

Record-high rolling stock and fleet replacement

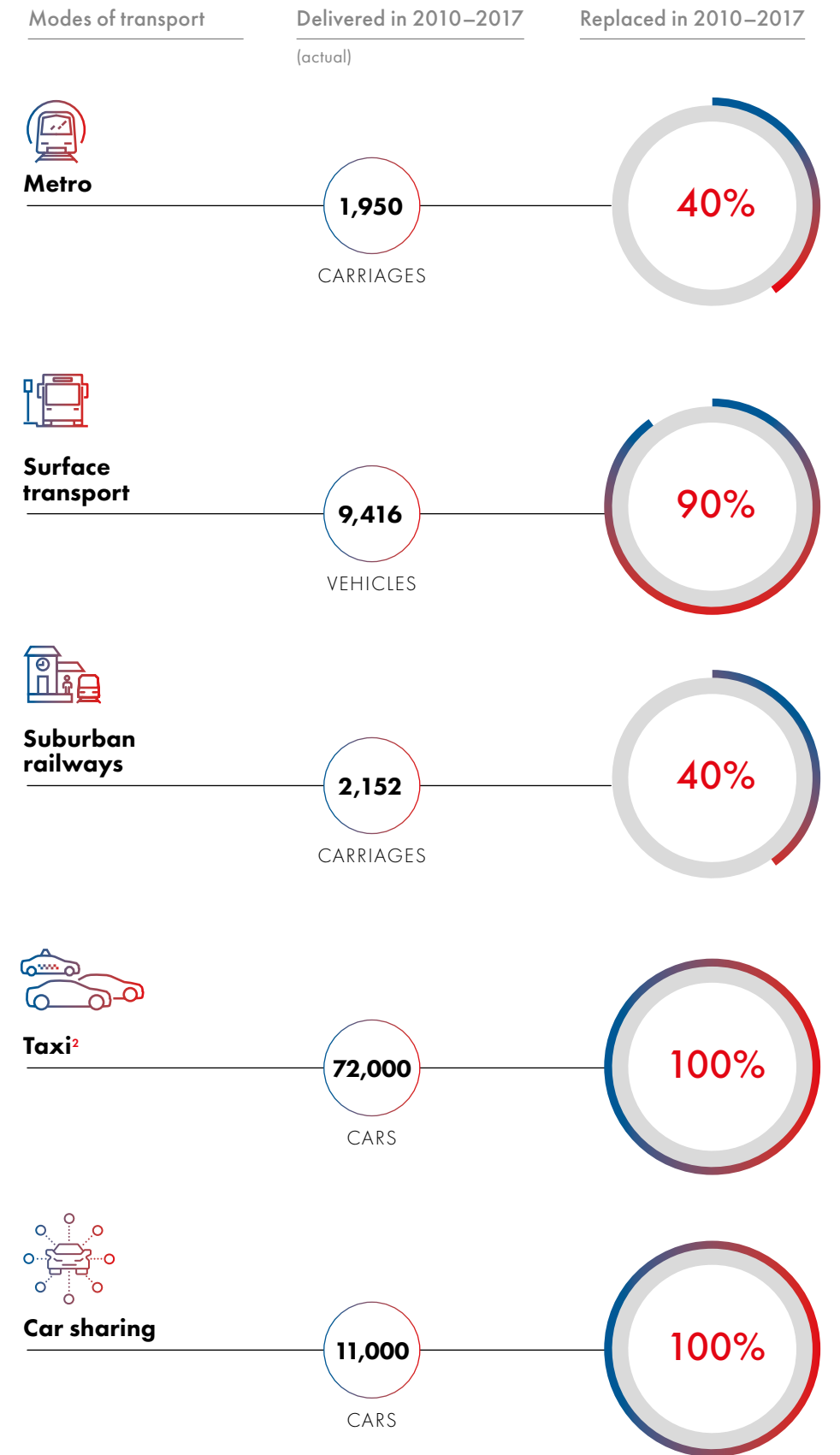
Moscow has been consistently replacing its public transport rolling stock and fleets.

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 contracts¹

All rolling stock is Russia-made



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

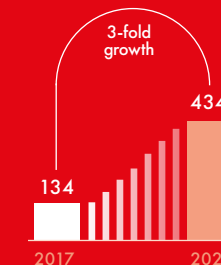
VITYAZ-M TRAM

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.

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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

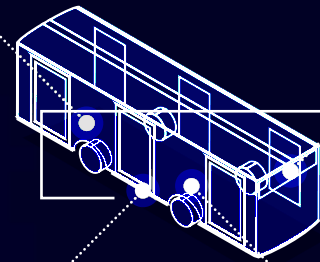
is the most advanced and environmentally friendly surface passenger transport in the world.

To be launched in September 2018

МОСКОВСКИЙ
ТРАНСПОРТ

• 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



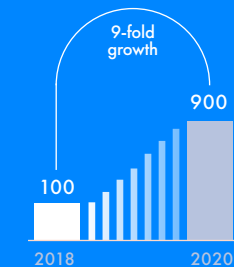
Specially designed for Moscow

• 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.