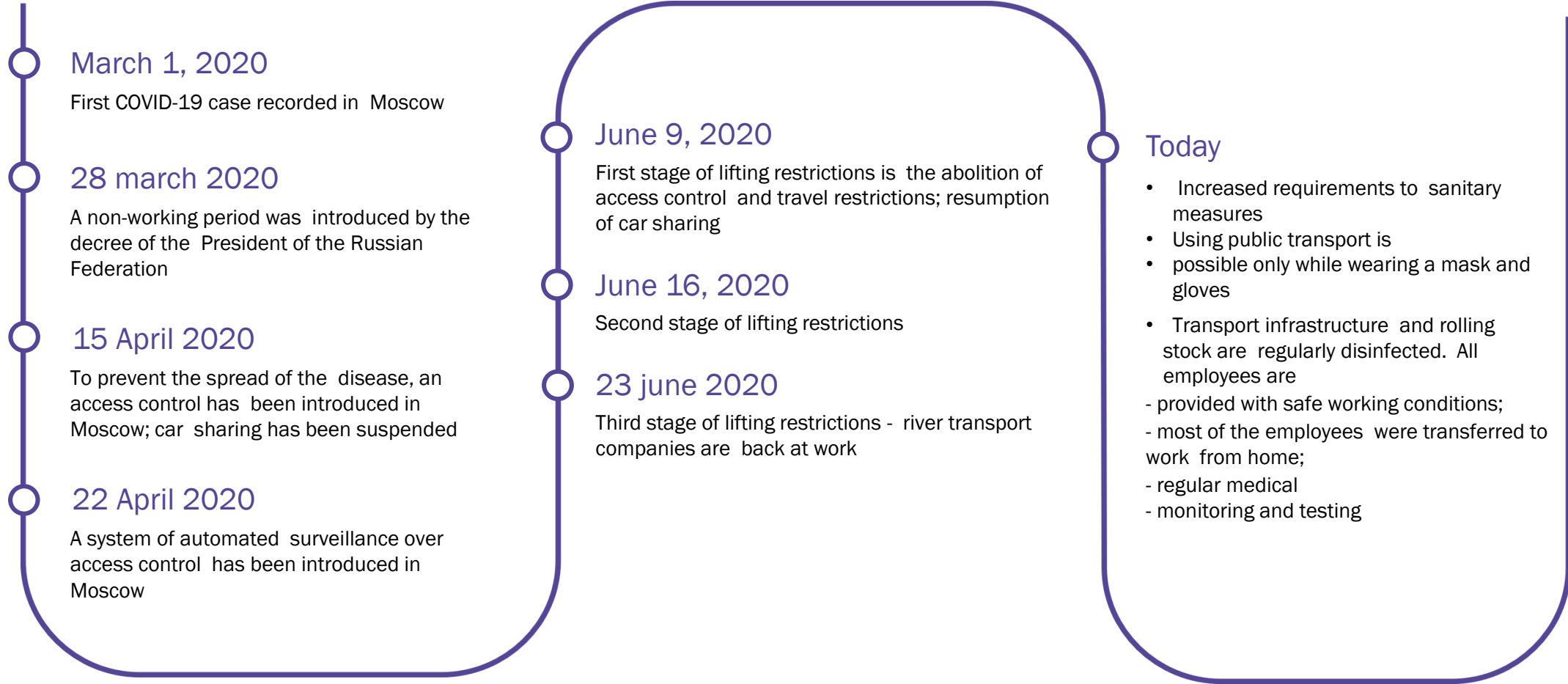


The operation of Moscow Transport during and after the pandemic

Moscow Research and Development Institute for Urban Transportation MosTransProekt



Urban transportation did not reduce the volume of work during the pandemic



The major technological solutions to prevent the spread of COVID-19



The Mayor of Moscow
Sergei Sobyenin



We actually saved thousands of lives, ensuring safety in transport, observing sanitary security measures, multiplying the disinfection of cars and transport hubs. This is a great contribution to the safety of citizens, a huge contribution to the development of the economy, as we have preserved the transport infrastructure, which is a vital sphere for the city.

The Transport Complex provided safe access to urban mobility



Integration

- The automated permit control system on all types of urban transport
- The Troika card provides access to public transport services
- The online access to a permit registration



Complexity

- The automated permit control at all infrastructure facilities
- The Moscow Assistant mobile app entered the Top-12 of the best innovative solutions in the world for fighting against COVID-19
- The access to a permit check via the Moscow Assistant mobile application and the Unified Transport Portal
- The automatic violating cars' detection system – 5000 cameras

Ensuring safe urban mobility

Every day we disinfect



900 000

square meters cleaned daily
disinfected in the subway

100%

trains are disinfected
by quartzing

**Up to 2 times
more**

air filters in trains with built-in air
conditioning are changed



The volume of daily
disinfection has
increased



> 8 000

buses, electric buses and trams are
disinfected every time they return to the
vehicle fleet or depot, as well as during
the day at the final stops of the route

100%

of the interior surfaces are treated with
special disinfectants

30%

more air exchange in the
underground

> 1 600

ticket machines are washed
every hour

1,5-2

hours, frequent disinfection of
handrails, turnstiles, door handles,
checkout areas in lobbies and on
platforms is carried out



The regular disinfection of vehicles

The “new norm” of urban transport operation

Mandatory use of masks and gloves

Regular communication on safety rules Social
distancing

Hand sanitizers at metro, the MCC and the MCD stations - 2 800
units

Hand sanitizers at major surface transport stops - 125 units

Contactless payment

Informing passengers

- Moscow Transport publishes only verified information in its official channels:
- ✓ **The Unified Transport Portal** (in Russian and English)
- ✓ The official **Telegram channel** has more than **57,000 subscribers**
- ✓ Our official social media accounts have **over 200,000 followers** – Twitter, Facebook, Instagram, VK, OK



Communication channels:

- ✓ **110,000 posters** inform about the prevention of Coronavirus
- ✓ **36,000 information materials** remind metro passengers about linking electronic passes to
- ✓ **40,000 warning stickers** remind passengers of social distancing in public transport
- ✓ **3,800 media screens** inform ground transport passengers about travel rules during the pandemic
- ✓ **177 traffic signs** and **10,000 leaflets** remind drivers to issue digital passes

- ✓ **99% of passengers wear masks**
- ✓ **76% use gloves**



Despite the restrictions being lifted, Moscow transport continues to care about muscovites



Passengers

- Safe use of all types of urban transport is ensured
- Cleaning regulations are permanently changed
- Passengers will be able to renew their tickets at ticket offices, ticket machines and online



Employees

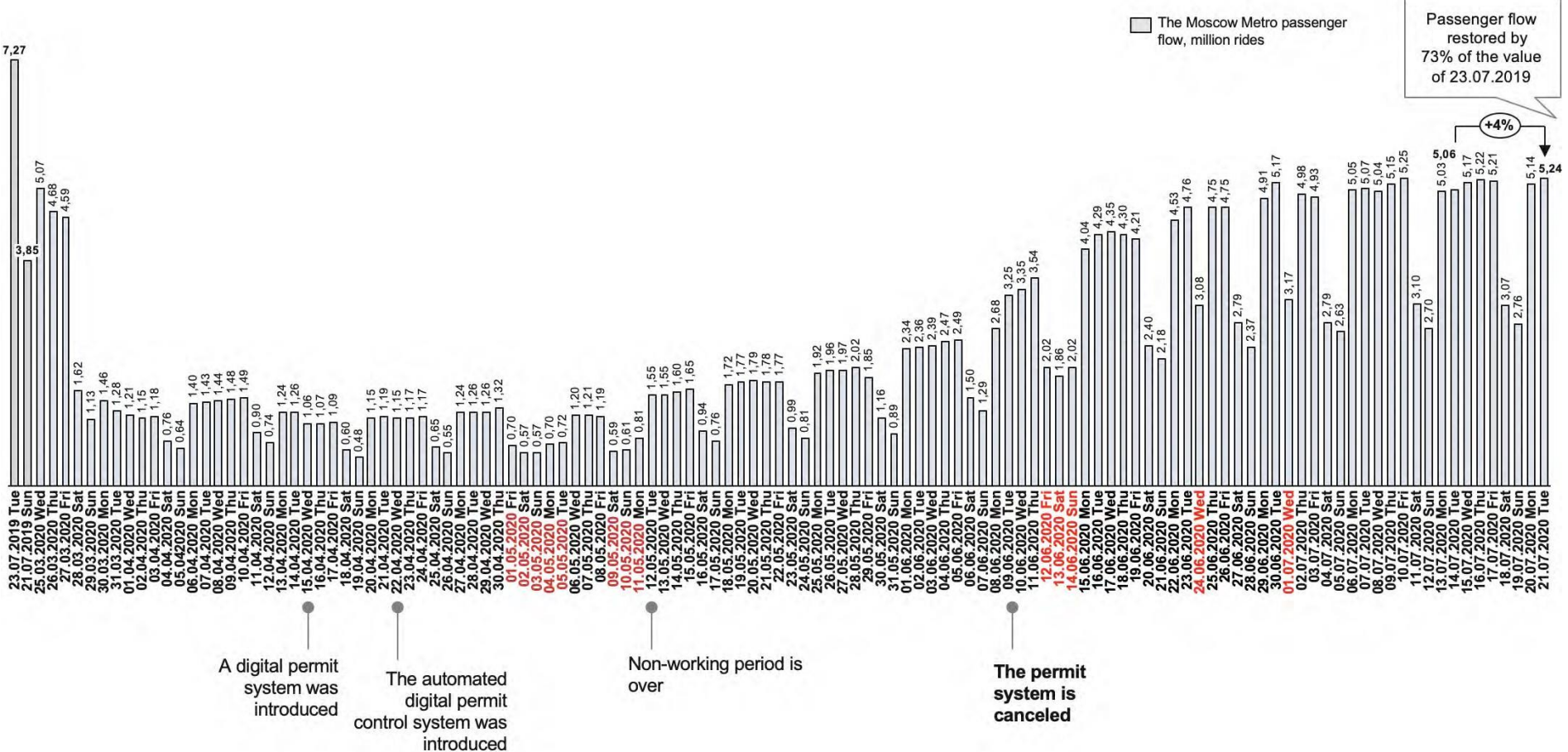
- Some of the employees were transferred to work from home
- The necessary protection system has been created in the working areas - regular testing, temperature measurement, disinfection and use of PPE and antiseptics



Transport operators

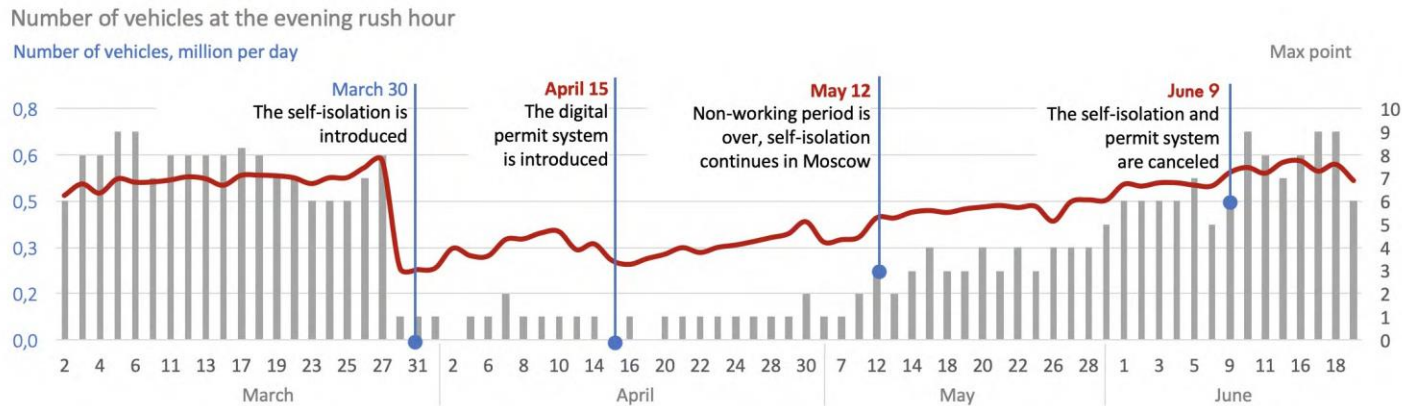
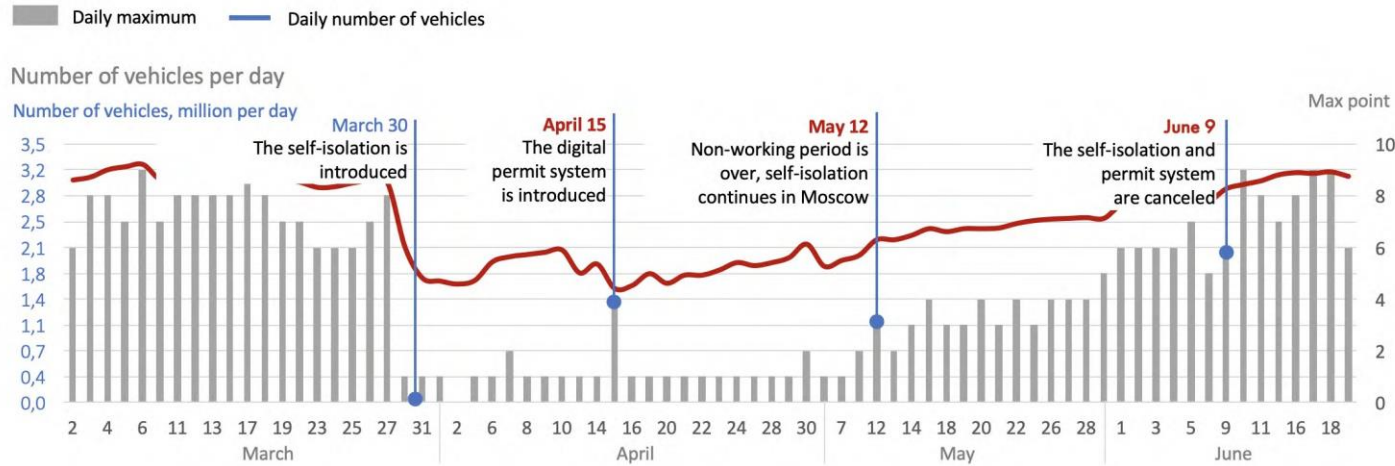
- The implementation of infrastructure megaprojects and the purchase of new rolling stock to ensure the availability of high-quality and safe public transport
- Private carriers get paid in full - transport service for people works full time

The Moscow Transport passenger flow (compared to the period before self-isolation)



Timely restrictions have helped to dramatically reduce the number of contacts and cases of COVID-19

The number of vehicles and road congestion



The increase in the number of cars is:

- Increased road congestion
- Growth in the number of road accidents
- Increased emissions of CO₂, NO₂ and particulate matter

→ poor quality of life

The use of public transport must be supported



Private vehicle \neq Personal safety

New working conditions for urban transport



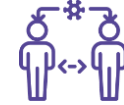
Monitoring the load of rolling stock

- The automated passenger traffic monitoring system works in real time
- In the Moscow Transport mobile app the function of determining urban transport congestion has been implemented for passengers
- Optimal distribution of passenger traffic - transport from the least loaded routes is redirected to more in-demand routes
- The most popular routes operate with the maximum amount of rolling stock on the line



Alternative mobility

- Residents began to walk and ride bicycles more often
- Bicycle rentals have a 30% discount
- City bike rental is free for couriers and volunteers
- More than 2 000 applications were received in the course of the implementation of a crowdsourcing project for the development of pedestrian and bicycle infrastructure



Citizens' safety

- **Most of the client services are being converted to online format**
- Access to PPE and disinfection is provided throughout the infrastructure
- Floor stickers remind on the observance of the distance and indicate more free cars
- Seat stickers help choose the safest seat



The experiment on the Line 7 of the Moscow Metro

- The launch – November 2020
- By 50% reduced fee off peak hours
- Employers and educational institutions are encouraged to switch to remote work or change the start time of a working day

Moscow continues to invest in rolling stock renewal (2010-2023)*

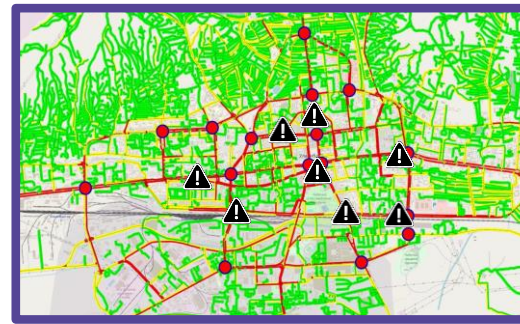
		2010-2020 (June)	Renewal, %	2020	2021	2022	2023	Total	Renewal, %
	Bus	Mosgortrans (including tourist routes) Carriers under government contracts 10 454	100	1345	888**			2 233	100
	Tram	495	70	70	60	144	50	324	100
	E-bus	400	New mode of transport	300	600	650	800	2 350	
	Metro cars	3 189	62	551	337	336	328	1 552	80
	Suburban trains' cars	3202	60	441	184	352	605	1 582	80
	Taxi (in Moscow)	~70 000*		5 000	12 000	12 000	12 000	41 000	
	Car sharing	32 000		2 000	4 000	5 000	5 000	16 000	
	Bike sharing	6 100		1 000	1 000	1 000	1 000	4 000	

* As of June 15, 2020

** Current permits for taxi operation as of 15.06.2020: in Moscow –52 333, in Moscow Region –85 892.

*** Buses of large and extra-large capacity for the transition period from 2020, as well as transport within the framework of the mobilization task

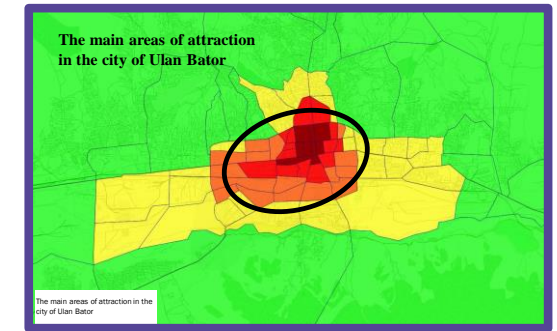
Transportation strategy of Ulaanbaatar city



▲ high-risk zones
 ■ areas of typical congestion
 ● primary places for optimizing traffic management



Traffic management and traffic light control

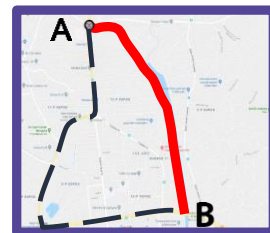


○ zone of priority structuring and administration of parking space of Ankara
Traffic congestion on the road network
 <20% >60%
 <40% >80%
 <60%

Development and administration of parking space

Achievable result:

- Reducing the number of road accidents with injured by 15%,
- Reducing the load on the transport network in the central part of the city by 12 %



A new road along the seafront from St. Doloon Maudlin Zam to str Their Toiruu (Ikh Toiruu)



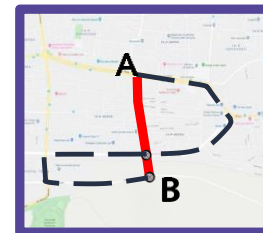
Distance by offer: **2700 m.**
 Current distance: **4300 m.**
1.5 times overmillage (1600 m).



Connection of Unesco St to Bolgarin Gudamj by tunnel via Peace Ave



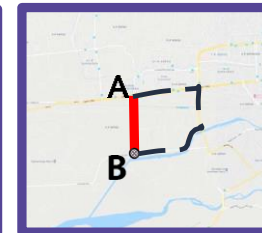
Distance by offer: **300 m.**
 Current distance: **1200 m.**
4 times overmillage (900 m).



Connection Ave. Mira from Narry Zam street and construction of an overpass to Hunnu Gudamj street



Distance by offer: **1250 m.**
 Current distance: **5100 m.**
4 times overmillage (3850 m).

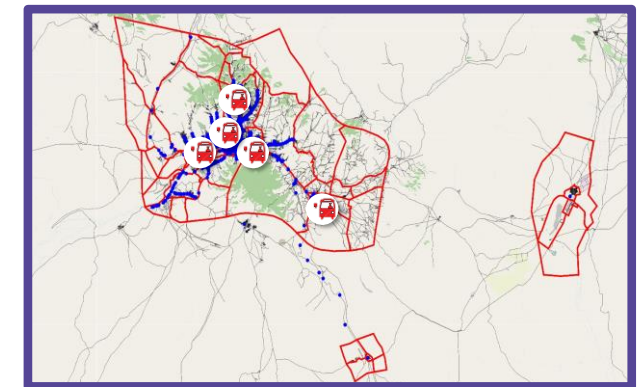


Construction of an overpass between prosp. Mira and CHPP-4 Inn Deputy



Distance by offer: **1400 m.**
 Current distance: **4900 m.**
3.5 times overmillage (3500 m).

Development of the road network



Microdistricts with a low level of pedestrian accessibility of SUPT stops
 Walking distance accessibility of a GUPT stop within a radius of 500 m

Availability of public transport