistant (Pomoschnik Moskvy) app

- The orientation of the maps uses heads-up mapping, which corresponds with the direction the user is facing. For example, everything showed on the right side of the map is actually located to the right of the user.
- Magistral network routes are colour-coded.
- A five-minute walking circle is marked to show what is located nearby.
- Local landmarks to help with navigation are shown as either pictures or icons.



A city for cyclists

Moscow residents use bicycles not only for leisurely rides, but also as a last-mile transport mode to get from home to a surface public transport stop, the metro, or an MCC station. Moscow's cycling infrastructure is based on a network of bicycle paths and dedicated lanes, bicycle parking, and bicycle rental stations.

Moscow bicycle rental system

#1

in Europe by rides per bicycle

2.5 million

rides over three months of bicycle rentals in 2018 (as many as for the entire 2017 season)

TRAVELLING AROUND THE CITY

– WHAT ARE THE FURTHER PLANS FOR DEVELOPING THE CYCLING INFRASTRUCTURE?

– The reconstruction of urban spaces under the My Street programme includes mandatory construction of bicycle paths and parking. As for bicycle rentals, a hundred new stations will be launched each year starting from 2019 in addition to those currently in use.

– IS CYCLING NEEDED IN A CITY EXPOSED TO RAIN AND SNOW SIX MONTHS A YEAR?

– Other large cities with similar climates such as London, Paris, New York, Montreal and Stockholm have three or four times more bicycle paths than Moscow. Bicycling is a quick last-mile solution to get to a destination.

Local resident involvement

>100,000
CYCLISTS
participate in Moscow cycling parades each year

900,000
USERS
registered in the bicycle rental system (13 times more than in 2013)

Cycling infrastructure

773 KM
of bicycle paths and lanes in Moscow[1]

14.2 KM
Russia's longest bicycle lane on the Boulevard Ring

>14,000
PARKING SPACES
for private bicycles

Velobike

The Velobike mobile application is designed to help find the nearest station, check the availability of bikes and parking stations, select a rate, top up one's account, and calculate the cost of travelling.

ANDROID APP ON Google play

Download on the App Store

Electric scooter rentals launched in Moscow

– IS THERE A BICYCLE RENTAL STATION OR PARKING NEAR WHERE I LIVE?

– Contact the Moscow Department for Transport and Road Infrastructure Development if a bicycle rental station or parking station has not yet been installed near your home. Your application will be examined, and if a positive decision is made, a bicycle parking area can be constructed near your home.

Electric scooters are environmentally friendly vehicles for fast and comfortable short-distance travel around the city. In June 2018, Moscow launched Delisamokat, Russia's first public electric scooter rental system.

Its 25 rental stations are located in the city centre as well as in the Strogino, Krylatskoye, Kuntsevo, Ramenki, Prospekt Vernadskogo, and Lomonosovsky districts. Registration via online or a mobile app is required to rent a scooter.

- Weighs 12 kg
- Up to 25 km on a single charge
- Can be charged at a station or at a 220 V outlet
- Speed of up to 25 km/h
- ☑ Reflectors ☑ A light

Moscow bicycle rental system
(launched in 2013)

430
STATIONS
(five times more than in 2013)

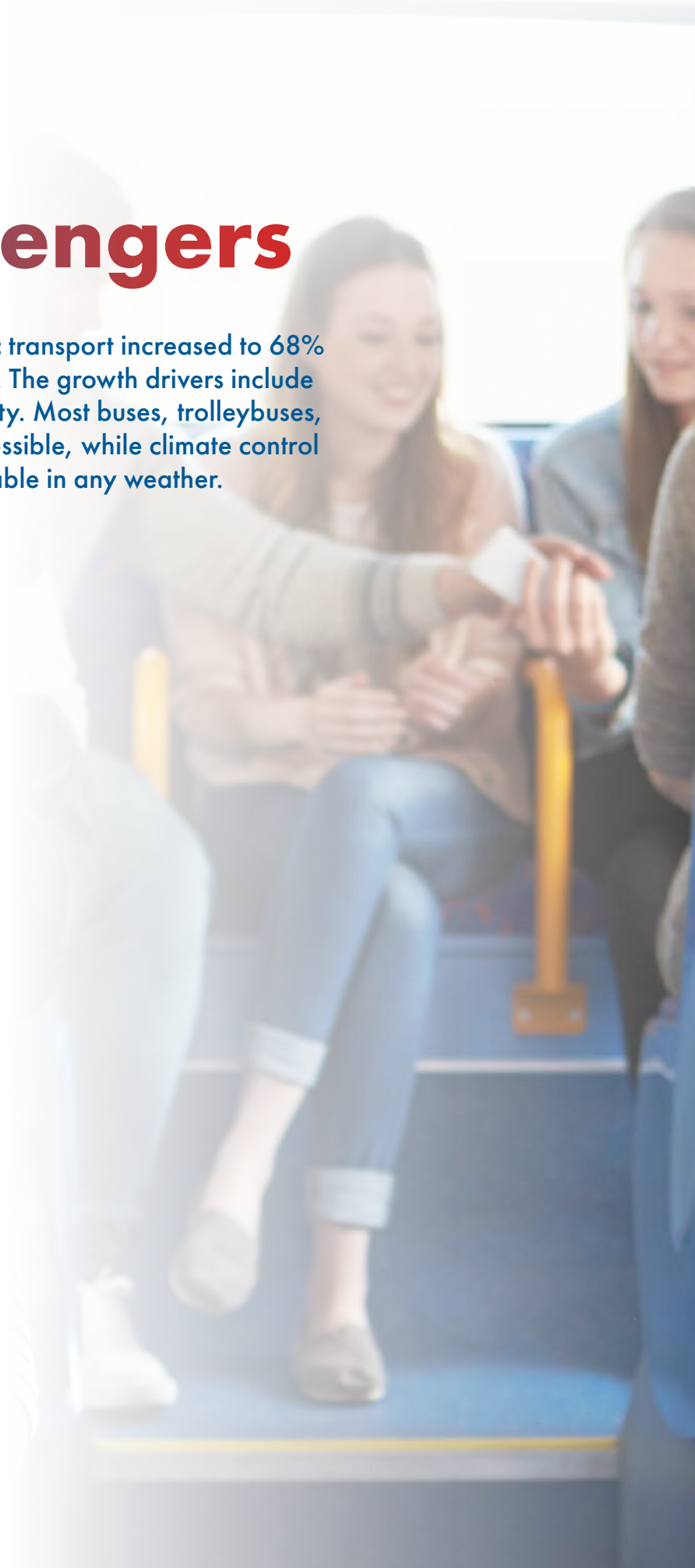
4,300
BICYCLES[2]
(eight times more than in 2013)

2,950
ELECTRIC SCOOTERS

1 Including dedicated lanes.
2 As at May 2018.

A city for passengers

The number of Moscow residents using public transport increased to 68% of the population in 2017, from 62% in 2010. The growth drivers include improved convenience, speed, and availability. Most buses, trolleybuses, and trams are low-floor and wheelchair-accessible, while climate control makes travelling on public transport comfortable in any weather.



Moscow

#1

in Russia by transportation service quality (Moscow State University, 2018)

Over

19 million

trips on Moscow transport every working day

TRAVELLING AROUND THE CITY

SURFACE TRANSPORT

Mobile apps of Moscow Transport

Moscow Transport
to be launched in 2018

Mosgortrans tracks the traffic of surface transport online and calculates travel time and cost.

Mosgorpass – a city wayfinding navigator.

– HOW CAN I FIND OUT THE ARRIVAL TIME OF MY BUS OR TRAM WITHOUT WASTING TIME AT A STOP? SURFACE TRANSPORT IS SO UNPREDICTABLE.

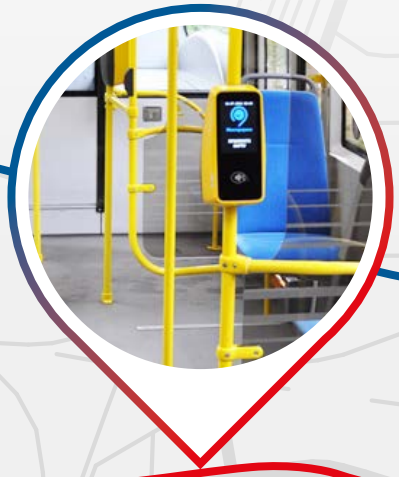
– Moscow Transport mobile apps will help you find an optimal route by travel time, modes of transport, and cost. The Mosgortrans app uses up-to-date traffic data to calculate the estimated time of arrival. An alert can be set up to notify that your bus or tram is about to arrive at the stop. The travel times of surface transport have become more predictable following the establishment of dedicated lanes. The Department for Transport has consistently been adding dedicated lanes to help debottleneck roads.
To improve the passenger experience, stops are equipped with real-time arrival information panels, arrivals are now at regular intervals, and turnstiles are being phased out.

New-generation surface transport shelters

Public transport stops have become more comfortable. Moscow currently has 802 new model stops (including 497 stops installed in 2017), with wayfinding pylons, maps, and digital arrival information panels. The stops are equipped with CCTV cameras, free Wi-Fi, and USB ports for portable device charging.

For details, see
Current and Future Mega Projects: New Convenient Surface Transport
page 56

3–5 MIN
average waiting time for buses in the city centre



– SOMETIMES TRAFFIC JAMS MAKE WAITING FOR A BUS TOO LONG. WHAT IS THE PROGRESS ON THIS?

– We are organising more dedicated lanes for public transport. Their total length in Moscow has now reached 287 km. Another 48.5 km will be built to address bottlenecks by 2020.

– QUEUES BUILD UP AT THE BUSIEST ROUTES DURING PEAK HOURS. HOW CAN THE BOARDING PROCESS BE SPED UP?

– Turnstiles are being phased out in public transportation, which will substantially shorten boarding time. In early 2018, turnstiles were removed from all large-capacity buses, and from all trams in June 2018. From September 2018, all surface transport will operate without turnstiles.

Fast and smart

80
BUS ROUTES

47
TRAM ROUTES

Turnstiles removed from all surface public transport from 1 September 2018

Schedule performance

2017 **95%**

2010 **76%**

TRAVELLING AROUND THE CITY:

METRO AND MCC

Live music on the Metro

A unique busking scheme to entertain passengers and promote music performers.

18 BUSKING PITCHES
at metro stations

>200 PERFORMERS
In the busking scheme

>20,000
live performances
since launch

With the **Moscow Metro app**, passengers can build intermodal routes, top up their Troyka cards, and contact the metro authorities.

Velvet Track

Velvet Track (a continuous welded track) is a technology for laying rails and welding seams between them, providing higher train speeds and a more pleasant journey.

– THE METRO IS OVERCROWDED DURING PEAK HOURS, WITH PEOPLE TRAVELLING IN PACKED CARRIAGES! ARE YOU DOING ANYTHING TO ADDRESS THIS ISSUE?

– The construction of new metro lines has reached unprecedented rates in Moscow. Launched in 2016, the Moscow Central Circle has taken a 15% load off the Circle line. The Big Circle line is under construction (to take a 15%–30% load off radial lines) as well as the new surface metro for Moscow, and the Moscow Region – Moscow Central Diameters (5%–10% off the metro's current load).

Moscow's metro is becoming increasingly efficient. Peak hour period was extended in 2016, with trains arriving at 90-second intervals. The Moscow Metro is the only metro in the world that maintains such short arrival intervals throughout peak hours. Since 2017, we have been purchasing higher capacity (+ 15%) next-generation trains with enlarged (+ 15 cm) doorways for convenient entry and exit of passengers.

– WHY DOESN'T THE METRO WORK 24/7?

– The metro is an extremely sophisticated integrated technological system that requires regular inspection of all its tracks, tunnels, rolling stock, and equipment. Sinergiya diagnostic trains are used to check tracks in the daytime without disrupting the train schedule. Tracks are replaced at night. Track replacement is indispensable, as passenger safety depends on it.

Interestingly, voltage is cut from the rails for only 2.5 hours. This period of time is sufficient for operators to replace rails, sleepers, and joints, clear stations, and return equipment to a depot.

UNTIL 2023

555 KM
of underground metro and MCC lines

>446 KM
of MCC ground metro

>110 ANNUAL CHECKS
are arranged for all metro tracks

–20%
noise following a comprehensive track upgrade

99.98%
metro train punctuality: better than a Swiss watch

807 THOUSAND CUBIC KM OF AIR
passes through the metro ventilation system every year. This amount of air would be sufficient for all the residents of Paris to breathe for 70 years

For details, see
Current and Future Mega Projects: The Unprecedented Rate of Moscow Metro and Moscow Central Circle Development
page 42

– SHOULD WE EXPECT A SUDDEN INCREASE IN FARES?

– No. Since 2010, the average fare has been growing by less than 4% a year – twice as slow as inflation (8% per year on average)[1]. Moscow Transport is one of the most affordable transport systems among the world's largest cities. With our flexible ticketing and fare options, passengers can choose an optimal option to save on travel costs.

– HOW CAN PEOPLE WITH REDUCED MOBILITY USE THE METRO? LIFTS AND RAMPS ARE NOT EVERYWHERE.

– A Passenger Mobility Centre has been operating in Moscow since 2013. Its staff help passengers with impaired hearing, vision, and mobility, as well as elderly people, parents with small children, and large families to travel by metro. Help is provided throughout the journey, including outside the metro, free of charge.

–30%

reduction in monthly travel costs for Moscow residents since 20102[2]

Need to top up your Troyka card or buy a ticket? Easy!

35%
of all transactions are through ticket machines. 1,239 ticket machines in the metro

88%
fares are paid for with Troyka cards

Aid to passengers with reduced mobility

>650,000
PEOPLE used the service (including 152,000 in 2017)

>50%
of metro stations will be made wheelchair-accessible by 2020

To apply for assistance…

Call:
+ 7 495 622 73 41
+ 7 800 250 73 41
(from 7:00 a.m. to 8:00 p.m.)

Via the Moscow Metro mobile app

Via the website at:
www.mosmetro.ru

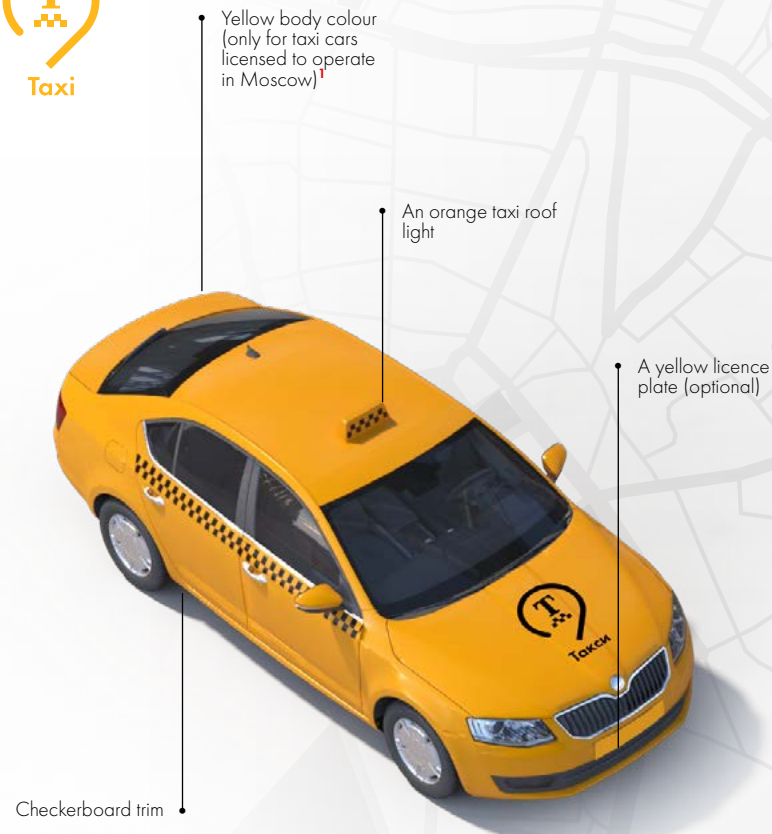
1 In nominal terms.
2 Based on the average monthly income rate and an assumed travel frequency of 40 trips per month.

TRAVELLING AROUND THE CITY:

TAXIS

Moscow Taxi cars need to meet the Moscow quality standard

Taxi



☑ Official work permit

The following must be available in the cabin:

- Terms of payment (rates)
- Information about the taxi operating company
- The driver's name card with a photo

1 Mandatory from 1 July 2018.
2 Moscow and Moscow Region taxis

– I AM AFRAID OF USING TAXIS BECAUSE DRIVERS ARE COMPLETE STRANGERS.

– Choose legal taxi services. A taxi's licence plate number can be checked in the Register posted in the Services section on the Moscow Mayor's website (see Public Transport/Taxi) at www.mos.ru. Some taxi companies also have driver rating systems, photo and video surveillance cameras, driver fatigue monitoring, and remote vehicle diagnostics.

72,000 TAXI CARS
operating in Moscow[2]

– HOW CAN I TELL A MOSCOW TAXI FROM OTHER CARS BY SIGHT?

– All Moscow taxis are yellow, including yellow licence plates and checkerboard signs. Since 1 July 2018, 100% taxi cars licensed to operate in Moscow are yellow in colour.

USD 7.9
average taxi fare in Moscow in 2017 (down 29% from 2015)

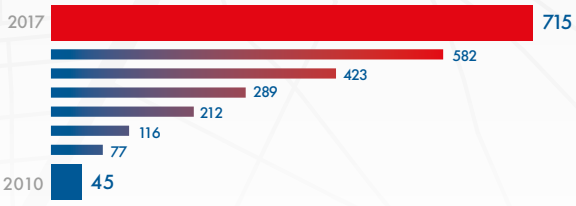
5–7 MIN
average pick-up time for Moscow taxis during peak hours (one of the best performers among the world's largest cities)

– LAST TIME WE TOOK A TAXI, WE ALMOST HAD A CAR ACCIDENT! WHERE SHOULD WE LODGE A COMPLAINT TO HAVE THIS RECKLESS DRIVER PROHIBITED FROM CARRYING PASSENGERS?

– If you have questions, complaints, or proposals, please contact the Moscow Transport contact centre or service centres. Some taxi and ride-sourcing services also use their own driver scorings and ratings.

For contact details of Moscow Transport service centres, see page 124

Number of taxi passengers in Moscow, thousand per day



Social Taxi

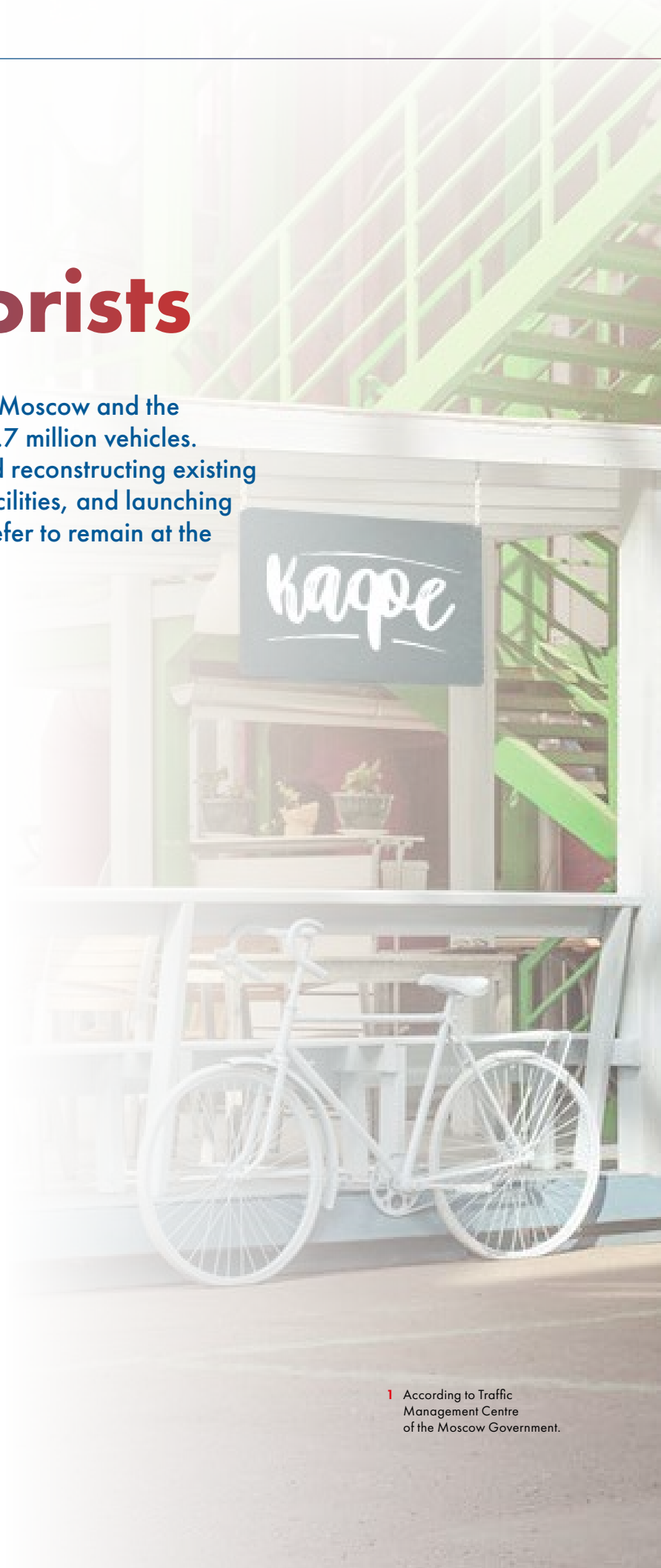
Social Taxi was launched in Moscow in 1994. Today, it is Russia's largest individual and group passenger service for people with reduced mobility, providing travel to healthcare, cultural, and social institutions.

Social Taxi operates over 130 buses, vans, and cars. All vehicles are fitted with entry lifts and restraints for wheelchairs. The service's drivers undergo special training.

>400,000
per year use the services of Social Taxi

A city for motorists

Since 2010, the number of cars registered in Moscow and the Moscow Region has increased by a third to 7.7 million vehicles. The Moscow Government is building new and reconstructing existing roads, managing road traffic and parking facilities, and launching alternative mobility options for those who prefer to remain at the wheel at all times.



3.6 million

vehicles move within the city every day

16%

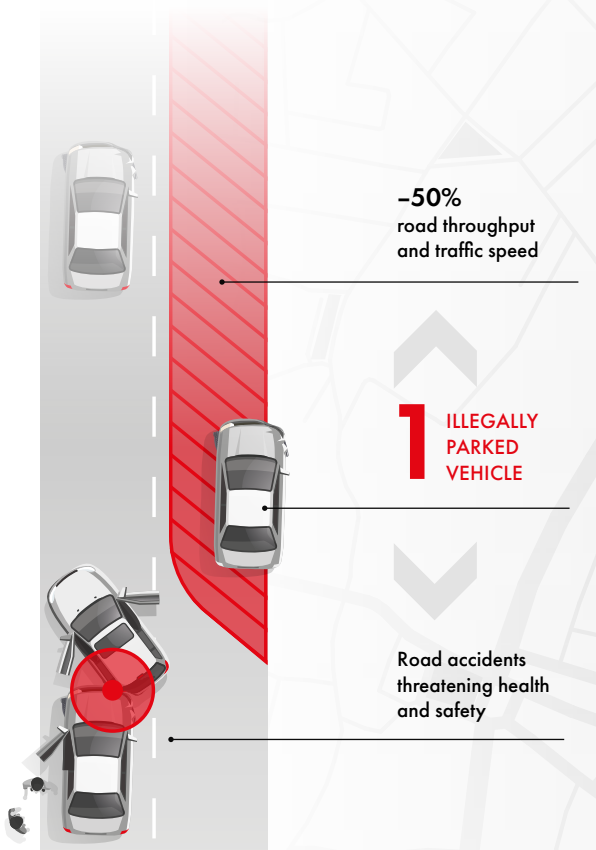
average speed increase on roads since 2010 (52 km/h in 2017)[1]

1 According to Traffic Management Centre of the Moscow Government.


Московский
каршеринг
BELKA
CAR

TRAVELLING AROUND THE CITY

PRIVATE VEHICLE



–50%
road throughput and traffic speed

1 ILLEGALLY PARKED VEHICLE

Road accidents threatening health and safety

Paid parking

80,000
parking spaces created since 2012

–65%
less time to find a parking space

Just **2.7%**
of all parking spaces are paid ones

– WHY WAS MY CAR TOWED? IT WASN'T IN THE WAY OF ANYTHING.

– Vehicle removal is a forced safeguard measure to protect 99.98% of law-abiding people from the 0.02% of offenders.

– PARKING WAS ALWAYS FREE, WHY IS IT PAID NOW? WHY SHOULD I PAY FOR AIR?

– Paid parking increases parking turnover. It is easier to find parking when two out of ten spaces are available, without having to cruise around creating unnecessary traffic, congesting roads, wasting your personal time, and causing stress when in search of a space. Paid parking has also resulted in lower road congestion and fewer road accidents caused by chaotically parked vehicles.

Moscow Parking

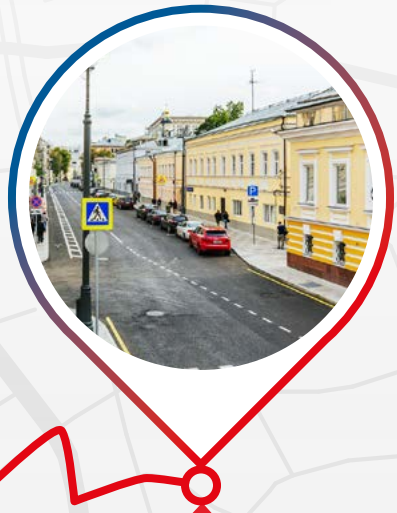
With the Moscow Parking mobile app, you can find and pay for different types of car parks.

ANDROID APP ON Google play

Download on the App Store

ABOUT 700 KM
roads built and reconstructed between 2010 and 2017 (including 60 km of commissioned new roads)

+25%
increase in road throughput in the city centre



Moscow Parking

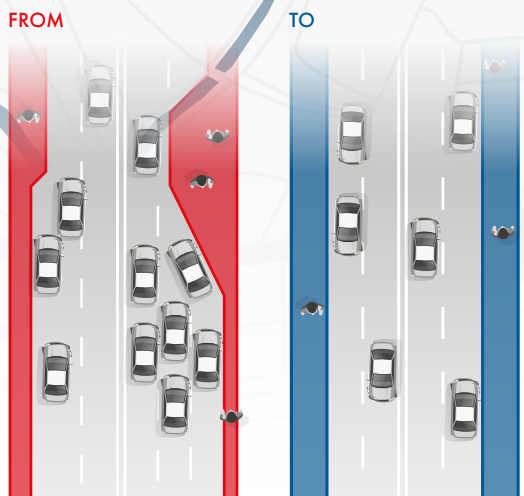
2.3 MILLION
downloads

– WHY EXPAND PAVEMENTS IN THE CITY CENTRE TO NARROW THE CARRIAGEWAY?

– Previously, the width of Moscow city centre roads was non-uniform, and the disparity resulted in bottlenecks, traffic jams, and frequent road accidents. Once reconstructed, excess parts of roads are given to pedestrians, with streamlined and faster traffic as a result.

– WHY NOT SIMPLY BUILD LOTS OF NEW ROADS TO ADDRESS CONGESTION?

– The historical buildings in Moscow leave little room for building new roads, especially in the centre, while the number of vehicles continues to grow. As a result, the road area per vehicle remains low in Moscow despite record-high road-building rates, at only 25 sq. m as compared to 95 sq m in London and 205 sq. m in New York.



TRAVELLING AROUND THE CITY:

CAR SHARING

Car sharing is a type of short-term car rental on a pay-by-minute or pay-by-hour basis. The service represents an alternative to private vehicles for trips within the city.

The Moscow Car Sharing System comprises 15[1] operators.

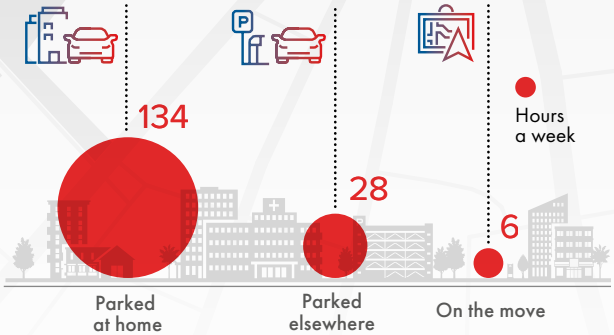
Делимобиль, you drive, BELKA CAR, Яндекс Драйв, CARLION, Timcar, CAR5, anytime, Rentmee, EASY RIDE, Матрешка car, CARENDA, iiF car, CAR4YOU, Карусель наш каршеринг

57%
OF USERS
are ready to forgo owning a car or driving their own vehicles within the city

– HOW WILL THE CITY BENEFIT FROM CAR SHARING?

– A motorist typically only drives a limited number of hours per week, between work and home. The car stands idle the rest of the time, but the owner still needs to pay for its parking, insurance, and maintenance. A shared car can be used repeatedly to reduce road congestion and costs for drivers.

How do Moscow residents use their private vehicles?



1 As at May 2018.

+5,000
new shared cars each year

Moscow carsharing

– WHY IS A SHARED CAR PREFERABLE TO A PRIVATE VEHICLE?

– The user does not need to pay for parking, fuel, insurance, or maintenance.

– HOW TO USE CAR SHARING?

– Register via an operator's website or mobile app. Each company has both age and driving experience restrictions for users. A car can be booked either online or via an app. The car unlocks via the app, with all necessary documents and ignition keys already inside. Once the trip is over, the fee will be automatically debited from the user's bank card.

Moscow Car Sharing System

6 MILLION TRIPS
in the first half of 2018 (as many as for the project's entire period since launch)

6–8 TRIPS A DAY
per vehicle within the Moscow Car Sharing project, the best performance in Europe

11,000 CARS
available

A city for businesses

For businesses of any size, from major holding companies to small-scale private entrepreneurs, the city's rapid growth provides a unique opportunity to expand operations and engage in ambitious projects supported by the Moscow Government.

– HOW TO BECOME MOSCOW'S PARTNER IN DEVELOPING TAXI SERVICES?

– The Government and Municipal Services Portal of Moscow is taking online applications for taxi licences. A licence provides access to a number of benefits, such as the right to use dedicated lanes and free parking at special taxi ranks, as well as partial reimbursements of car leasing costs or loan interest. A total of USD 5.6 million in subsidies was issued for car purchases over six years.

– IS IT WORTH STARTING MY OWN CAR-SHARING BUSINESS IN MOSCOW? WILL THE CITY AUTHORITIES SUPPORT ME?

– The sharing economy has been gaining traction worldwide, and the car sharing system has also rapidly grown in Moscow. Supported by the Moscow Government, it currently ranks No. 1 globally by growth rate. Over its first year of operation, Moscow outperformed Berlin and London by the number of trips in shared cars.

Companies can take advantage of the explosive growth and healthy competition in this market to expand their business. Businesses setting up car sharing schemes are eligible for support from the Moscow Government in the form of reduced parking fees and subsidies on fleet expansion.

Moscow Taxi

47,000 Moscow taxis

384 taxi ranks for **1,329** vehicles

2.7 years is the average vehicle age (the youngest taxi fleet in Europe)

260 million trips made in 2017 (16 times more than in 2010)

Moscow Car Sharing

11,000 vehicles

15 operators

> 1.5 million registrations in the system

– WHY IS THERE SO MUCH PRESSURE ON COMMERCIAL CARRIERS IN MOSCOW? HOW ARE SMALL BUSINESSES SUPPOSED TO EARN A LIVING?

– Both the city and private carriers will benefit from the new management model. Previously, private carriers incurred great losses due to unstable demand, and their aged fleets were not upgraded, thereby putting the lives of passengers and drivers at risk, while private bus carriers did not offer any free travel or reduced fares for school and university students or retirees.

Today, all carriers operate to unified quality and safety and standards. Large and comfortable buses have replaced uncomfortable, low-capacity vehicles. New vehicles can be leased on attractive terms.

Commercial carriers and SUE Mosgortrans are on equal footing when competing for contracts to operate certain routes, as all contracts are awarded through a bidding process. Private buses offer city-wide fares, with 40% of passengers now using free travel or reduced fares subsidised by the city. Providing contracted services to the city authorities guarantees a steady flow of business under a five-year government contract, regardless of demand, the economic situation, or other factors.

– WHY DO AUTHORITIES RESTRICT THE MOVEMENT OF TRUCKS AROUND THE CITY? IT'S HITTING THE BUSINESS COMMUNITY.

– For many years, trucks have put immense pressure on the city, both in traffic congestion and environmentally, while those crossing the city accounted for up to 30% of all freight traffic in Moscow. Truck drivers often chose to drive in smaller streets within residential districts.

We have developed a freight framework to streamline traffic by all types of vehicles within the city, providing better logistical opportunities for businesses with dedicated streets which can accommodate for trucks and are located far from residential districts. Similar zones exist in the world's largest cities such as London and New York, and have shown to improve and streamline freight delivery. For better load handling, special parking bays for trucks have been established in the city centre.

Commercial surface transport

214 routes

2,000 new buses

About 1 million trips: average daily passenger traffic

Freight framework

53% respondents of the Active Citizen project have noted a positive effect from the freight framework

A **17%–35%** decrease in pollutant emissions in pilot areas (Northern, North-Eastern, and Western Districts)

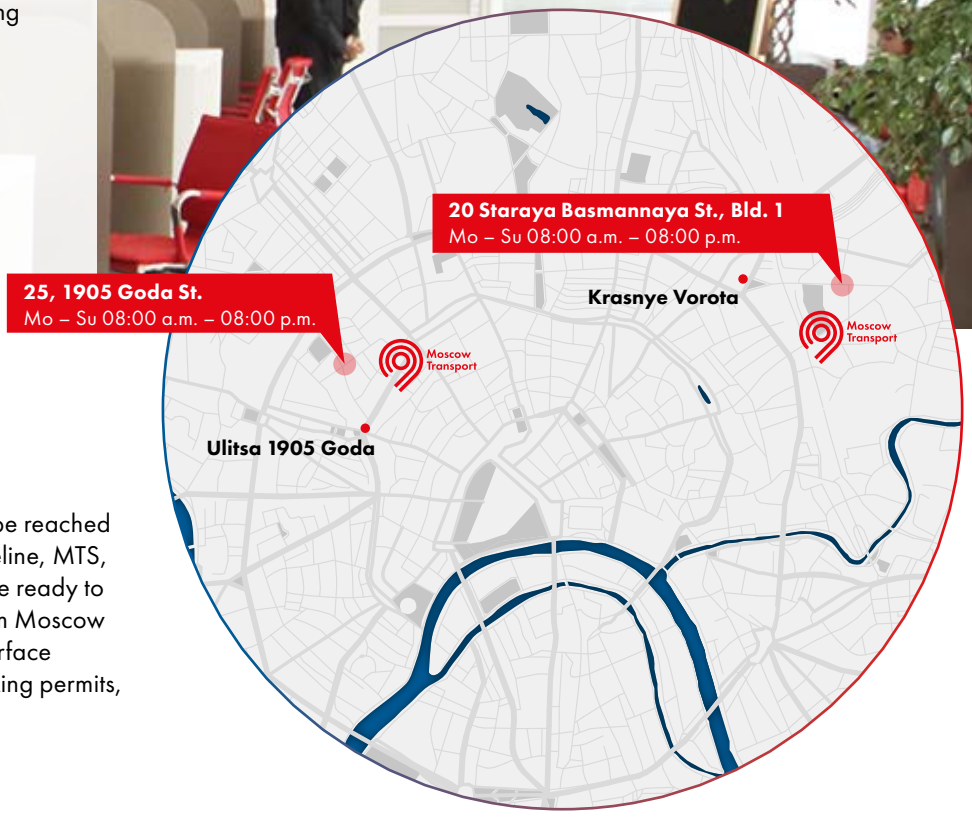
Contacts

Moscow Transport service centres

The Moscow Transport service centres in Staraya Basmannaya Street and 1905 Goda Street operate on a one-stop shop basis. Here, users can obtain advice on all issues related to parking, public transport operation, fares, and cycling zones.

>260,000 visitors
served by the service centres in 2017

3 min. – the average waiting time



Moscow Transport contact centre

The Moscow Transport contact centre can be reached by calling +7 495 539 54 54 or 3210 (Beeline, MTS, MegaFon, Tele2). The centre's operators are ready to answer any transport-related questions from Moscow residents, including on: metro operation, surface transport schedules, routes, and fares, parking permits, and so on.

> 2.2 million calls
were handled by agents of the Moscow Transport contact centre in 2017

Unified transport portal

The unified transport portal offers all the information passengers need. Passengers can use this website to choose an optimal route and fare for their trip, top up their Troyka cards, find out the arrival times of surface public transport, intercity buses, suburban trains, and Aeroexpress, as well as verify a taxi driver's licence, check for road congestion, apply for support at the Passenger Mobility Centre, and receive many other services.

www.transport.mos.ru/en

1.5 million unique users
of the Moscow Transport portal in 2017