# FIFA World Cup 2018 – the Planning Challenge for Russian Cities

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## 1 ABSTRACT

11 Russian cities were chosen to host FIFA world Cup 2018. Their starting positions 6 years before the championship are very different. It seems that the Megacity of Moscow may host almost any large event at any time. From the other hand the city has been suffering for years from infrastructural shortcomings and incorrigible traffic problems.

Sochi and Kazan are cities most prepared for FIFA world Cup due to other coming sport events: winter Olympics in Sochi (2014) and World student games in Kazan (2013). All sport facilities and infrastructural projects will be completed 4-5 years before World Cup 2018 starts. So these cities probably will face the problem of maintenance surplus sport objects.

Other 8 cities including one of the largest European city St. Petersburg face the challenge they haven't ever faced before in their 20-years post-soviet history.

City's approaches to the "challenge 2018" are common – the main idea of the preparation period is to obtain more federal investments into local transportation projects. Current priorities for almost all cities start from new stadium construction (or total reconstruction). The next issue is network development that focuses mostly on focal projects like a new airport, street crossings nearby the stadium or parking facilities.

The aim of Local organizing committee (LOC FIFA 2018) and the federal company "Arena' founded to coordinate all construction activity – is to ensure the championship itself. The FIFA's claim to provide the heritage of the tournament is taking into consideration rather on the theoretical level.

The core task for all cities – to integrate "World Cup oriented" infrastructural projects with federal financing into own planning strategies, to consider the FIFA tournament as a «catalytic agent» for post-soviet city transformation. This idea is rather new for cities. At the same time planning projects for future stadiums causes wide public discussions in some cities from the point of long-term development – not the championship preparation.

The legal issue is also claiming attention. All cities have general plans worked out a few years ago. New stadiums appointed by FIFA, were not planned. Is it necessary to correct the general plan? Or the serious project like FIFA World Cup may inspire the city to real strategic planning – more sustainable and more resilient than traditional soviet regulatory-based planning?

The paper overviews all FIFA world CUP 2018 host cities focusing on significant construction and infrastructural projects that may excite structural transformations of every city framework. The paper attempts to pay cities' attention on planning aspects of "sports objects development" and related issues (like renovation, mixed use, public spaces) beyond transit systems, hotels and fan areas. Various local long-term development projects that can be pushed hand by hand with championship-oriented ones are explored.

# 2 FIFA 2018 HOST CITIES – THE OVERVIEW

FIFA local organizing committee had grouped all cities into clusters according to their location. We prefer another approach: the importance of the World Cup for every city. Four groups were distinguished. The championship for Small cities is a great event, for cities-Millionaires (above 1 million citizens) is a chance, for "Sport" cities is out of agenda yet and is an ordinary event for Capital cities

## 2.1 Small cities

Kaliningrad – extreme western city of Russia, is an enclave surrounded by new EC countries. Centre of promising resort region on the Baltic Sea. Population – 431 500.

The stadium was built in 1892 now seats 14000 people. Airport Khrabrovo failed to become an international hub a few years ago. Now is 18th in Russia. Public transportation system includes bus, trolley and shrinking tram networks. Hotel network is well developed both in the city and surroundings.



Plans for 2018 includes: new Stadium on the Lomse island close to the city centre together with the whole island housing and commercial development, fast tram ring, the tram network and water passenger transport extension, street network extension around the Lomse island, including 4-5 bridges construction across Pregola river, new energy supply facilities. Railway extension to the airport is the issue for discussion.

Saransk – the capital of Mordovia – the region with a highest level of social and political stability in Russia. Population  $-298\,000$ .

New stadium that seats 11500 people was built in 2004. Small airport operate only one route to Moscow. The city is not on the transit railway – only 3 long-distance trains daily. Saransk has well developed trolley and bus network and a very low level of hotel service – insufficient to FIFA minimal demand.

Plans for 2018 includes: new Stadium on a new site near the centre of the city, temporary terminal construction at the Airport, new hotels construction (about 2000 rooms), street network extension, housing development project near the stadium. City centre redevelopment is also declared by city authorities.

World Cup 2018 – is the great challenge and opportunity both for Kaliningrad and Saransk. Former Keningsberg had lost all the greatness of the Prussian capital. The city gets a chance to start its spurt towards the modern one developing the Lomse Island like HafenCity in Hamburg or Västra hamnen in Malmo. Saransk is too small and too provincial. The city is realizing several housing projects now based on soviet "microrayon" and strong functional zoning approaches. Probably Saransk may switch to present-day planning concepts and rise its appeal, but it should start strategic planning immediately thinking not only about the FIFA event but planning its own future in the whole.

## 2.2 Millionaires

Nizhni Novgorod (former name Gorky) – industrial city on the bank of Volga river. Capital of the Povolzhsky federal district. Has a good rail connection to Moscow. Population – 1 254 600 (decreasing).

The main stadium "Lokomotiv" seats 17000 people. The city has a wide range of sport objects an plans to build new ones – like the largest hockey hall in Russia. Airport "Strigino" is situated at the south-west end of the city and connected by bus line with the metro station. Nizhni Novgorod has two metro lines, bus, trolley, tram network and a cable-way to the city of Bor on the other side of Volga River. Railway station in the centre of industrial part together with metro station forms the main transportation hub. The city is lacking for hotels.

Plans for 2018 includes: new Stadium on a very significant place on the bank of Volga in the central part of the city, railway terminal reconstruction, two metro stations (probably more), 3 cable-ways, street network extension, road junctions and a tunnel, 30 new hotels. Railway extension to the airport is discussing.

Samara – one of the largest cities on the Volga river, forms Samara-Togliatti agglomeration. The centre of space science and industry. Famous for its historical centre dated by late 1800-s. Population – 1 198 000

The stadium Metallurg is old and uncomfortable. Airport "Kurumoch" (in top-10 Russian airports) is situated 40 km far from the city. Samara has one metro line (9 stations) but it role in public transportation system is minor. The city has extensive bus and tram networks. Also trolleys and route taxis. Railroad doesn't used for inner-city connections. Hotel network fit minimal FIFA requirement but need extension.

Plans for 2018 includes: new stadium on a new site far from the centre of the city, tram network extension and water passenger transport development, new cable-way, street and outer road network extension, road junctions and railway crossings. A new metro line (12 stations) and alternate airport connection by existing railway extension or new LRT construction are issues for discussion.

 $Volgograd - (former name Stalingrad) - one of the longest cities of Russia, stretches for about 90 km along the Volga River. Industrial centre in the South of Russia. Population <math>-1\ 018\ 739$ .

The Central stadium is situated in front of the main landmark of the city (downhill towards Volga) – "Mamaev Kurgan" with the statue of Motherland. Gumrak airport is located about 13 km from the city centre. Volgograd is the unique city in Russia with Metrotram system launched in1984. It has 22 stations on one line length of 17.3 km. The city has also a separate tram network, buses and trolleys. Hotel network includes 84 hotels that rooms more than 3000 people.

Plans for 2018 includes: the new stadium is "Victory" on the same place of the Central stadium on the Volga' riverfront in the north-central part of the city, training camp in Maslovo on the over bank of Volga river, airport complex reconstruction, fast tram (Metrotram) network extension, transit road network near the stadium and west cargo traffic bypass around the city, hotel network development.

Rostov-on-Don – the capital of the Southern federal district, a major industrial, scientific and cultural centre in the south of the country, is often informally referred to as the "Gateway to the Caucasus". Population –1 099 500.

The main city stadium now is "SKA" that seats 11000 places. Rostov airport located inside the city 8 km far from the centre. They plan to close it after the new one will be completed. Rostov-on-Don is the only city in Russia with European gauge system (1435 mm). It also has trolley, bus and route taxi network. The city counts more then 40 hotels, motels and resorts for 3500 rooms.

Plans for 2018 includes: the new stadium construction on the left-bank of Don river opposite the main city embankment, training fields in the suburbs, a new international airport, reconstruction of one bridge over the Don River and construction of another one, two new road bypasses for transit transport to the south and to the west of the city, cable-way over the Don River. New metro network construction is the question for discussion.

Yekaterinburg – the largest city, industrial and economical centre of Ural region. The city's brand is epy largest number of skyscrapers among all Russian cities. Population –  $1\,377\,700$ .

The "Central" stadium was opened after reconstruction in 2009, now seats 27000 people. Situated close to the central part of the city from west side. The new airport is 5th in Russia and was included in top 100 European airport in 2012. Connected to the city by the railway and highway. The city has one metro line, bus, trolley and tram network and unique transport for Russia – the city railway. A lot of hotels were constructed during last years.

Plans for 2018 includes: total stadium reconstruction (The stadium couldn't be demolished due to historical significance), 4 stations on a new metro line, Fast tram line, Street network extension with a few road junctions. About 25 hotels may be build if necessary. No planning projects developed yet.

All cities except Yekaterinburg are situated on great Russian rivers determine the historical planning structure and claims for new extension. Key words for Rostov-on-Don and Samada are city expansion and agglomeration development. Airport and interregional transportation networks development play a great role, the stadium construction on a greenfield forms a new central place for the whole region.

The main idea for other millionaires-cities is reconstruction and road network development. Projects will be more local, more detailed. Planners and architects may pay attention on public spaces, parks, waterfront, spatial and visual links between stadiums and city centres.

### 2.3 Sport cities

Kazan – city on Volga River, the capital of Tatarstan Republic – one of the most populated and economically developed regions in Russia. Population – 1 161 300.

The city is almost ready for the Summer Universiade 2013 (started on July 6, 2013). More than 10 new sports objects were build during last few years. New Stadium for 45 000 people is among them. Many infrastructural projects were also dated for the Universiade including extended street network reconstruction, traffic interchanges construction and a new railway connection to the airport. Kazan has one metro line, bus, trolley and tram network and no route taxis (untypical for Russia). Hotel network is well developed.

Plans for 2018 includes: launching city rail ring project, new transportation Hub development (railway terminal Kazan-2), street and network extension, a new metro line of 5-6 stations.

Sochi – the main and the most popular Russian sea resort. The Great Sochi is stretched out 140 km along the sea-side and includes several living communities (Sochi is the largest) separated by natural landscapes and resort development. Population – 343 300 is increasing 3-5 times during the summer.

The city is going to host winter Olympic Games 2014. Sports infrastructure (stadium "Fisht" for 40000 people) and traffic network projects (transit streets and road bypass, rail connection to the airport, etc.) are

completed or in last stage of construction. City has only two really working types of public transport: bus and rout taxi. Hotel network is redundant for any sporting event bus still is extending.

Sochi has no Plans for 2018. All development projects are concentrated on Winter Olympics. Water and energy supply systems development, completing traffic bypass for cargo transit and launching the city railway are the main ones. Development plans beyond 2014 are not discussing yet.

World Cup 2018 is not the key issue for planning discussions not in Kazan no in Sochi now. While Sochi is focused on tactical issues of 2014 Olympics, Kazan is almost ready for Universiade and tries to widen its "planning horizon" to 2018 and beyond.

# 2.4 Capitals

St. Petersburg was the capital of Russia in 1712-1918. The northern, sea and cultural capital of the country. The most "European" city in Russia. Population -5028313.

Stadium "Petrovski" – the home one for the richest Russian football club Zenit was built in 1925 now seats 21000 people. The airport "Pulkovo" (3th in Russia) is situated close to the city but connected with it only by road network. St. Petersburg has 5 railway terminals, marine passenger terminal, 5-lines metro network and all types of public transport. Hotel network is well developed and includes a lot of small hotels.

Plans for 2018 includes: new Stadium on the place of Demolished Kirov Stadium on the west end of Kirovsky Island (project by Kurosava) may form a significant landmark in the city's panoramic view from the seaside. New terminal construction at the Airport and connecting it with the city by rail, metro or LRT line, construction of 5 metro stations on 2 lines, Street and road network extension.

Moscow is the capital of Russia, The largest mega city in Europe and one of the top-10 in the world. Population of the city is about 12 million people. The Moscow agglomeration population runs up to 16-17 million.

Moscow is implementing a lot of projects now: Smart city Scolkovo, Moscow agglomeration and new southwest development, transportation projects including rail ring and fast tram lines construction, vast metro network extension, Industrial sites redevelopment, etc. FIFA 2018 is among them but not the main one. They plan reconstruction of the main Moscow stadium "Luzhniki" and the new stadium "Otkritie Arena" construction on the north-west of the city.

# 3 CHALLENGES AND OPPORTUNITIES

World cup campaign has already started. Stadium design comes first. Dozens of architects had worked out their concepts of fantastic sport facilities. Networks development dreams goes next, focused on airports, rail and metro construction, kilometres of new streets, highways and road junctions. The most tempting time – cost assessment comes now.

#### 3.1 Federal investment race

City's approaches to the "challenge 2018" are common – the main idea of the preparation period is to obtain more federal investments into local transportation projects. First evaluation of World Cup cost for Russian budget was estimated as 10 billion Euros. Now it rises to 15 billions. Cities' requests are the flip side of the process. Samara region has calculate detailed demand as 5,5 billions – only for one city.

While analysing preparation plans one can see a lot of expensive projects. Only some of them would be accepted. For example currently only two of metro network extension projects would be financed by federals: in St. Petersburg and N. Novgorod. What are criteria for project selection? Is it provision of a few football matches or significance for long-term city development?

#### 3.2 Local initiatives

The main stream of federal financing would go via the regional governments – not municipalities. And what are the real cities' needs? It's amazing but almost all cities do not really need new large stadiums. Average attendance of football matches in Russia is about 10 thousand fans. Top matches can attract 20-25 thousand – not more. Present-day cities' needs are housing and network's development: roads, public transport, gas and water supply systems, etc. Coming back to Samara region demand one can see that 70 % of 5,5 billions

is necessary for road networks development, 11.7% – for sports facilities and only 9.5 – for city improvement.

Most plans not strategically but problem oriented. The main problem for almost all cities is traffic. If you have traffic jams – you mast build more roads. Another approach – to integrate "World Cup oriented" infrastructural projects with federal financing into own planning strategies as a «catalytic agent» for post-soviet city transformation – is rather strange idea for cities' authorities.

# 3.3 Planning challenges

What about strategies? All cities have general plans elaborated 6-8 years ago (long before crisis came) they are out of date now in principal statements. As a result – all new stadiums were located ignoring general plans – in Kaliningrad, Samara, N. Novgorod, Saransk. Yekaterinburg has a city development strategy adopted in 2009. Samara has started its strategic planning last year. That is all.

Bad roads and lack of housing have been traditional problems for Russia for years but they are not critical now. The main problem is referred to demography. Volgograd and N. Novgorod are shrinking cities (N. Novgorod was stated by UN as one of the most rapidly depopulating cities in the world), Samara, Kaliningrad and Saransk are stable, Kazan, Yekaterinburg and Rostov experience minor growth in the last 2-5 years after the fall in the end of XX century.

Stagnating and shrinking cities in Russia are entering the era of competition for skilled human resources. They must learn how to attract people not only by construction of social objects and dwellings or solving current infrastructural problems but by improving city environment, widening range of possibilities in workplaces, education and rest. Cities need to implement new planning methods and approaches using the wide range of instruments including participatory planning, professional discussions, competitions, international cooperation etc.

# 4 PLANNING STORIES

Two case studies offer more detailed view on cities' planning challenges. Kaliningrad is famous for the wide public involvement in city long-term development discussions. Rostov-on-Don seems to face most serious spatial transformation in the nearest future.

## 4.1 Kaliningrad

Kaliningrad – former Keningsberg was demolished during the 2 World War and still has been looking for its identity for more than 60 years. The city never faced strategic challenges like World Cup 2018. Probably this was the reason for wide public discussions both concerning the championship preparation and city development started immediately after the idea to host football championship was announced in 2009.

First of all location of a new stadium was discussed. The FIFA commission's decision adopted in 2011 is still an issue for debate. The Lomse island is a swamp with average height 1,5-2 meters above the sea level. According to the general plan developed in 2004 the whole island except the western part was the recreation zone. The new stadium was placed in the middle part of the island. Some experts worry about negative geological and hydrological conditions that can complicate the stadium construction and increase its cost.



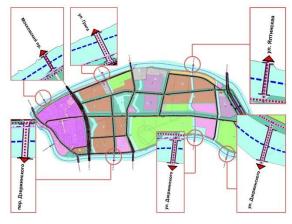


Fig. 1: Concept of Lomse Island development (left). Transportation scheme in the "Project of Planning" (right)

At the same time the stadium construction can stimulate development of the large territory about 220 ha close to the city centre. The concept of Lomse island development was created in the beginning of 2012. An official document "Project of Planning" was developed half a year later and caused a new round of debates. Somebody may see that blocks-based structure of the Concept was transferred to typical "microrayon-based" scheme with a rare street network. "Project of Planning" was criticized by a group of Kaliningrad architects but vas adopted by city authorities in march 2013.

New development of Lomse island based on today principles of green building, public spaces priority, low carbon emission and multi-use planning approach may help the city to start its spurt towards the modern-looking city and get a unique identity among Russian cities. Probably Kaliningrad needs to explore successful housing projects in middle-sized European cities like Västra hamnen in Malmo (Sweden) or Port Marianne in Montpellier (France).

## 4.2 Rostov-on-Don

Rostov-on-Don has surpassed almost all host cites by the number of proposed infrastructural projects on the threshold of World Cup 2018: construction of the new metro line, a new airport, cable-way, of the northern bypass around the whole city, bridge reconstruction and of course the new stadium on the left bank of Don river. World championship will make a qualitative leap in the city's development. Moreover, this opportunity can be considered in the geopolitical competition in southern Russia. It is a chance to get ahead of Krasnodar (also was a candidate to host WC 2018 but lost) as a leading city in the region.

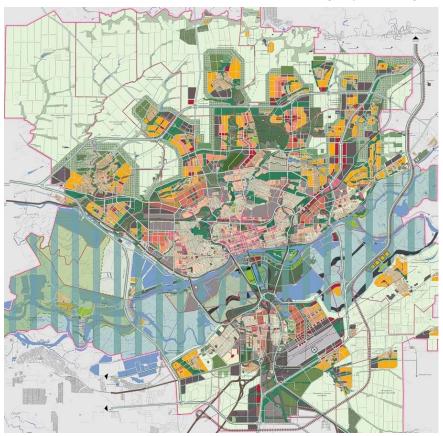


Fig. 2: Concept of the "Great Rostov" agglomeration

Investments in transportation network not only within the city but also in the adjacent municipalities will improve metropolitan planning structure of the "Great Rostov" and ensure the development of new "points of growth" for the harmonious territorial development. One of new focal points is the airport projected to the north-east from the city that can attract logistics and commercial development. Another one is a new stadium, whose active "life" would depend on the ongoing events.

In case of successful "Great Rostov" development most of active functions related to business, sports and recreation will transfer to the left coast to create more balanced city's framework. At the same time challenges of the "Great Rostov" may face a various risks.



Fig. 2: 3-D model of new development around the stadium on the left bank of Don River

The left bank development conflict with the theory of a compact city and has a risk of limited connection between both sides of river by existing and planned bridges. Infrastructure development on the left bank may cause multi-stored economy class housing construction while most workplaces will remain on the right bank of the river.

Will "Great Rostov" slide to the notorious offering "affordable" housing in the new "active" areas, or the city can formulate the concept of a modern urban environment? What are the goals now and what is the vision? The question of urban policy focused on qualitative development remains open.