Integration of railway transport system and Moscow metro by the example of MCC

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Moscow Metro
6 tasks were performed for realization of this project

- Contract for delivery of transportation services at MCC
- Passenger services at MCC
- Integration with city public transport
- Integration of Moscow Metro and MCC
- Transport interchange hubs
- Fare system
- Navigation system
Transport interchange hubs of Moscow Central Circle

- **54 km in 90 minutes**
- **31 stations with interchanges to surface transit (transport interchange hubs)**
- **14 interchanges to metro (17 in future)**
- **6 interchanges to suburban trains (10 in future)**
- **4 stations with car parking (17 in future)**

**Open integration of transport interchange hubs with metro** – **10 hubs**

**Closed integration of transport interchange hubs with metro** – **5 Hubs**

- **150 thousand square meters** technological space was built
- **1.1 mln square meters** commercial space is going to be developed
# Fare system – integration into public transport fare system

Legislation of Russia requested changes in fare system of Moscow Metro for journeys at MCC at the same fare as Moscow metro

## Tasks

- Transportation of passengers at MCC according to fares of Moscow Metro
- Creation of fares for interchanges between city and suburban public transport

## What was done

- Changes to the Government Decree of the City of Moscow dated 25.12.2015 №880-PP, including new order for one trip with interchanges between public city and railroad transport
- Free and concessional journeys at MCC, additional social support
- New Decree of the City of Moscow dated 18.08.2016 №515-ПП «About transportation of certain groups of passengers at Small Ring of Moscow Ring Railroad»

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Unified fare policy exists in Moscow Metro, MCC and public transport
Passengers don’t pay additional price for interchanges between Moscow Metro and MCC
Ticketing system – integration of payment system

It was decided to integrate metro ticketing system at transport interchange hubs of MCC for implementation passenger access systems to metro and MCC with one ticket.

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<th>Challenges</th>
<th>Results</th>
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<td>• Implementation of unique ticketing system for MCC and metro</td>
<td>• Software of all payment control systems and ticketing systems was fully restored</td>
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<td>• Necessity of payment systems integration for “Russian Railways” and Moscow Metro</td>
<td>• System of 100% redundancy of optical channel was realized through installation of radiorelay communication</td>
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Information technologies implementation and automated cooperation with customers

2016 became the most challenging for using of mobile payments

1935 r.
Carton single one-way tickets. Tear-off paper coupons and first turnstiles were implemented.

1961 r.
Turnstiles started to accept five-kopeck coins.

1992 r.
Metal token was implemented, and was changed for transparent plastic ones in a year.

Token was replaced by magnet tickets. Firstly they were non-reusable, for a single trip, then monthly tickets had appeared or for a certain trips.

2000 r.
«Unique transport cards» for trips by metro and suburban transport

2013 r.
Modern tickets for 90 minutes and «Troika» card with integrated electronic chip.

2016 r.
New payments methods:
• Bank card:
  VISA / MasterCard / MIR
• Pay Pass / Pay Wave
• Apple Pay / Samsung Pay / Android Pay
• Yandex Money
• Mobile ticket:
  Beeline
  MTS
  Megafon
  Yota

Innovative payment services

More than 12% passengers use
Metro and MCC have new unique navigation system

New unique navigation was implemented at metro infrastructure, MCC and surrounding areas

Infoplanning was performed and new unique navigation conception was implemented including navigation at metro and MCC stations, in rolling stocks, in other surrounding areas.

By MCC launching:

- New unique metro and MCC scheme was implemented in a single style
- Navigation elements for MCC were implemented in co-branding
- Navigation consists of 15 elements, 3 of which are absolutely innovative

Metro navigation was improved:

- Routing stripes at 175 stations – 607 pcs.
- Lighting indicators – 254 lightboxes
- Metro maps (in entrance halls and rolling stocks) – 75 thousand pcs.

- The shortest interchange routes from MCC to metro at the surrounding areas were implemented
- More than 150 additional elements of street navigation were installed for passengers’ comfort
MCC is fully integrated in land city passenger transport network

- **13** Changes of route location
- **6** New routes
- **9** Changes of deployment

**52 Routes**

- **24** Stops were relocated
- **237** routes have stops spanning 500 m from MCC
- **300** stops of land transport branded
- **300** busses branded on 28 routes

Local territories map updating for more than 4000 stops

Update of route maps for more than 150 routes of land city passenger transport
Innovative passenger services of Moscow Metro on MCC

Navigation services

5 information desks are located at MCC stations:
Up-to-date and reliable information of the MCC working hours and tariff system
Convenient routes
Information about Moscow transport system

Daily the employees of each information desk in the metro handle with more than 300 queries

MCC has more than 7 000 elements of demanded passenger infrastructure and innovative services

«History of development of Little Ring Of the Moscow Railway» exhibition in the connecting passage from Ploschad Gagarina interchange station to Leninskiy prospekt metro station was put on a show

Elements of passenger infrastructure and innovative services

Passengers have chosen additional services for stations by voting at the “Active citizen” project before the MCC launching

The majority of the votes gathered:
Benches
Landscaping on adjacent territory
Gadget charge spots

Mobile library works on MCC stations, each station has a QR-code with the history of the station
Responsibilities for MCC operations are divided between JSC «Russian Railways» and Moscow Metro according to the gross-contract, signed by the parties.

Transport services at MCC:
- Rolling stock operations
- Transportation of passengers at MCC
- Advertising, retail and other commercial activities, connected with the use of railroad rolling stock

Services at 9 transport interchange hubs of MCC:
- Fare collection
- Prevention of fare evasion
- Maintenance of passenger infrastructure
- Security at transport interchange hubs

Services at 22 transport interchange hubs of MCC:
- Fare collection
- Prevention of fare evasion
- Maintenance of passenger infrastructure
- Security at transport interchange hubs

- Moscow Metro pays JSC «Russian Railways» according to amount of car-km
- Moscow Metro compensates JSC «Russian Railways» all expenses connected with operations except for purchasing of rolling stock and payments for maintenance of public railroad infrastructure