



*МОСКОВСКИЙ АВТОМОБИЛЬНО-
ДОРОЖНЫЙ ГОСУДАРСТВЕННЫЙ
ТЕХНИЧЕСКИЙ УНИВЕРСИТЕТ*

МАДИ

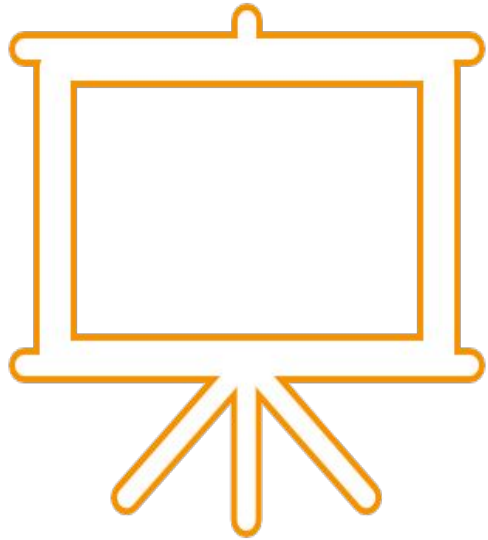
UNIVERSITÉ DE
VERSAILLES
ST-QUENTIN-EN-YVELINES



WHAT SUSTAINABLE TRANSPORT SYSTEM FOR MOSCOW CITY OF 2030? Part 1

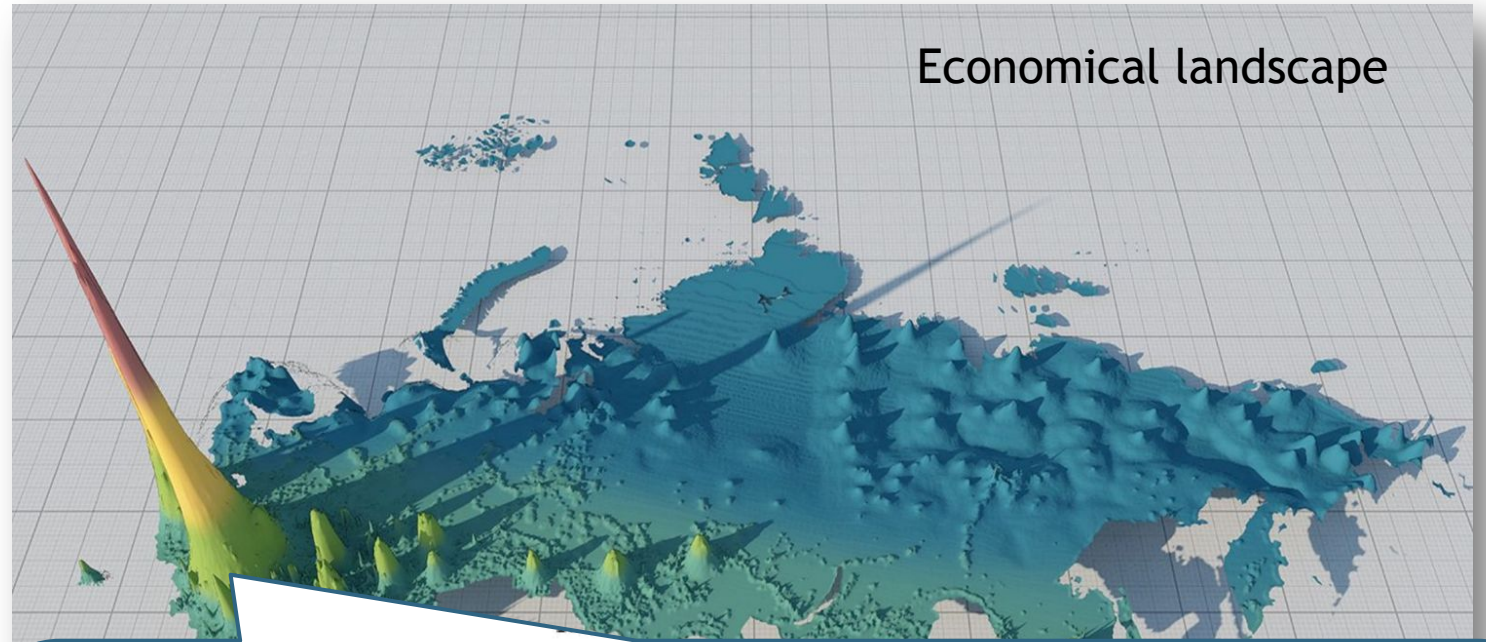


Introduction



External context

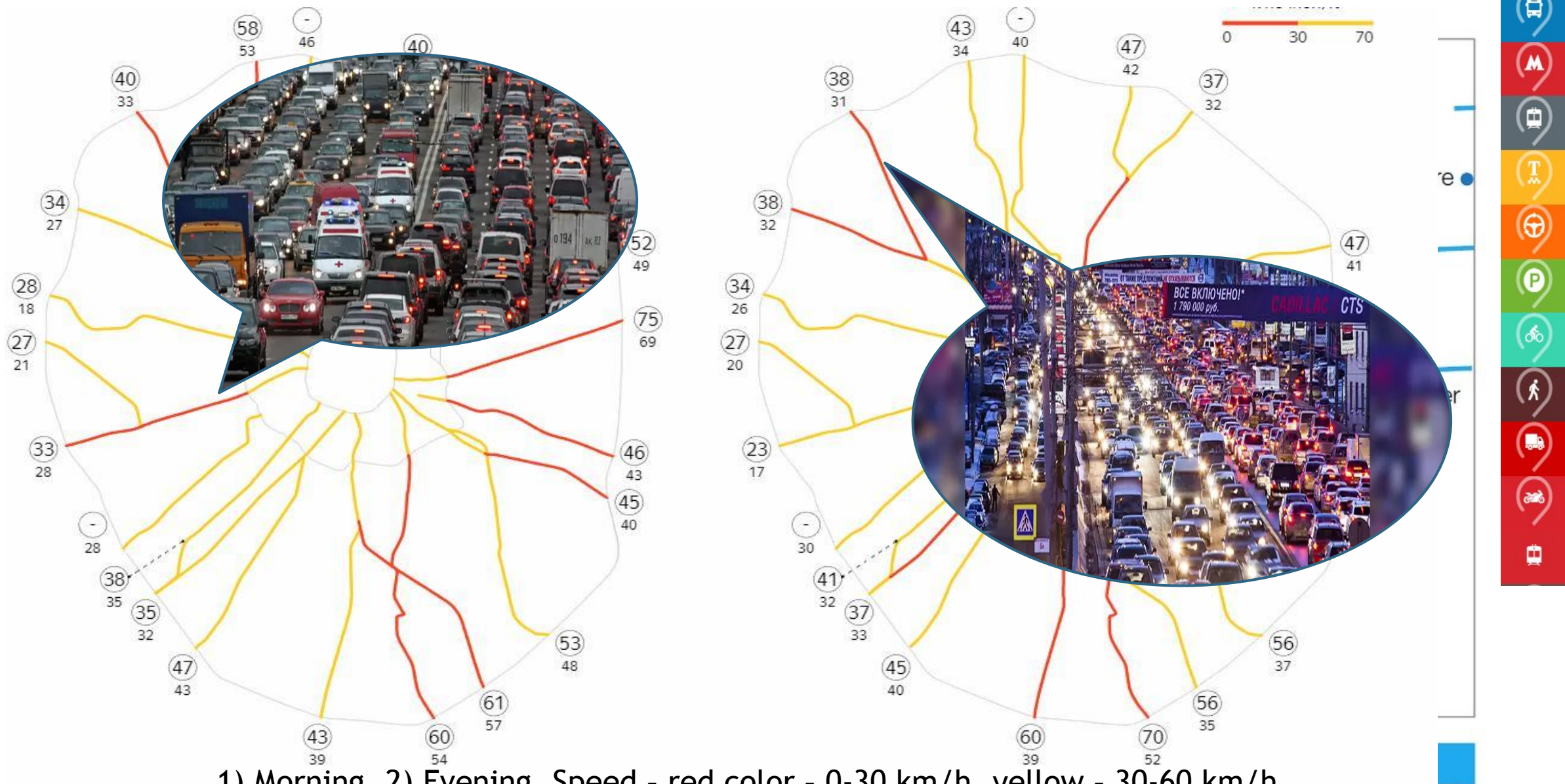
Moscow is the capital of Russia



No	City	Population, thousand people	Budget expenses in billion rubles	Per capita population, thousand rubles.
1	Moscow	12330	1751	142
2	St. Petersburg	5226	506	97
3	Novosibirsk	1584	35	22
4	Yekaterinburg	1444	34	24
5	Nizhny Novgorod	1267	23	18
6	Kazan	1217	19	16

Main cities with per capital income

Public perception vs. reality



1) Morning, 2) Evening. Speed - red color - 0-30 km/h, yellow - 30-60 km/h
Runners-up

Aggregated ranking by objective indicators

Leaders

Tourism

21 million people

Over the past 7 years, the number of tourists has increased by 65 percent, from 12.8 million to 21 million people. City revenues from tourism, festivals and cultural events have soared by 70 percent. A new navigation system has been introduced for the convenience of city residents and tourists: signs and markers are currently available in eight administrative areas as well as at every bus stop

Construction

21,2 million

The city no longer implements high-density (infill) construction projects, and construction of properties with an area of 21.2 million square metres has been cancelled. New hospitals, schools and kindergartens, transport interchanges and metro stations appear each year.

Sports

93 facilities

Since 2011, the city has opened over 90 new sports facilities, and the number of city residents preferring a healthy lifestyle has doubled. During the summer of 2018, Moscow hosted the 2018 FIFA World Cup. Luzhniki Stadium was renovated in the run-up to the event, and home stadiums for Spartak and CSKA were also built.

Social care and assistance

430 billion roubles

The social-sector funding has almost doubled on 2011. In 2018, 430 billion roubles were allocated for social care and assistance projects. Apart from cash payments, the city implements other projects that make life easier. For example, 85 percent of buses, trolleybuses and trams are adapted for people with disabilities and to add to this the Exciting Activities for Senior Citizens project has been launched.

Environment

90 trees

Since 2013, the city has planted over 90,000 trees and 1.9 million shrubs under the One Million Trees project. The air is becoming cleaner: Nitrogen oxide and carbon oxide emissions are down 20 and 30 percent, respectively, and those of tiny particles have decreased by an average of ten percent. And tap water no longer reeks of chlorine.

Parks and green zones

550 parks

Since 2011, the city has improved 550 parks and green territories, including the creation of 259 new parks. In 2017, 113 green zones were improved. There are plans to still improve 84 parks before the year is out. Trees and shrubs cover 49 percent of the city's area.

Economy and business

76,6%

Since 2011, the city has improved 550 parks and green territories, including the creation of 259 new parks. In 2017, 113 green zones were improved. There are plans to still improve 84 parks before the year is out. Trees and shrubs cover 49 percent of the city's area.

Building and courtyard

21 875 yards

By 2015, the city renovated 105,900 residential-building entrances and sections and replaced 29,500 lifts in apartment houses. In all, 21,875 courtyards were improved in 2011-2016. Parking space volumes tripled, and 17,353 new playgrounds and 4,487 sports facilities were installed.

Science and innovations

34

The city has established technology parks accommodating thousands of small and medium-sized innovation companies. 39 industrial complexes prioritizing innovation development have been registered. 12 technology parks for children are being developed at local universities, offering classes for school children.

Trade

96,4%

The number of weekend markets has increased tenfold since early 2014, there are 102 market places. Over 4,000 illegal trading facilities have been dismantled during the past five years, a standard system for siting kiosks has been drafted, and a 96.6-percent outlet-accessibility coefficient is now posted.

Culture

42 facilities

In the past few years, Moscow built 42 new cultural facilities and restored over 1,000 architectural landmarks, including the Arch of Triumph on Kutuzovsky Prospekt, the Pashkov House, the Gnessin School of Music, the Izvestia building, Helikon Opera and many others as well.

Self-city



Policy



Sergei Sobyenin

MAYOR OF MOSCOW

2010



Appointed Moscow Mayor for a five year term by the Moscow City Duma upon the recommendation of President Dmitry Medvedev.

2018



Sworn in as Moscow Mayor on 18 September. At the inauguration ceremony, Sergei Sobyenin thanked Muscovites for their trust and announced that reforms in healthcare, transport, city beautification, urban economy and education would continue.

KEY PERFORMANCE INDICATORS

In 2010-2018, the city continued to develop steadily and posted positive changes in various areas, including demography, the economy, the quality of the local infrastructure plus the living standards

77,9 years

average life expectancy in Moscow is 3.8 years more on 2010

129 centres

opened in Moscow, and they provide 170 government services, with extraterritorial services accounting for 98 percent

over **1,7** million

people were covered by targeted social care programmes in 2013-2017

THE MAIN OBJECTIVE OF URBAN DEVELOPMENT POLICY MAYOR MOSCOW – CREATION COMFORTABLE FOR LIFE AND WORK OF THE MOSCOW CITY ENVIRONMENT



TRANSPORT INFRASTRUCTURE

Walking distance to public transport, the creation of alternative traffic routes.



HOUSING AND IMPROVEMENT

Home Improvement Muscovites, increased comfort of living



SOCIAL INFRASTRUCTURE

Improving the quality of service education and health



PARKS, PUBLIC SPACES CULTURAL OBJECTS

New environment for recreation and creativity



INDIANS AND NEW MOSCOW

New growth points, improvement urban environment



SPORTS OBJECTS

New features for physical development and healthy lifestyles



PRODUCTION OBJECTS AND COMMERCE

Creation of new jobs tax base growth

■ MAIN RESULT
ANNUAL GROWTH OF POSSIBILITIES OF MUSCOVITES IN ALL SPHERES OF URBAN LIFE

Moscow 2018

Governance

Unified portal with every city service (mos.ru)

250 services provided digitally

Unified call center

'Active citizen' and 'Our city' projects

Crowd-sourcing platform (crowd.mos.ru)

Open data portal



Information technologies and communications

Well-developed public Wi-Fi network

High level of coverage and quality of cellular networks

High data-exchange rate in fixed-line communication networks

Low fares for mobile communications and Internet

Safety

Information and analytics system for crime and public safety monitoring

Video surveillance and video analytics system

Emergency public notification system

Operational-service management system



Finances, manufacturing, and innovations

Piloting innovative solutions in 'smart' residential blocks

Supporting priority branches of Moscow's industry

Online payment for public and municipal services via mos.ru

Urban planning

Information and analytical system for urban planning management

All public services related to urban planning are virtually connected and provided in electronic format

Project office for implementation of building information modeling (BIM) in construction industry

Pilot projects using smart home technology in 'smart' residential blocks

'Smart' standards for designing house-wide digital systems



Municipal infrastructure

Automated system for resource consumption accounting

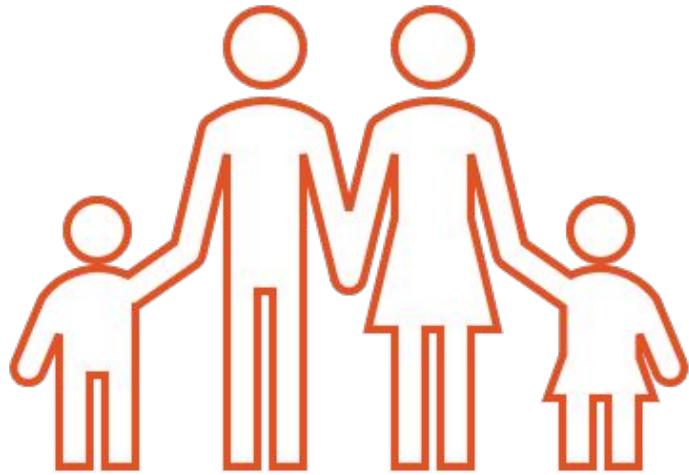
Unified information and payment center

Unified dispatching control center

GLONASS-based system for municipal vehicles monitoring

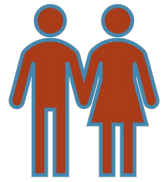
Outdoor lighting information and management system

Electronic meetings between apartment owners



Society

Women 53%



Men 47%

91,6% - Russian nation

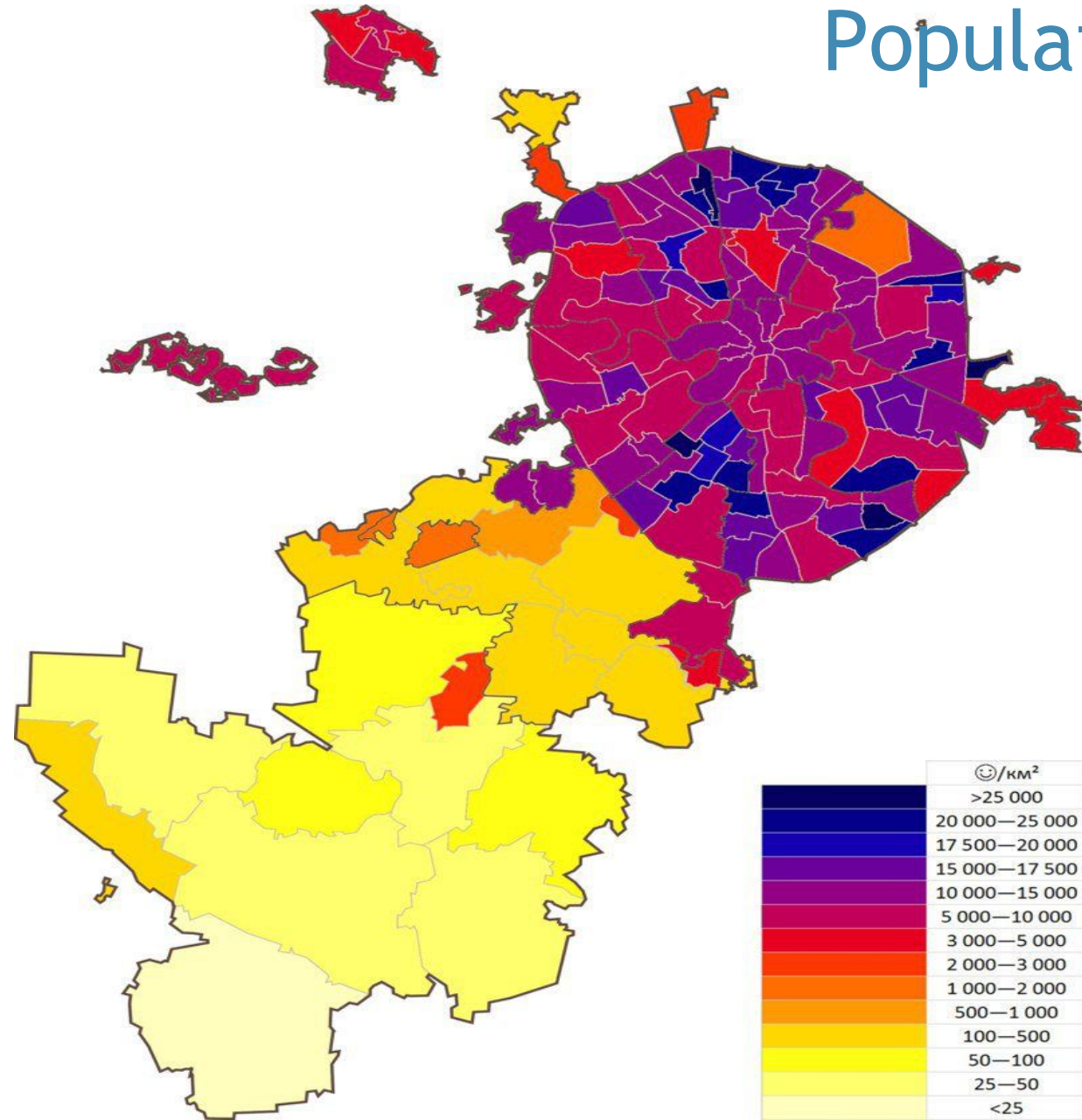
8,4% - Other

Total

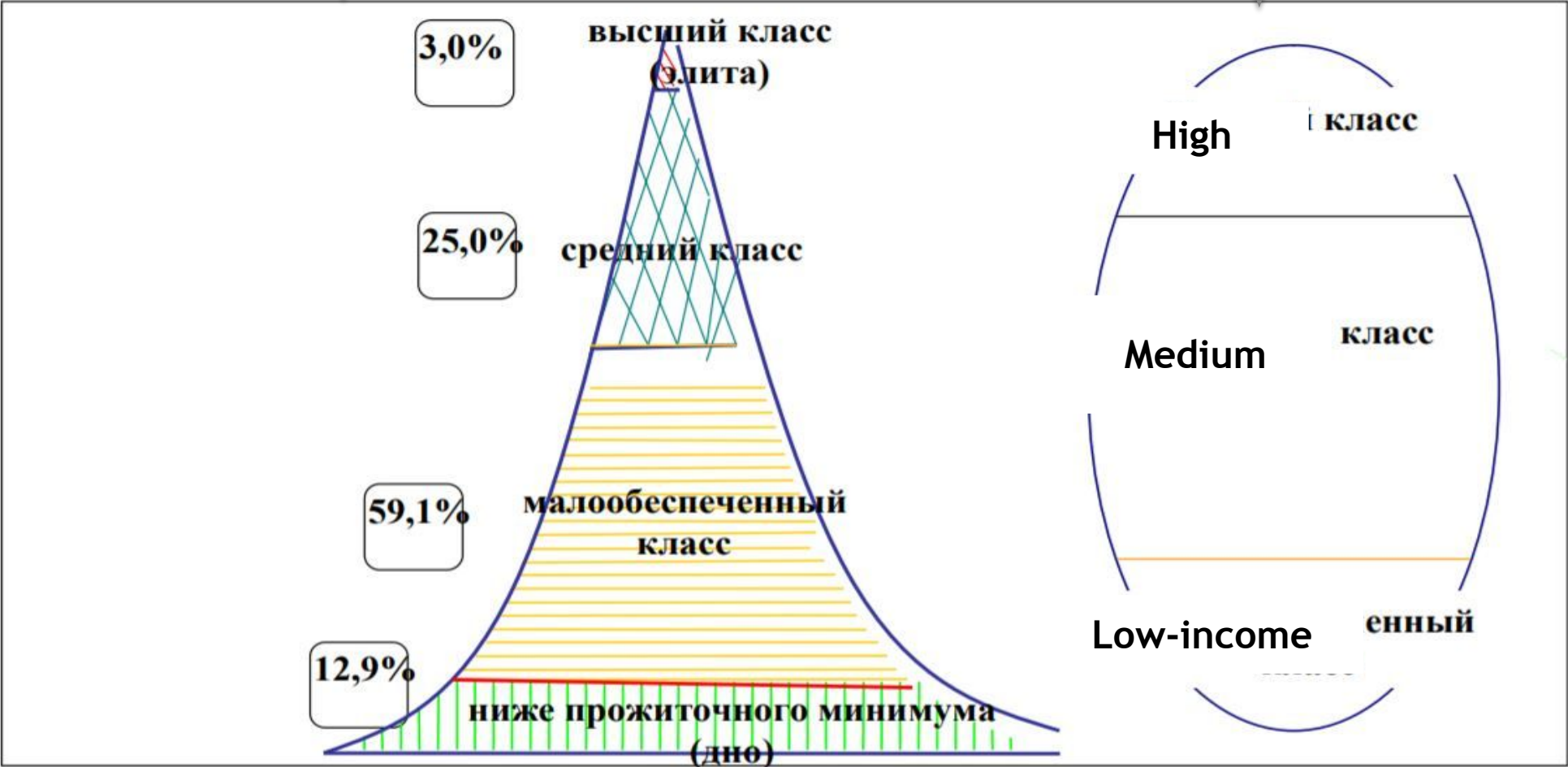
12,300,000 people

Workers	Old age	Children and teenagers
65%	15%	20%

Population



Population structure by per capita expenditure for Moscow VS other developed countries



Salary

1

	The poorest (10%)	Poor (60%)	Middle class (20%)	Rich (10%)
Population	1.2 million	7.2 million	2.4 million	1.2 million
Salary - rubles / month / person.	9.26 to 15.35 thousand	15.35 to 53.46 thousand	53.46 to 115.13 thousand	115.1 thousand to 184 million

2

	The subsistence minimum (SM), rub.				Population with cash income below the SM, %
	Whole population	Working people	Pensioners	Children	
2010	588	615	4521	109	12,5
2011	6369	6878	5032	6157	12,7
2017	10088	10899	8315	9925	N/D
III Qu. 2016	9889	10678	8136	9668	12,8
III Qu. 2017	10328	11160	8496	10181	13,1

3

Income class	Housing class
Below the subsistence minimum ("bottom")	Municipal housing
Low-income class	Economy class
Little class	Middle class
High class	Cottages, business class and elite

Support for persons with disabilities in Moscow in 2018

More than 1m disabled people live in the capital

Среди них



Age structure



Medical and social support

5 центров медицинской и 11 центров социальной реабилитации

Амбулаторные центры

Кабинеты паллиативной помощи в больницах

97 реабилитационных отделений

Коррекционные школы и детские сады



Около **30 тыс.** человек получили услуги по социальной реабилитации в 2018 г.

В том числе **10,5 тыс.** проходили лечение по системе выездной реабилитации

Support

More than 27k children study on Moscow school

В том числе



85% social important objects in Moscow absolutely or partly is able for using by disabled people



Более **1 тыс.** потолочных подъемных систем установлено в квартирах

Свыше **3 тыс.** подъемных платформ налажено в подъездах жилых домов

Low floor transport



Более **250** поездов столичного метро оборудовано местами для инвалидов-колясочников

Benefits and Payments for disabled people, rub * 10³

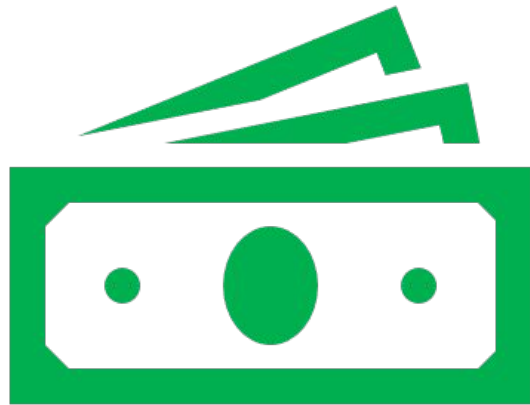
Доплата к пенсии неработающих и отдельной категории работающих инвалидов **17,5**

По уходу за ребенком-инвалидом в возрасте до 18 лет или за инвалидом с детства в возрасте до 23 лет **12**

На ребенка, в семье которого один или оба родителя являются неработающими инвалидами I или II группы **12**

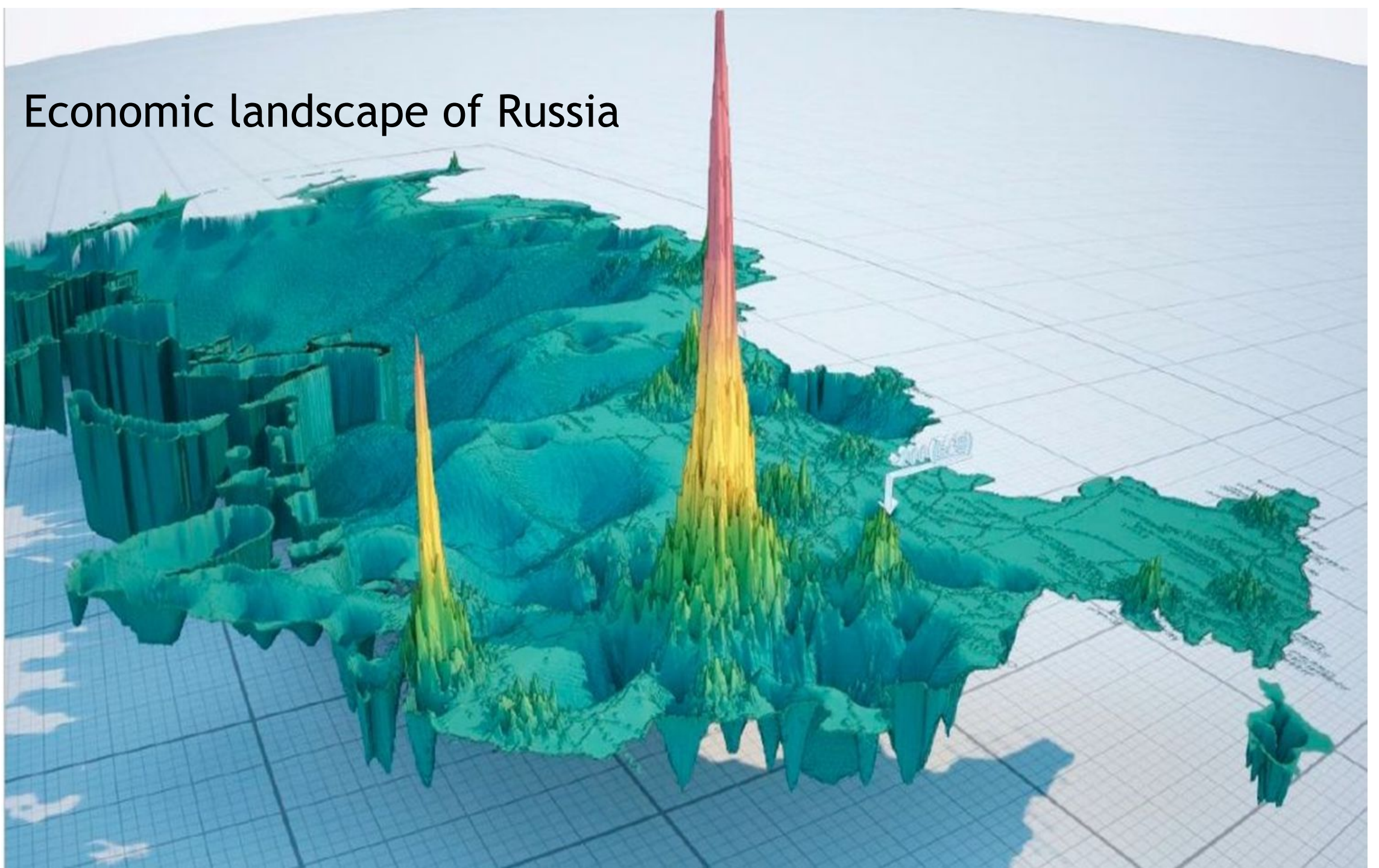
На школьную одежду детям-инвалидам **10**

Участникам и инвалидам Великой Отечественной войны **2**



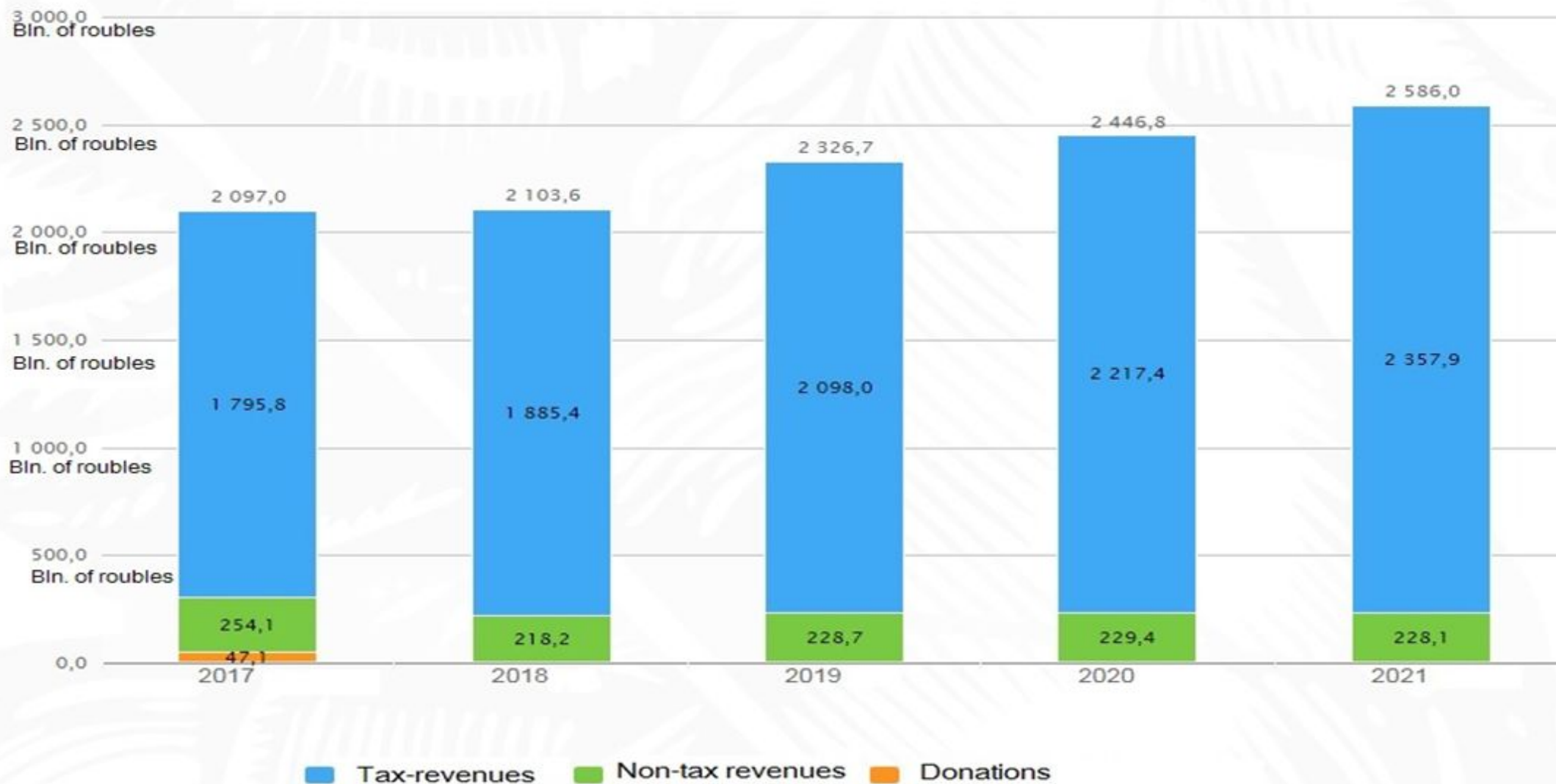
Economy

Economic landscape of Russia



Budget

Budget revenues in 2017-2019



Tax Revenues
2 098.0 billion
rubles.

Tax Revenues
228,7 billion rubles.

Sources financing
Deficiency 276.0
billion rubles.

Total budget 2,602.6 billion rubles.

Main directions
Budget politicians
Moscow city

Self-city

Development
transport
systems
608.5 billion
rubles.



Social support
residents of
Moscow
452.5 billion
rubles.



Metropolitan
education
330.3 billion
rubles



Metropolitan
Health
279.2 billion
rubles.



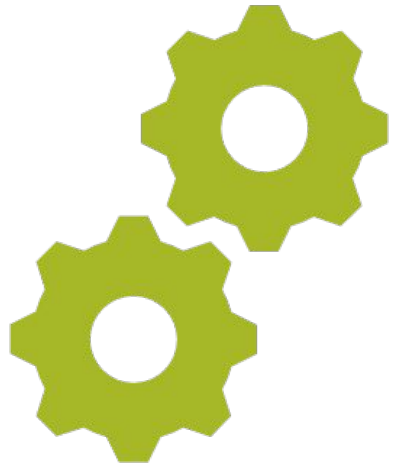
Dwelling
203.6 billion
rubles.



Other state
programs
496.6 billion
rubles.



Non-program
part 232.0 billion
rubles



Planning

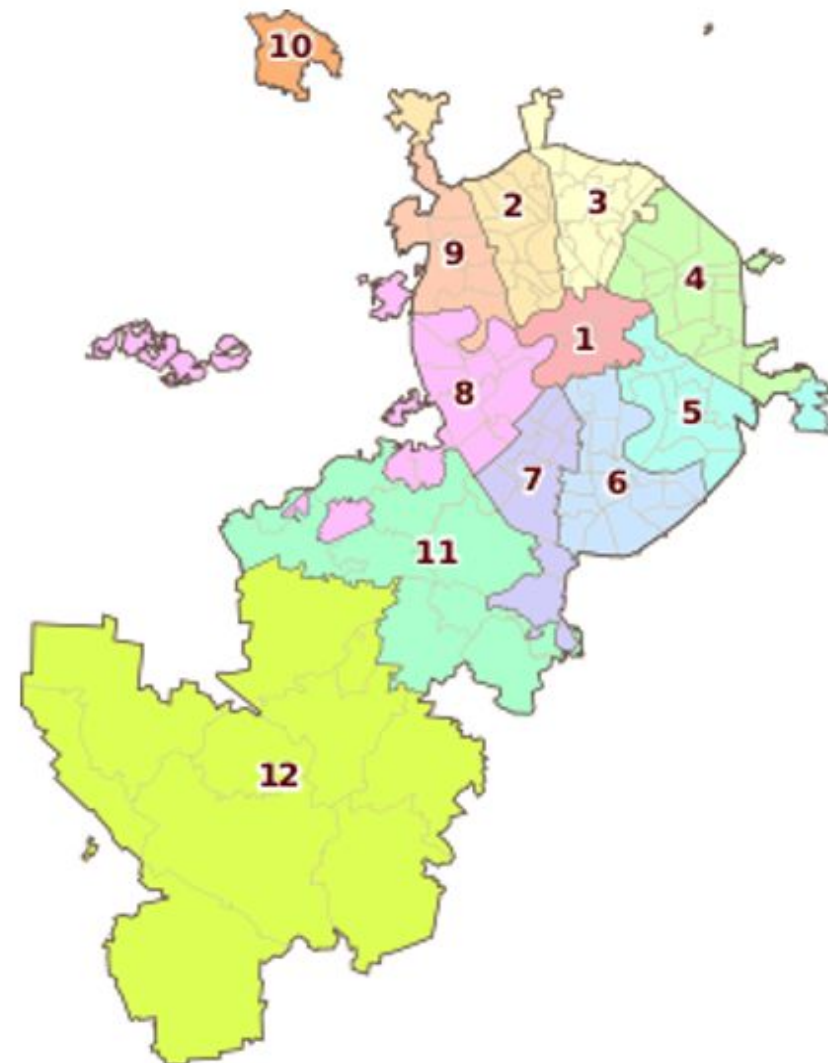


Administrative divisions of Moscow

Map of Moscow administrative okrugs



- 1 Central Administrative Okrug
- 2 Northern Administrative Okrug
- 3 North-Eastern Administrative Okrug
- 4 Eastern Administrative Okrug
- 5 South-Eastern Administrative Okrug
- 6 Southern Administrative Okrug
- 7 South-Western Administrative Okrug
- 8 Western Administrative Okrug
- 9 North-Western Administrative Okrug
- 10 Zelenogradsky Administrative Okrug
- 11 Novomoskovsky Administrative Okrug
- 12 Troitsky| Administrative Okrug



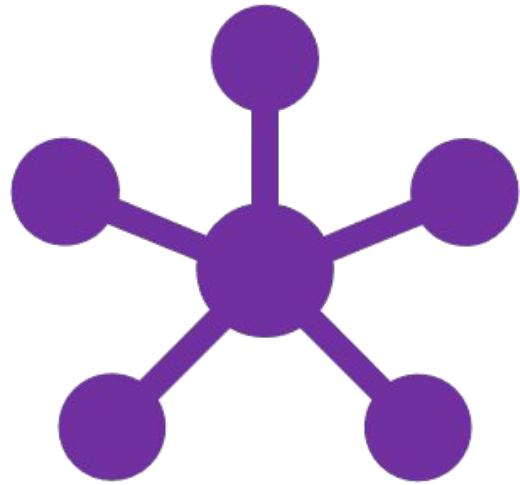
Federal city of Moscow, Russia	
of city administrative okrugs	12
of districts and settlements	146
of municipal formations (intra-city territories of a federal city)	146

ECOLOGICAL FRAMEWORK OF THE NEW MOSCOW

Self-city



- ◆ CONSERVATION AND PLACEMAKING OF THE NATURAL AREAS
- ◆ RECONSTRUCTION AND RESTORATION OF ARCHITECTURAL MONUMENTS
- ◆ CREATION OF THEME PARKS AND RECREATIONAL ZONES



Systems



Moscow 2030 -

comfortable, educating, culturally rich
and safe urban environment for
everyone



'Smart City 2030' sets priorities, goals and objectives for city governance
and digital technologies development by the year 2030.





Receiving information

mos.ru
main city website

data.mos.ru
open data

budget.mos.ru
city finances

Receiving services

My documents
Offline public services

pgu.mos.ru
Online public services

Governing

ag.mos.ru
online voting

gorod.mos.ru
complaints online

crowd.mos.ru
discuss online

Governing

Getting around

atlas.mos.ru
city map

um.mos.ru
routes

travel2moscow
multi-language guide

Navigating the metro

Wi-Fi city network

✓

✓

✓

✓

✓

✓

Navigation

On the move

ITS
Intelligent transport system

Managing traffic using information screens, traffic signals, parking and photo and video cameras

Transport services
Troika card
avtokod.mos.ru
Mobile Inspector

✓

✓

✓

✓

✓

✓

Transport

Learning

E-school
New technologies school

Hackathons
talent.mos.ru
civil service careers

✓

✓

✓

✓

✓

✓

✓

✓

Education

Working

imoscw.mos.ru
the city's innovative infrastructure
investmoscow.ru
Investment in Moscow

prostobusiness.ru
Everything you need to start a business

✓

✓

✓

✓

✓

✓

✓

Business

Staying healthy

Integrated Medical Information and Analytical System

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

Healthcare

Helping

findme.mos.ru
searching for missing people

'Good deed'
Granting wishes

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

Social projects

Improving

Overseeing urban development

Smart power grid

Eco-monitoring

Glonass-control

✓

✓

✓

✓

✓

✓

✓

✓

✓

Urban environment



АКТИВНЫЙ
ГРАЖДАНИН

Голосования

Городские новинки

Афиша

Новости проекта

Новости Правительства Москвы

Проект в лицах

Регистрация

Результаты работы

Blockchain

Электронный дом



Войти

+20 баллов за участие в голосовании

ID

Лето в парках: творческие студии, кружки и секции

Вопрос 1. На ваш взгляд, какие кружки и секции необходимо открыть летом в городских парках?

Освоить новые навыки и постоянно учиться — начать бегать или заниматься йогой — все это на свежем воздухе, на зеленой лужайке. Такую возможность каждое лето предлагают городские парки. Сейчас началась подготовка к новому сезону, и на этот раз программа летних кружков и студий будет создана с учетом мнений активных граждан Москвы.

На ваш взгляд, какие кружки и секции необходимо открыть летом в городских парках?

Вы можете выбрать до трех вариантов ответа.

Мнения экспертов:



Танцы



Йога



Self-city



Services

Water

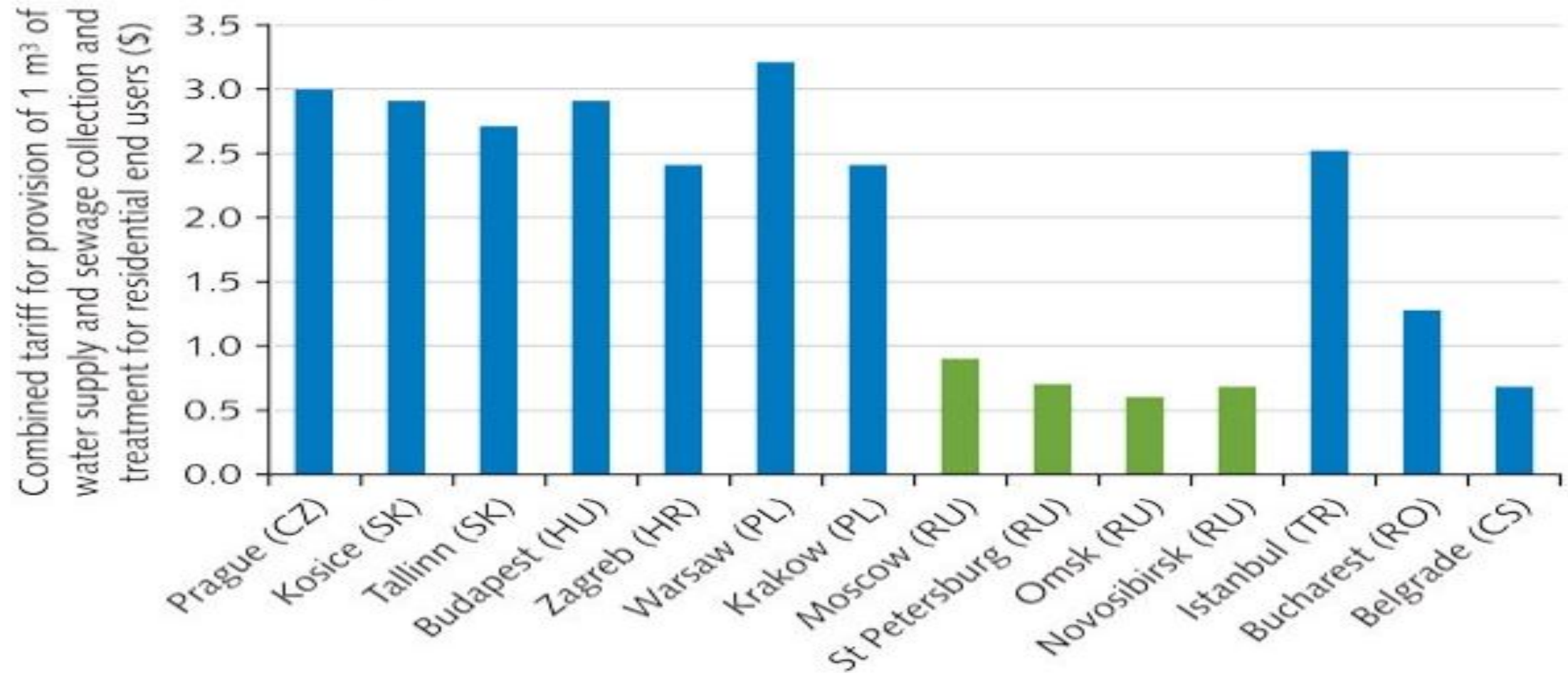
The capital laid more than 12 thousand kilometers of water supply networks



To date, the total water loss of these systems is 2.5–3 times higher than the city's demand for drinking water, therefore, an acute shortage of water resources is not foreseen in the near future," – explained Mosvodokanal.



Figure 1. Comparison of average water and wastewater tariffs in major Central Eastern European cities in 2010

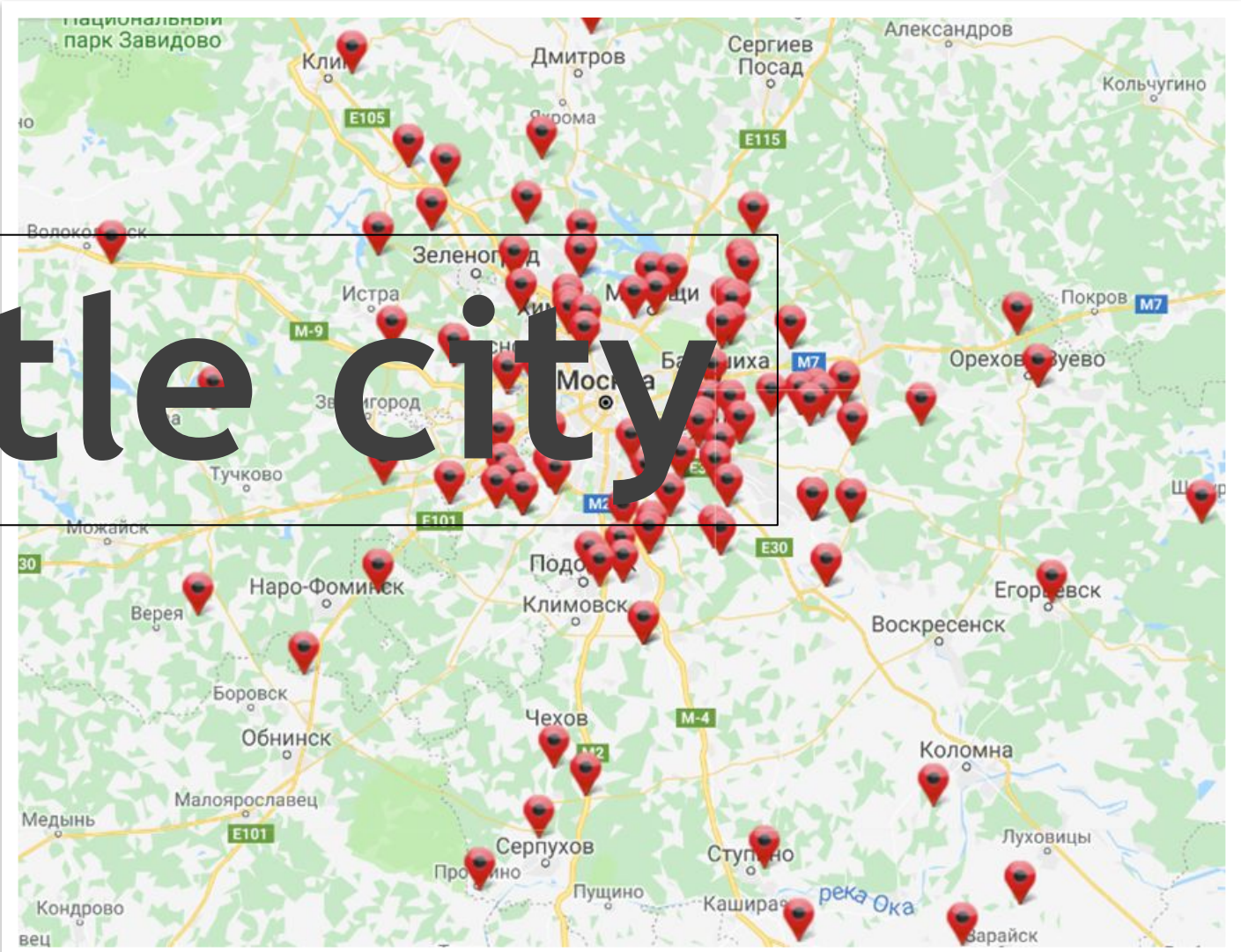


Year	Tariffs (rub. / M3)	
	Drinking water	Drainage
2019	38,70	27,47
2014	28,40	20,15

Garbage



Castle city



Summery

	Self-City	Planet City	Castle City	Patchwork City
External context	✓			
Policy	✓	<p>DRIVERS</p> <ul style="list-style-type: none"> ● Low-energy city committed to sustainable development ● Political autonomy of the city <p>SELF CITY</p>		
Society				
Economy	✓			
Planning	1/2			
Systems	✓			
Services				
Total	4,5			

Thanks for attention