

## Metropolitan Governance Expert Group

### 2.2 Meaningful Cooperation Experience • MTU MOSCOW METROPOLITAN AREAL

#### Description of the experience

- What is the Moscow Transport System - "MTU"
- Problems of transport in the Moscow agglomeration
- Planning and management of MTU
- Coordination Council of MTU
- Implementation programs for the development of MTU
- Conclusion











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# What is the “Moscow Transport System” – MTU



**Transport network of the Central Federal District and the Moscow Region**

-  Road network
-  Metropolitan
-  Rail transport
-  Public passenger transport
-  Transfer hubs
-  Freight logistics
-  Air transport
-  Safety on the roads
-  Intelligent Systems
-  Water transport

**Components of the Program of the Moscow Transport System - MTU**

The **Moscow Transport System "MTU"** is an interconnected system of all types of transport of the Moscow metropolitan area = Moscow Region= Moscow agglomeration in the territory of 46.9 thous. sq. km with a population of more than 20 million people (12.6 million - Moscow and 7.6 million - Moscow Oblast). However, it is precisely the shortcomings of the sectoral management of certain types of transport - road, rail, water, urban passenger; as well as the problems of linking the transport infrastructure of different levels - federal, regional, municipal in the territory of the Moscow agglomeration, demanded unification of efforts of all levels of government in the framework of the Development Program of the MTU

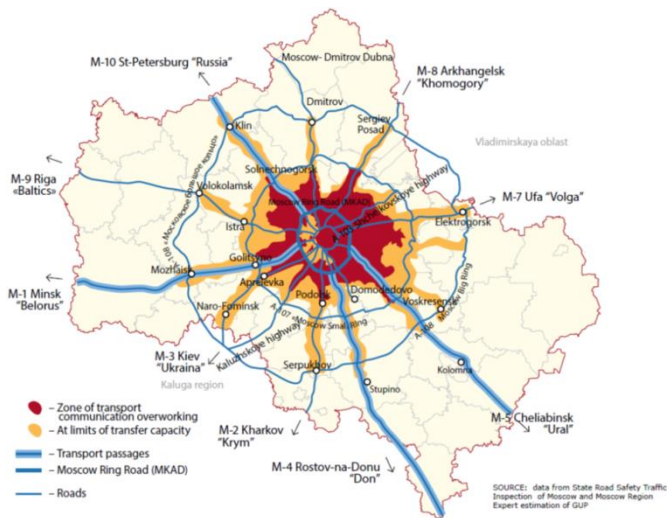
Moscow Transport System "MTU" is the name of a long-term trilateral comprehensive Program for the coordinated development of the transport system of Moscow and the Moscow Oblast, which started in 2011. The City of Moscow, the Moscow Oblast and the Federal Ministry of Transport participate in the development and implementation of the MTU Program. The comprehensive Program of the MTU is divided into subprograms according to the types of transport and tasks: 1 Road network, 2 Underground, 3 Rail transport, 4 Public passenger transport, 5 Air transport, 6 Water transport, 7 Transfer hubs, 8 Freight logistics, 9 Safety on the roads and transport, 10 Intelligent Systems.

Moscow Transport System "MTU" is, first of all, the center of transport work of the Capital: millions of passengers arrive daily to the Moscow, hundreds of millions of goods flow from all parts of Russia. The Moscow transport system is in demand for international business and cultural cooperation, but its main task is to make it comfortable daily life of the inhabitants of the city of Moscow and the Moscow Oblast, ensuring greater accessibility of places of residence to places of work, rest and receiving various services within the boundaries of Moscow agglomeration.

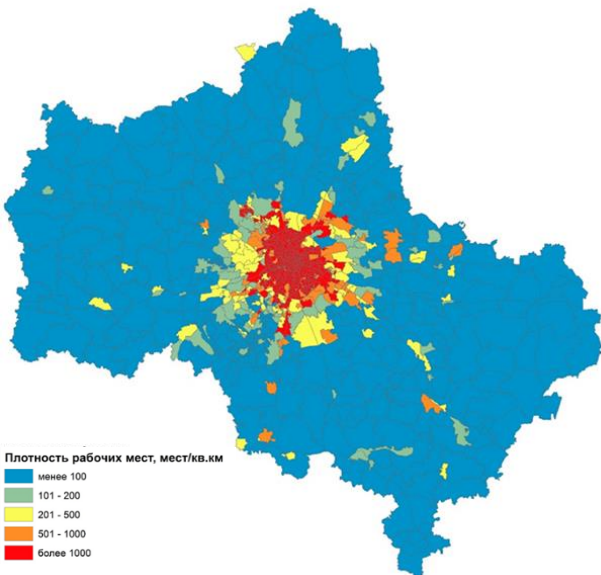


**Three railway stations on Komsomolskaya Square - one of the centers of Moscow regional and federal passenger connections**

# Problems of the Moscow metropolitan transport system



## Traffic congestion of the Moscow metropolitan area



## Over the concentration of jobs in the city of Moscow and the lack of in the Moscow Oblast



Overload of the ring highway transit transport

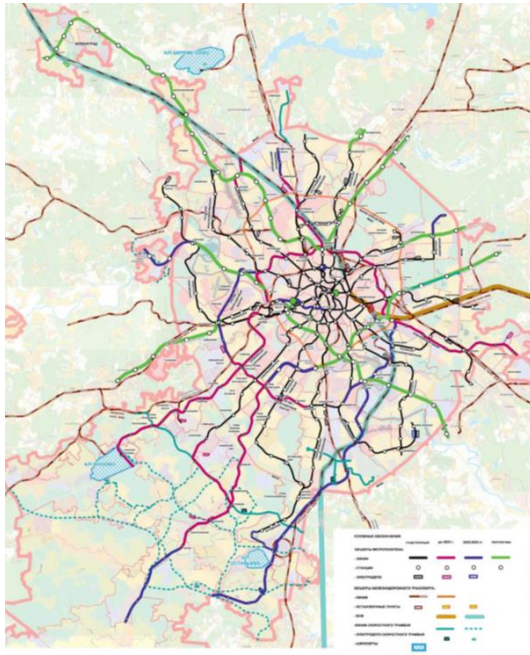
## The following factors influenced the difficult transport situation in the Moscow agglomeration:

- a sharp increase in the population's auto mobilization and changes in the structure of the agglomeration economy after the collapse of the USSR;
- long-term uncoordinated planning and development management of a separate city of Moscow and a separate Moscow Oblast;
- insufficient financing of the transport structure of both Moscow and the Moscow Oblast;
- underestimation of the role of public transport in the largest agglomeration of Russia;
- a historically prevailing imbalance between the concentration of jobs in the center of Moscow and the concentration of people on the periphery has increased the pendulum migrations of passengers and cars every day;
- low average density of the road network, predominantly radial direction of the traffic arteries, lack of ring and chord connections in Moscow and the Region led to a constant overload of the road network of the agglomeration;
- poor integration of routes of different types of public transport, insufficient comfort of the transfer and the unstable operation of public passenger transport stimulated the use of individual private transport, which reduced the carrying capacity of the streets;
- the absence of a developed fund of rental housing, the legacy of hard functional zoning of territories did not allow forming compact multifunctional zones suitable for pedestrian traffic, and wide highways with heavy traffic were not attractive for cycling
- excessive concentration of transport logistics throughout Russia in the Moscow Region led to an overload of railways and highways with transit cargo.

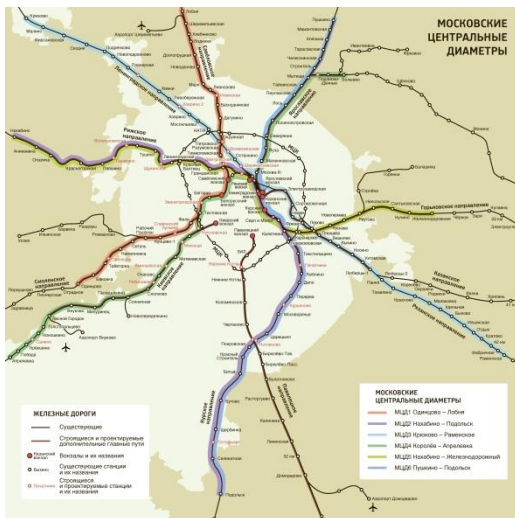


Moscow traffic jams in the 2000s

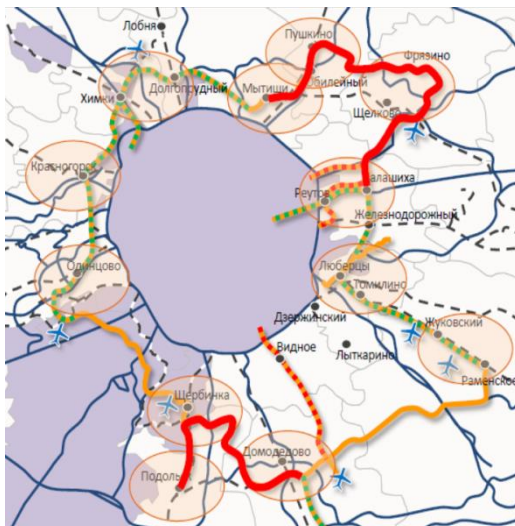
# Planning and management of MTU



Metro development in agglomeration



Development of regional S-ban



LRT development in the Region

The directions and tasks of the development of the transport structure of the Agglomeration to a varying degree were separately considered in the following Federal, Moscow city and Moscow Oblast documents:

- Territorial Planning Scheme of the Moscow Oblast (2007);
- Transport strategy of the Russian Federation for the period up to 2030 (2008);
- Strategy for the development of railway transport in the Russian Federation until 2030 (2008);
- The General Plan of the City of Moscow until 2025 (2010)
- Strategy of social and economic development of the Central Federal District until 2020 (2011);
- A territorial planning plan for the transport service of the Moscow Oblast (2016);
- Strategies of socio-economic development of the Moscow Oblast until 2030 (2018);
- The General Plan of the City of Moscow until 2035 (2017);
- Projects of Detailed planning of transport infrastructure (2011-2018).

The main achievement of the documents of the strategic, spatial and transport planning of Moscow and the Moscow Region from 2010 to 2017 was the emphasis on the priority development of public passenger transport, and above all the high-speed metro and regional railways.

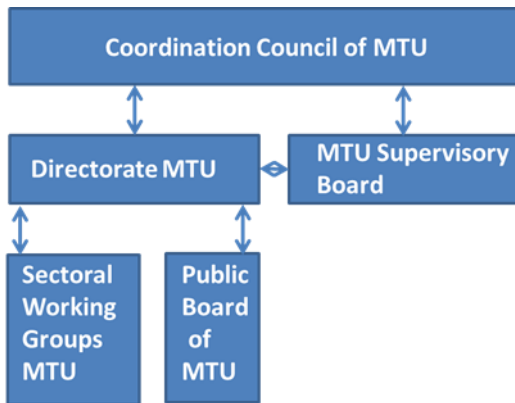
General Plan of Moscow provides for an increase of **subway lines** by 2035 to 650-700km with a share of the overall work of the transport system up to 50%. The most significant metro line will be the new Big Ring Line (60km long with 31 stations), which will significantly reduce the load on the Small metro ring of Moscow.

The plans stipulate that the radial-ring system of long-distance railways will be complemented by passenger traffic in Moscow and agglomeration. The **Small railway ring** of Moscow serving the industrial zones and transit traffic from 2016 began to work as an intracity electric train integrated with the metro.

**Ten radial railway** entrances leading to Moscow railway stations are gradually being reconstructed into railway diameters (446 km in total with 211 stations in perspective) with greater frequency of movement, new stations - interchange nodes on the metro, improving connectivity of the entire Moscow agglomeration. This program is implemented jointly by the Government of Moscow, the Government of the Moscow Oblast and OJSC Russian Railways.

The program for the development of **Light rail transport** in the region. The total length of the LRT ring is 246 km, including 192 km in the Moscow Oblast and 54 km in Moscow with the construction of 16 transfer stations to radial directions, a carrying capacity of 360 thousand passengers per day and a single fare for the Region.

## Coordination Council of MTU



To coordinate the plans and joint implementation of transport development programs in Moscow and the Moscow Oblast, by the decision of the Government of the Russian Federation, the Coordination Council for the development of the transport system of Moscow and the Moscow Oblast of February 15, 2011 N 82 was created. The Coordination Council was formed from the top leaders of the Federal Ministry of Transport, heads of Moscow and the Moscow Oblast, heads of sectoral departments and public transport enterprises.

### The Coordinating Council has the following main features:

- organizes an assessment of the effectiveness of transport communication in the territories of Moscow and the Moscow Oblast;
- identifies priority areas for the prevention and elimination of the causes of difficulties in the movement of vehicles and improving the quality of work of transport organizations engaged in regular passenger transport in urban and suburban traffic, including the metro;
- prepares proposals for the development of federal target programs, as well as programs for the city of Moscow and the Moscow Oblast, related to the development of transport infrastructure and traffic management, and considers issues related to their implementation;
- considers proposals containing a justification of the need for financial and material and technical resources for the implementation of measures for the development of transport infrastructure and the organization of traffic in Moscow and the Moscow Oblast.

The activities of the Coordination Council are aimed at ensuring the implementation of all ten subprograms of the MTU: 1 Road network, 2 Metro, 3 Rail transport, 4 Mass public transport , 5 Aviation, 6 Water transport, 7 Transfer hubs, 8 Cargo logistics, 9 Transport security, 10 Intelligent transport systems.

With the help of all its subsidiary structures, the MTU Coordination Council take into account the entire planning process of the Moscow agglomeration transport systems and their implementation, including strategic transport plans, detailed transport planning documents prepared by the city of Moscow and the Moscow Oblast, as well as construction projects, financing and implementation schedule.

Since its establishment, the Coordination Council held 26 meetings by February 2019.



**Meeting the Coordination Council for the development of the transport system of Moscow and the Moscow Oblast, 2018.**

In order to carry out operational work and ensure interaction between the main players of the Coordination Council (the Federal Government, the Moscow Government, the Moscow Oblast Government), an Order of the Government of the Russian Federation in 2011 established the Autonomous Non-Commercial Organization “**Directorate of the Moscow Transport Structure**”, which also aims to involve non-state structures in the implementation of plans.

**The Directorate of the MTU**, in preparing questions for consideration by the Coordination Council, interacts with the Supervisory, Public Councils and sectoral Working Groups of the MTU.

**The Supervisory Board of the MTU** - coordinates the interaction of administrations and transport policy of the federal, regional and municipal levels, and The Directorate of the MTU

**Public Council MTU** - provides expert opinions on the proposed solutions for the development of MTU

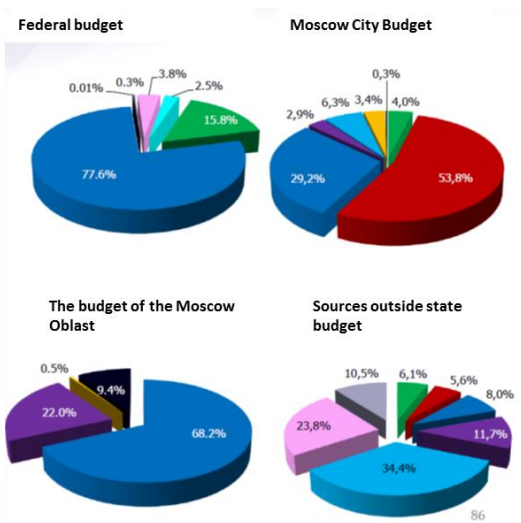
**Ten working groups of the MTU** - carry out the elaboration of design solutions for each subprogram of the development of MTU with the participation of specialists and the public.

The Directorate of the Moscow Transport System, in the framework of the current work on preparing and supporting investment projects on the territory of the Moscow agglomeration, including projects using public-private partnership mechanisms, interacts with financial organizations, investors, contractors and other market participants, forms Concession agreements for development of the commercial component of the transport infrastructure.



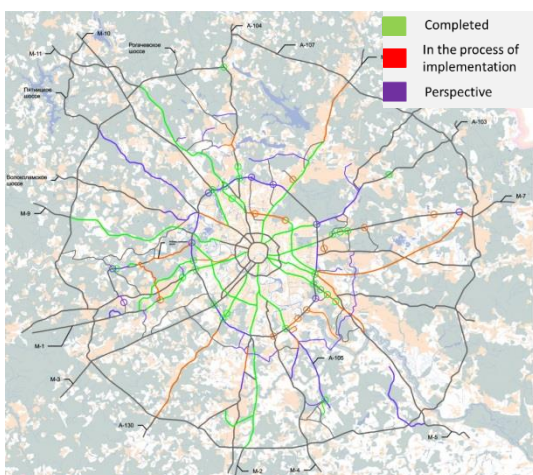
**Meeting of the Working Group on Rail Transport, 2018.**

# Implementation programs for MTU



- Rail transport
- Metropolitan
- Road network
- Public passenger transport
- Transfer hubs
- Intelligent Systems
- Safety on the roads
- Air transport
- Water transport
- Freight logistics

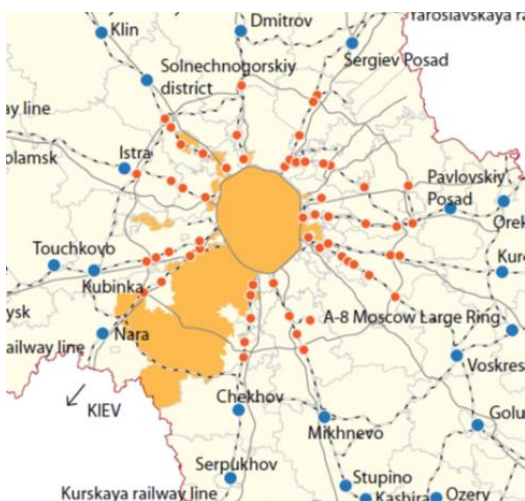
Examples of the distribution of funding for all subprogrammes MTU for 2016



## The Program of road network

**The Program of synchronization of the development of the road network and highways in the territory of the city of Moscow and the Moscow Oblast.** The timing of the program: 2013-2020. The estimated cost of implementing the program is 930 billion rubles. Sources: the budget of the Russian Federation, the budgets of the Subjects of the Federation - Moscow and the Moscow Oblast.

**The Program to reconstruct the regional Central Ring Road –CKAD** with a length of 339 km is aimed at reducing the traffic load of the Moscow agglomeration from heavy transit transport, forming 29 modern logistics centers and techno parks of the region, creating a polycentric structure and parallel development of public transport of the agglomeration. In 2019, the first section of the Central Ring Road, 50 km long, is introduced. The project is implemented with Federal funds and funds of the Concessionaire. The project Ring Road received the most prestigious award in the field of jurisprudence The Lawyer European Awards 2017 in the nomination "The best project of the year in the sector of infrastructure and energy in Europe"



## The Program of transport interchange systems

**The Program for the development of overpasses and junctions on the territory of the Moscow region,** including priority measures for the elimination of single-level railway crossings and the construction of new overpasses in the composition of the Central Ring Road and urban bypasses. The program provides for the construction of 89 overpasses. Duration of the Program: 2009 - 2025 Project budget: 209.28 billion rubles. Sources: Russian Federation, Moscow, Moscow Oblast. As of December, 2018 28 overpasses were implemented, 27 in the construction process.

**The Program to create transport interchange systems (TPU).** The task of the TPU is to stimulate the use of public transport in the territory of Moscow and the Moscow Oblast due to the comfort of transfers, including from individual vehicles. On the territory of Moscow, construction of 251 TPU is planned, in the Moscow Oblast - 121 TPU. For 2018, the first phase is implemented - 8 Moscow TPU. The regional program implementation of TPU is planned at the expense of extrabudgetary sources, which are investors' funds for the development of commercial components of TPU.



**Moscow Central Railway Ring (red),  
Big Ring Metro (blue)**

**The Program of the Moscow Central Railway Ring-MCRR.** Reconstruction of the Small Ring of the Moscow Railway 54 km long to enable the launch of the urban electric train movement was carried out from 2012 to 2016 at the expense of Federal investments, Russian Railways, the Moscow Government and a group of investing companies.

The volume of investments in this project amounted to 237 billion rubles. According to Russian Railways and the Moscow government, the ring railway will be another metro line for Moscow, only a ground one, which transports today more than 500 thousand passengers daily. On the ring line, 31 interchange terminals for radial lines of the metro and railways were built, with the possibility of using a single ticket for all types of public transport.

Entering the MCRR allowed unloading the stations of Moscow and railway platforms of radial directions, the first metro ring, to reduce the time of movement of passengers in the middle zone of the city by 9-14 minutes. From 2021, Russian Railways plans to introduce a system of unmanned electric train control on this line. In accordance with the General Development Plan of Moscow for the period up to 2025, a reorganization of a large part of the territories adjacent to the MCRR is foreseen, with a fundamental change in the functional specificity of the entire zone: from predominantly production, it becomes public-business, residential and transport and communications. For the development of areas adjacent to the TPU, attracted about 40 billion rubles of private investment.



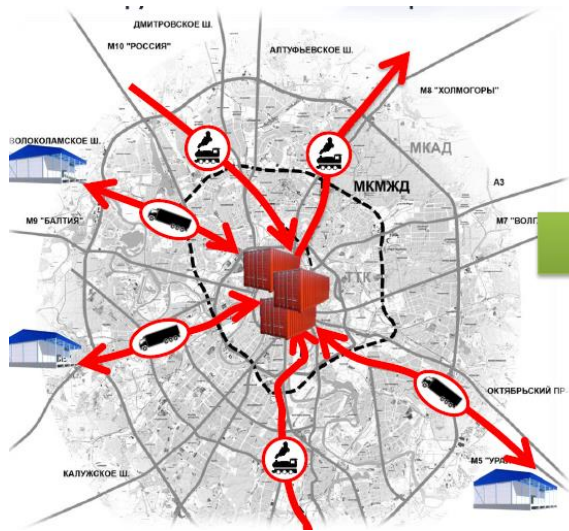
**The transfer hub of the Moscow Central  
Railway Ring on the metro.**

**The Big Ring Metro Line Program - BRM** is the largest 70-km metro construction project with 31 transfer stations to the radial lines of the metro and railways, as well as to the Central Railway Ring. The term of full implementation of the project is 2023 years. As part of the first phase in 2018, stations were opened in the north-western section of the 11 km long ring. After the construction of the BRM is completed, a general decrease in the load on the metro network by 15% is planned, time savings when traveling in the Metropolis will be up to 30 minutes, passenger traffic on the BRM will be 400 million passengers a year.

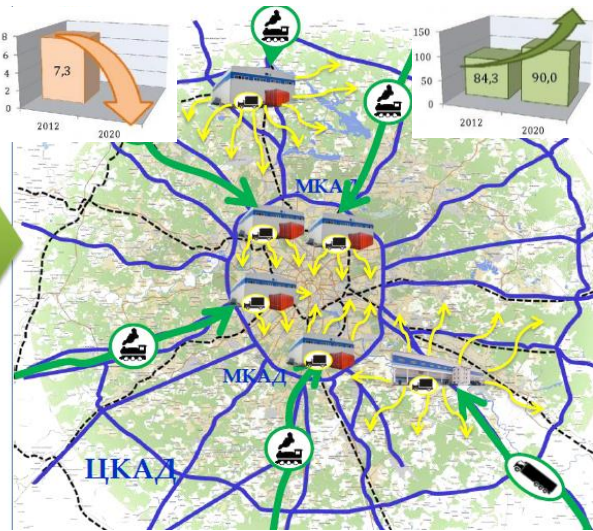




The Development Program of the Terminal Logistics Centers of MTU has set a goal - to contain further deterioration of the transport situation in the Moscow region. With this in mind, there is: the deployment of new terminal and logistics centers of increased capacity in the region; reorientation of freight flows from road to rail and water transport; the transshipment of transit cargoes on railway freight yards within the city of Moscow is excluded, and it was ensured that it was taken into agglomeration; consolidation of goods upon delivery to the consumer. Logistics complexes in the Moscow Region are formed using 131.5 billion private investment with the creation of 25.5 thousand new jobs.



Previous scheme



Implementation scheme with the elimination of transit and an increase in the share of railway logistics

**Динамика исполнения мероприятий Программы**

Выполнение Подпрограммы	2013 год	2014 год	2015 год	2016 год	2017 год
Более 80 %	4 • Железнодорожный транспорт • Метрополитен • Внутренний водный транспорт • Общественный транспорт: наземный пассажирский транспорт и служба такси	6 • Железнодорожный транспорт • Метрополитен • Автомобильные дороги и улично-дорожная сеть • Организация дорожного движения и интеллектуальная транспортная система • Общественный транспорт: наземный пассажирский транспорт и служба такси • Внутренний водный транспорт	5 • Терминально-логистические центры • Железнодорожный транспорт • Метрополитен • Внутренний водный транспорт • Автомобильные дороги и улично-дорожная сеть	8 • Метрополитен • Внутренний водный транспорт • Железнодорожный транспорт • Безопасность дорожного движения • Воздушный транспорт • Общественный транспорт: наземный пассажирский транспорт и служба такси	6 • Метрополитен • Внутренний водный транспорт • Железнодорожный транспорт • Безопасность дорожного движения • Общественный транспорт: наземный пассажирский транспорт и служба такси • Организация дорожного движения и интеллектуальная транспортная система • Воздушный транспорт
50-80 %	4 • Автомобильные дороги и улично-дорожная сеть • Организация транспортно-пересадочных узлов и парковочного пространства • Воздушный транспорт • Организация дорожного движения и интеллектуальная транспортная система	3 • Безопасность дорожного движения • Воздушный транспорт • Терминально-логистические центры	4 • Организация дорожного движения и интеллектуальная транспортная система • Общественный транспорт: наземный пассажирский транспорт и служба такси • Безопасность дорожного движения • Воздушный транспорт	Более 80 % • Организация транспортно-пересадочных узлов и парковочного пространства • Терминально-логистические центры • Воздушный транспорт	3 • Организация транспортно-пересадочных узлов и парковочного пространства • Терминально-логистические центры • Воздушный транспорт
Менее 50 %	2 • Безопасность дорожного движения • Терминально-логистические центры	1 • Организация транспортно-пересадочных узлов и парковочного пространства	1 • Организация транспортно-пересадочных узлов и парковочного пространства	2 • Организация транспортно-пересадочных узлов и парковочного пространства • Терминально-логистические центры	1 • Организация транспортно-пересадочных узлов и парковочного пространства

↑ Увеличение показателей исполнения мероприятий Подпрограммы по сравнению с предыдущим годом  
 → Показатели исполнения мероприятий Подпрограммы по сравнению с предыдущим годом не изменились  
 ↓ Снижение показателей исполнения мероприятий Подпрограммы по сравнению с предыдущим годом

Management by the Coordination Council of the dynamics of the implementation of activities of the MTU Program for the ten subprograms for 2013-2017.

## Conclusions

The results of the activities of the Coordination Council for the development of the transport system of Moscow and the Moscow Oblast, starting from 2011, confirm the effectiveness of this body to ensure balanced implementation of 10 transport subprograms with the participation of representatives of the Federal, Moscow City and Moscow Oblast Governments, as well as with the participation of state monopolies and non-state investors and municipalities. For the implementation of the ten programs of the MTU provided 4 749 billion. rub. for the period 2013-2020.

The share of the Federal budget is 18%, the budget of Moscow - 58%, the budget of the Moscow Oblast - 3%, other sources - 21%. The ratio of investments between the main subjects of the MTU confirms the key role of the city of Moscow as the main driver of the region's economy and as the main territory, which faces the most sensitive problems of the transport infrastructure.

The projected social and economic effect by 2020 of the implementation of the MTU Program has the following characteristics:

- the growth of the gross domestic product of the Russian Federation to 8.5% due to the modernization and development of the Moscow agglomeration;
- increase in the capacity of transit transport corridors by 30%;
- a reduction of 20% in time for the movement of the inhabitants of the Moscow agglomeration;
- increase in passenger traffic in railway transport by 60%;
- the formation of a new mobility philosophy, aimed at reducing the use of individual transport, on the priority of public transport, cycling and pedestrian communications.

For the Moscow metropolitan area, where the city of Moscow and the Moscow region have the status of a region under the Russian Constitution, resolving conflict situations is possible only with the participation of the Federal Government, and for solving complex infrastructure issues on transport, polycentric development of places of employment, the ecological complex, social and engineering infrastructure and others will require the establishment of appropriate sectoral coordinating bodies.

Even the creation of a unified management of the Moscow metropolitan area will require the participation of the Federal authorities and the more active participation of the MMA municipalities. It will take a change in the structure of the Moscow municipalities, which currently number 125, with 67 in the Moscow Oblast. It should also take into account the Capital status of the City of Moscow, whose municipalities do not have the rights to urban planning, in contrast to the regional municipalities. Taking this into account, the experience of the Coordinating Council of the MTU can be considered positive and acceptable, especially for managing the development of large metropolitan agglomerations.

Prior to the completion of the considered Transport Program, the MTU Directorate is organizing the development of the Transport System Development Strategy for the city of Moscow and the Moscow Oblast until 2030 with the corresponding Implementation Program, which will ensure the continuity of the previous Program and will be linked to the strategic and territorial planning documents of the federal and regional level - the city of Moscow and Moscow Oblast.

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