

## **City-scale private “Megaprojects”: real estate manipulations or way to planned development in Moscow region**

### **I. Introduction to “megaprojects” history.**

“Megaprojects” is a relatively new term that became common in Russia about 2-3 years ago. Originally this definition was used as a kind of marketing tool to bring customers’ attention to new type of real estate projects announced getting started around Moscow. The new features that gave a ground for such distinguishing title were the following:

- much larger scale of the area involved – thousands hectares of nowadays agricultural land had to be converted into new urban areas;

- greater figures of population – dozens and even hundred thousands of new inhabitants were expected to settle in new urban precincts;

- declared intention to create an urban fabric sharply different to what nowadays are common types of living environment in Russia. From marketing point of view the latter was really crucial. One should have been persuaded that he or her will be guaranteed from unexpected and undesirable new construction nearby by means of controlled and predictable urban development on surrounding territories belonging to the same owner.

What was and still remains important from urban planning point of view it is the fact that all those projects in spite of their scale were initiated by private investors without coordination with local urban development plans and only later discussions on that issue have started. In the same time it could be justified by the situation when one could hardly find any proactive urban policy in Moscow region and normally towns and communities had no or outdated zoning plans.

Since then this phenomenon has spread all around Russia (more than 20 projects in different regions) and obtain another, more science-wise and official name as “integrated area development”. It also has become a central point of the so-called “national housing project”, launched by the central government to enhance housing supply in the same time as first “megaprojects” appeared. One of key principles of the nation-wide program is a support to private investors undertaking the projects of at least 1 mln. sq.m of housing stock each by waving costs for engineering infrastructure and providing them with political assistance regarding regional authorities. It is not possible to say exactly whose initiative come first. Were it developers that had bought cheap lands of former collective farms near large cities and later lobbied the support for transforming of their property to urban use or the government preoccupied with the lack of housing and having a budget full of oil money. Nevertheless none of the projects has yet started digging the earth indeed but 3D pictures of future “megaprojects” on the former rural land have gained their place in newspapers and architectural exhibitions.

It needs to be mentioned that simultaneously new Town Planning Code was introduced in attempt to clearly distribute responsibilities among central, regional and local authorities over urban development and to force regional authorities to work out territorial development plans that were neglected and got outdated during last two decades. In fact it was quite often situation when large scale private projects were approved on local level (i.e. in village county where it will be situated) while no planning framework existed on regional or country scale where they were to be incorporated to. From other hand new Code introduced officially right of owners to give their proposal to be included in development plans and much easier legislation for changing allowed land use.

Another factor that appeared to be important for facilitating growth of built-up areas was enlarged cities’ limits all over the country encouraged by undertaken municipal reform. It may look strange for the country where urban population constitutes about 78% of the total and that proportion have been stable at least decade long accordingly to last census of 2002 and natural population growth is negative. However the lack of housing is still serious problem and new areas absorbed by cities are considered as opportunity to increase supply on housing market. Besides highly centralized tax system also encourages local administrations

to benefit from construction boom as each developer’s project not only pay normal taxes but also extra money to local budget through so-called “investment contract” with administration.

First time faced “megaprojects” in 2006 during consultancy work for involved foreign investor Laboratory of Urban Studies of Moscow Institute of Architecture has followed the evolution of this kind of development. Taking into account absence of coordination between different projects neither by planners nor by business community we become interested to analyse possible cumulative impact of all local “megaprojects” together can have on regional structure if they ever are realised. For that on the first stage publicly open information on area, planning structure and location of the projects were collected and summarized. Next mainly through Internet and partly by means of printed documents current distribution of population and trends of its changing in the areas adjacent to Moscow were defined. Having both results in hand we had compared them with intentions of region and capital development plans and international experience concerning suburbanization and urban fringe development. In spite of earlier expectations of finding just negative consequences of uncontrolled sprawl along the research it was unexpectedly discovered that new projects likely present deeper shifts in relations between capital and its surroundings and manifest appearance of a truly new urban region which none of the involved actors foresee. Its governance will be inevitably challenge both for planners and authorities in nearest future while its sustainability is questionable but not yet completely impossible.

## II. Moscow and region: urban framework and planning policies.

Contrary to many other parts of Russia both the capital and its region have their own structural plans but due to political reasons they were developed almost autonomously one from another and had little respect to new trends “megaprojects” present. That approach can be well illustrated by the graphics of the maps being in use for presenting urban plans. Moscow vision is centrally focused with extending of transport infrastructure in order to catch more periphery and to connect it rather to the city than to provide different sectors with links between themselves (fig.1).

It also witnesses the traditional attitude to the metropolitan area as reserve for more and more enlargement of the capital territory that had been taking place during all XX century. Just opposite regional plan had sometimes on it maps literally “grey zone” in the centre where the Moscow is situated in spite of both areas are tightly connected.

Main reason for such strange situation is not an ignorance of the planners but is a consequence of country political system. Moscow and Moscow region are equal entities within the political framework of Russia and both have status of “Subject of Federation” – so the parts that Russia consists of accordingly to Constitution in force. Except Petersburg in all other cases regional administrative centres are just municipalities within a region with no dependency on how big is their proportion of local population or economic activity. In general state policy is focused on regional authorities while cities which are really main points generating income get the smallest part of amount of taxes collected on their territory. For example municipal bodies of regional capitals recently lost their right to allocate land of their own cities and their power over this aspect has been transferred to regional executives. Moscow and Petersburg are simultaneously the city and politically the region so their rights and financial benefits are more advantageous than other metropolitan areas have.

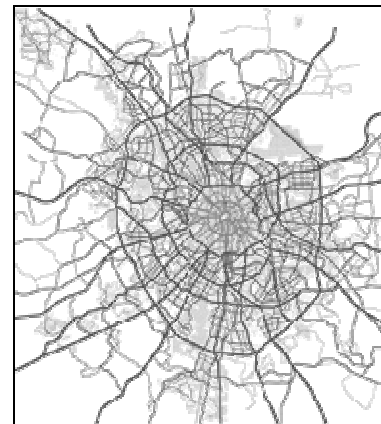


Fig.1 Road network development.  
©Scientific and Design Institute of  
Moscow Master Plan

Moscow has about 10,5 mln population and an area of approximately 1100 sq. km It has historically formed circular-radial plan that later was enforced by construction of Moscow circular automotive road (MKAD) as main city limit and internal circular roads (so-called third and fourth rings). This structure expands to the region where radial system of roads is

enhanced with also centrally focused railway lines. Links among radial roads are scarce and generally weak with low traffic capacities. Traffic congestion is constantly growing both in Moscow itself and its region. Main driving forces for that are role of the main national distribution centre of goods and biggest airport node (three international airports with current passengers' flow more than 30 mln people in 2007) and rapidly growing number of private cars. National feature of commuting between city and region is its seasonal character which related to a tradition of having country-house (dacha) in addition to city apartment. Therefore Monday morning and Friday evening (really afternoon already) are disaster on the roads leading from capital to region but on Sunday and Saturday it is evident that not less than third of Moscow population is out.

The regional area is more than 40 000 sq. km and population approximately 7 mln. inhabitants. The particular feature of the region is concentration of greater proportion of its population (about 4,5 mln people) in the mid-sized (about 50-150 thousands inh.) cities adjacent or close to MKAD. Those cities have appeared from merging of former villages, industrial developments of Soviet or earlier time and housing blocks of various types and periods. Urban growth gradually has led to formation from part of them group of clusters with 0,5-1 mln inh. each which are situated on north, east and south-east periphery of the capital right beyond MKAD while south and west are yet less urbanized (fig.2).

In spite of pressure on the environment many woodlands still exists in Moscow itself and right around it. Previously they were part of officially established green belt like the one of London but now regional government is not paying much attention to that issue and more focused on encouraging construction activities in that most prestigious part of the region. Therefore forests more and more act as the only barriers preventing complete junction of towns in metropolitan area.

Historical cities are situated mainly at 100 km distance from Moscow centre and create next level of metropolitan area which less populated. With recession in agriculture many fields there were left without cultivation and experienced slow process of spontaneous reconvert into natural landscapes. Green fields areas in the central part are focus of developers' interest concerning construction of new logistic centres, factories and cottage settlements that often create complete mess of functions. So within region limits one can easily find high densities in the central areas and almost empty lands sometimes in its outskirts. As far as quality of natural landscape and environment gradually becomes worse in the central part due to densification regional periphery and even neighbor regions become more attractive for living at least in summer time. But low quality of road networks and social amenities slow down that trend. As a whole Moscow region has more than 70 towns in total.



Fig.2 Urban clusters in Moscow surroundings

Both city and region experience strong influx of migration that has rapidly increased the population of city as well as of the region on about 2 mln people each during last decade. Those figures excludes seasonal workers while only officially registered employees from CIS countries in Moscow (without region) constitute about 800 000 people.

Although central government in Russia has very strong power it acts tiny role indeed in physical development both of capital and the region. There is no federal policy related specially to development of capital metropolitan area. Central government is presented mainly in areas which are in its direct possession or control: sites of federal institutions, railroads, partly airports, main thoroughfares outside Moscow, woodlands and rivers. When Moscow government has developed its strategic master plan the central one did not agree with its proposals as little attention was paid to the specific functions and aspects originated from status of the capital. Nevertheless this disagreement had no consequences on master plan

implementation. In turn the region has no definite duties regarding city as national capital. The legislation only says it has to assist Moscow bearing capital status.

During Soviet era Moscow region was always disadvantaged in comparison to the capital in terms of social amenities, infrastructure, living conditions and job opportunities. Centralised management and concentration of resources makes Moscow more prosperous place than its close surroundings. And if for other citizens the difference between Moscow and other parts of the country was softened by big distances for those who lived right nearby this misbalance was very sharp. The echo of that time seems to be evidently emphasized in recent public opinion polls on attitude to amalgamation of the city and the region to one metropolitan area. It has appeared that majority in region would approve joining up in contrast to Muscovites.

Meanwhile since new governor of Moscow region was elected in 2000, the situation has been changing. While wages in the capital are still higher and such establishments like hospitals and universities are still predominantly concentrated there a difference in living conditions is not so sharp anymore. Construction of new shopping areas, sport facilities, different kind of housing diminished deficiencies of live out of biggest city of the country. And at the same time many important indicators show that Moscow is now very close to really crisis situation in many fields and may soon lose its strengths.

First of all average living area per capita (indicator being used from Soviet time for estimation of housing provision) appeared to be already lower in the capital than in Russia as a whole (19,7 and 21,1 sq. m, 2006) and much lower than in the region (26 sq. m) accordingly to the state statistic agency. At the same time average price for apartment of the same quality is about twice times less in towns around Moscow than in the city itself. Housing supply accordingly to last updated Moscow strategic master plan will be stable on the level of 5 mln sq. meters annually with unpredictable prospect of city population growth (it varies from 11 to about 14,5 mln in 2025). In the region there is already 7 mln sq. m of new housing stock delivered by the market annually and this figure is likely to continue growing as the region has no lack of empty land to be developed.

Another challenge of Moscow is strong and fast growth of car provision index that now hits the level of 300 cars per 1000 inh and will likely double toward 2010-2015 accordingly to forecasts of road police department. Ironically households started to massively buy cars when it became clear that their savings and credit capabilities will never allow majority of them to buy better and bigger apartment. Besides that the grain of housing blocks designed and constructed in Soviet time along principles of modernism and focused on public transport and pedestrian links appeared too big to secure density of roads necessary now. It makes practically impossible to increase traffic capacity of capillary roads to cope with new levels of traffic intensity. The situation on the intercity roads near Moscow is not much better but transport flows inside smaller towns are less and associated problem of environmental pollution is not so sharp. Needless to say that ecology of Moscow is worse than in the region and natural environment here continues to degrade very fast.

In this situation the strategies of the regional and capital urban development are just opposed. Moscow master plan envisages expanding existing metro system beyond city limits and increasing the capacity of main internal thoroughfares to facilitate commuting flows. Meanwhile no radical changes and steps (like regional high speed expresses and other modern public transport) were suggested. Expanding metro lines to the outskirts will make many of them almost impossible to use on the intermediate stations as the trains will be completely filled in at the beginning of the line. As far as construction industry was long time important and profitable part of city economy where civil officers seem to have their own financial interests one of central points of Moscow strategy is to keep industry working by means of further densification and building-up new areas outside. The most extravagant proposal that frustrated regional executives was recently stated by vice-mayor responsible for architecture and construction industry. He announced intention of the capital to buy spare land in the region and to build their new satellite cities linking to urban "hinterland". Regional authorities expressed no enthusiasm on that approach.

In contrast regional master plan is based on principles of Charter of European Cities & Towns Towards Sustainability and proposed to turn over commuting directions and to make the region suitable to work and to live in by subdivision of its territory onto 18<sup>th</sup> sustainable systems of living areas where ideally greater proportion of local population could find all necessary services, jobs and housing in good natural environment. These systems are not administrative units but have their own boundaries and are objects of planning. Moscow is out of any system as it is under other governance as it was shown above. As industry and now offices start to be relocated into region development plan is counting that more and more Muscovites will work in region daily and will return back at the evening. The focus point of the regional development strategy is to reconstruct now existing tiny circular road running in 50km distance from Moscow centre (it was installed for military purposes and was not much used since) into highway (Central circular road, CKAD) and to create on that basis together with incoming European transport corridors and federal radial roads new backbone for the region. New industry, logistic centres and housing are to be concentrated there. It is also proposed to transform circular-radial transport structure to network and launch several express railroads connecting regional urban clusters. Compared with not much fruitful attempts to coordinate capital and regional policies given strategy looks more ambitious than the one of the Moscow and reflects rather competitive approach for interaction between capital and region.

Regional planners were often blamed for not considering all agglomeration (the term of national planning practice that is more or less equal to metropolitan area where one urban core is surrounded with group of smaller ones). That position was always justified by the fact that as an administrative unit and legal term such planning object doesn't exist and anyway can not be managed. It is true from the point of view of civil servants actually it was evident for everybody that both areas are dependent one from another. As a result current urban policies of two administrative entities are focused on cardinaly different directions: while Moscow plan is concentrated on metropolitan urban core, regional strategy is aimed to create an alternative to that in the form of new peripheral ring. Meanwhile area between MKAD (generally creating limits of the capital) and CKAD which is really a centre of the region was left by regional plan for so-called "organic" development except areas adjacent to main radial thoroughfares (fig.3). Important to note that decisions on the land parcels to be developed in this area, its land-use type and density is within power of municipalities.

Therefore "organic" development become generally matter of negotiations between private developers and correspondent local authorities and now appeared to be the third force creating new urban and suburban environment that seems to be underestimated by planners and politics.

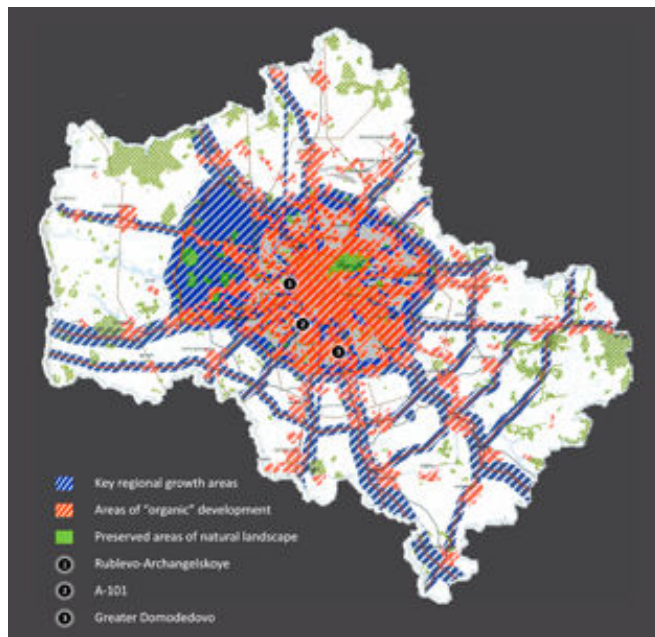


Fig.3 Focus areas of regional growth and "organic" development.

Based on regional plan scheme developed by Moscow Regional Institute for Urban Planning

### III. “Megaprojects” and other forms of regional “organic” development.

As it was described above development of areas closed to Moscow is not in focus of regional plan while right here real estate market pressure is most strong. Various commercial actors are operating here to benefit from previous lack of retail, sport and leisure facilities, housing and office space as well as from availability of spare land for new industry. As our research was inspired first of all by new scale of housing projects it was limited to types of “organic” development in that sector with regarding other land-use only if their influence or role was important in development of new residential areas.

Along our research four main types of “organic” projects were identified that listed below with titles used in Laboratory study to underline their urban pattern and scale:

-“*suburbia*”: hundreds of cottage and semi-detached houses areas spread across the region on different distances from Moscow. They vary much in scale from hectares to 1150 ha as the biggest present example (estimated population in latter case -30 000 inh). Majority of them is gated communities with no or small area assigned to social amenities. Only recently in respond to request of customers schools, kindergartens, sport and social facilities like clubs started to be introduced inside there territory or being provided by developers out of housing sector who intend to serve inhabitants of several settlements and cities in proximity. However almost no efforts was done to increase capacity of road network that serves areas of settlements construction. Another tendency is gradual increasing of distance from Moscow which is being considered as attractive for customers. If several years ago main opportunity was proximity to capital limits nowadays 100km and more radius from Moscow is being advertised as guarantee for good ecology. That trend indirectly proves declining of landscape and environment in the central part of the metropolitan area and development of commercial services in the periphery and especially along main roads.

-«*urban blocks*» *up to 0,5mln sq. m of total gross area*: in comparison with commonly known suburban pattern of living presented by previous type it is clearly urban form with multistory high- and middle-rise buildings. It can be situated either at local city periphery or on former agricultural land among forests and villages. Usually developers are trying to reduce social amenities to minimum - one school or if possible no schools at all by means of different tricks. Majority of districts of that type are constructed as really enclaves having no much planned transport and social links to surroundings and with as much as possible density inside. Other important feature is that being a real city by its population – 10-15 thousands inhabitants, urban blocks often lack variety of spaces and functions and become just “sleeping” areas. Very often this type provides sharp transformation of landscape when in previously rural views new 15-17<sup>th</sup> storey buildings start to dominate.

-«*urban blocks*» *over 0,5 to 1 mln sq. m of total gross area*: due to its larger scale those areas designed with different types of housing and some social amenities likes schools, shops, sport facilities and even with public green areas. No one project was finalized yet but it might be expected that there internal living conditions should be better than in many existing cities and smaller districts. However isolation trend is evident in this case as well (some new residential areas of such size intend to be gated communities too at least for cars’ entrance). Similar to previous examples no attention is being paid to secure places of work for new inhabitants thus left commuting to Moscow as the only solution. Therefore that type is strictly bound to Moscow limits and seeking land parcels in proximity to the capital.

-“*megaprojects*”: as it was mentioned before that “magic” threshold of total gross area derived from the amount of housing stock per project that can be supported by central government. It was never justified by any calculations or research but serves as the only clear indicator for developers and regional authorities to apply for federal support. However it doesn’t mean that any project of that scale automatically selected to join national housing program. There are three biggest and earliest projects of that kind that were scrutinized in our research while many others were announced during last two years in different parts of the Moscow region. They are Greater Domodedovo, A101 and Rublevo-Archangelskoye. The latter was the first ever announced new private town and had highly distinctive task to be “millionaires’ city”. All



three “megaprojects” have got national government support but still exists only on drafting desks. Main figures<sup>1</sup> on given projects are provided below:

Title	Direction/Distance from Moscow	Total area, ha	Gross total area, sq.m	Approximate population
Rublevo-Archangelskoye	West, 3 km	430	2,7 mln	30 000
Greater Domodedovo	South, 13 km	3 000	16 mln	450 000
A101	South, 2-3 km	3 400	10 mln	320 000

In some respect “megaprojects” were the result of evolution of less spacious types of “organic” development listed above but now they indicate new role private initiative acts in regional development. Smaller scale projects were just chaotic filling in of existing urban framework with corresponding mess of functions and landscapes in areas they occupied. Investors of “megaprojects” offered another approach insisting on selling the living environment rather than housing stock and their ambitions were to built-up areas not parcels. And as will be shown below “megaprojects” will have more radical impact on overall regional urban structure.

Several prerequisites for creating the “megaprojects” were found during the research. First of all it was a result of agricultural land consolidation. Collective farms created yet in Soviet time with thousands ha of agricultural land went fast bankrupt in 90<sup>th</sup>. Those of them which were situated close to Moscow limits were easily and cheap bought by emerging real estate actors. Thus to become a landlord in the municipal district<sup>2</sup> it was necessary to buy only two –four collective farms. As a result there are at least 10 biggest land owners posses from 3 to 70 thousands hectares of agricultural land in the region (“Commersant” newspaper, 2007).

Next one condition was an oil and metal price boom that creates enough capitals to be invested to projects of such scale. Two of three “megaprojects” were initiated by oil and coal/aluminum corporations. Combined with local real estate market growth pushed by lack of housing stock and rapid increase of population it creates an opportunity to benefit from potential built-up of spare land in proximity to Moscow.

Finally the crucial effect was made by start of national housing program that opens political support and facilitates provision of necessary engineering infrastructure for large scale investors’ schemes otherwise subdivided to number of smaller projects. Besides given program does not stipulate any obligations for investors concerning type or price of housing that should be provided but only minimum of total amount of housing stock and period of time within which that amount to be constructed. So it leaves investors free to develop there own marketing strategies under governmental support.

Indeed each of the “megaprojects” has its own target group they are focused for. Rublevo Archangelskoye (fig.4) occupies compact lively area in the bent of Moscow-river right opposite the capital outskirts. As this sector of the region had been already developing as luxury area given project was marketed as newly developed real city with “historical” centre, mid-rise intermediate blocks and low-rise suburban areas. The richest people were expected to select that location as permanent place of living. While later this social concept proved to fail and proposed density had been raised in



Fig.4 “Rublevo-Archangelskoye” master plan  
 © John Thompson and Partners

<sup>1</sup> Sources of the information are different: for Rublevo-Archangelskoye data collected from the official site <http://www.rublyovo-arkhangelskoye.ru>, for Greater Domodedovo data obtained from the management of development corporation during work Laboratory done for their prospective partner, for A101 all figures borrowed from developer’s report.

<sup>2</sup> Administrative areas constituting region that include cities, villages and areas in between.

order to make project more profitable the land of well advertised project has been successfully sold this year by original owner.

Proclaimed as a “new city” Greater Domodedovo (fig.5) accordingly to managers of the project was nothing but marketing slogan attracting people to the project. Project itself is a compound of many separate lots with area of hundreds ha each spread within municipal district of the same name. Investors of the project are main land owners in the municipal area of 81,6 thousands ha that expands for 30 km along the railway line from Moscow where all major current settlements are connected to. Periphery of the area is mainly woodland and rural landscape. Given territory is adjacent to now largest Russian international airport Domodedovo and will benefit from intersection of federal road leading south with future regional thoroughfare CKAD (see above). Therefore investors’ real intention was to construct tremendous logistic parks about 1-1.5 mln. sq. m each on part of the parcels and housing for workers of airport and logistic facilities on the others. So this project is mainly focused on cheap mass produced housing. For promotion of the project and to secure legal conditions for new construction rather low density area was given status of town county that gives the investors right to urbanize it. Total current population of 125 000 inh is almost four times less than proposed in the future and most of the newcomers expected to come from outside Moscow region.

The last one A101 (fig.6) gained its name from the federal road number



Fig.5 “Greater Domodedovo”  
development scheme  
© Deloitte & Touche, CIS



Fig.6 “A101” master plan  
© Maxwan Architects and Urbanists

which acts as backbone for the area of the project. All land acquired by the investor is subdivided onto four so-called quadrants that placed on some distances each from another. Selected through international competition master plan does propose variety of housing types, densities and public spaces. It is stated that at least one third of the total new population will find jobs in 1,2 mln sq.m commercial and office spaces to be constructed. To support that intention part of the area is assigned to new university while status and specialization of that institution remains unknown. Target group is middle class Muscovites to leave city for better environment, less traffic congestion and still proximity to the capital. Nevertheless enlargement of A101 road from two to three lanes is the only one real measure to increase local transport accessibility to Moscow. There were also negotiations with Moscow (not regional!) government to expand nearest metro line to the area across the lands owned by investor. But that line already serves remote Moscow districts with difficulties in rush hours and would be totally overloaded if comes to suburban area.



#### **IV. Common features of new residential areas.**

Analysis of internal planning structure of three “megaprojects” allowed us to identify several main features common for all of them with no difference to their size and marketing strategy.

All share with other types of “organic” development tendency to isolation from surroundings. Usually only links to Moscow are considered as important while neighboring villages and towns are mainly neglected even if they occurred in the tissue of new development. Very often existing settlements are shown on land use plans of “megaprojects” as just grey zones in the same manner Moscow was shown on first versions of regional plan. It is not only the result of become usual social segregation of new and old residential areas but also an evidence that regional policy to provide new centres of gravity beyond Moscow limits currently does not reach its target. At the same time Moscow strategy is to enlarge its own new districts rather to assign resources to the improve its surroundings that means that “megaprojects” will be likely badly connected to Moscow too. Lack of coordination between investors and the authorities as we can see also strongly contributes to that situation.

Another common feature is fragmented internal structure of the land use plans proposed by the investors. It makes impression that all new areas by no means will have an atmosphere of the real city. New residential areas are rather sequence of different but internally homogeneous parts glued together where each fragment is approaching particular market sector with related customers. New developments lack common to urban fabric main structural elements like squares, prospects and main streets integrating different areas. That approach is determined by several factors. One is to mitigate investors risks related to market volatility. Fragmented structure will allow flexibility of housing supply and to avoid massive investments to transport and engineering infrastructure in the very beginning of the project. Besides it provides possibility to some extend control market prices by including more or less number of fragments to be delivered to the customers. On another hand investor can always easily sell part of its land whether to get cash flows to develop other zones of the project or even to restructure business model from housing market to land development. As an example in Greater Domodedovo case described above main profit was expected on the stage of selling former agricultural land after changing its allowed use to built-up areas instead waiting of construction and contracts with end users of the apartments.

Fragmentation derives also from the structure of the acquired land that can be cut off by villages, federal woods or small intrusions of other owners. It makes difficult to integrate overall area as there is no well developed and politically supported approaches to include private initiative of that scale into broader context where local community and its economy is completely overweighed by financial and political power of the investor.

While all the “megaprojects” have master plans, zoning schemes and strategies of implementation several important aspects in all cases left without proper solutions as they truly need cooperation and partnership with federal, regional and capital authorities which is difficult to reach under competing urban planning approaches. This is issues of transport infrastructure enhancement, natural landscape preservation, development of areas of employment and social welfare facilities (hospitals, clinics, etc). From this point of view all projects remain heavily relied upon existing infrastructure and social welfare facilities which by no means will be able to bare two-three times increased load when new residential areas start to be constructed.

Understanding of the current state of “megaprojects” and their common features proves that positive and negative issues of the very idea of that approach to urban development can be found. Negative ones mainly concern domination of private financial interest that drives “megaprojects” over public domains contributing to quality of life of both newcomers and current population. Initial idea of operating on large scale should have been promising low level of dependency on external factors and thus reducing number of threats and risks out of investor control. Paradoxically right opposite large scale increases grade of interaction between externalities and internalities of the project. Due to long term of realization circle even if it is possible to subdivide “megaproject” on many fragments the lack

of public services mentioned above and environmental impact of first phases will have time to hit next development. Rapid urbanization of territories long time conserved for preferably agriculture and leisure as part of the green belt around Moscow will have heavy impact not over local but also larger scale ecological systems and finally can undermine one of the key advantages promoted by “megaprojects” – combination of urban life with nature in contrast with overcrowded Moscow.

At the same time private investor of the project can not guarantee provision of necessary public facilities in time even if he/her understands their crucial role. The greater scale of the project initiated the more support it needs from authorities and consequently the more risks of not securing that task grow. Thus large scale initiative even on consolidated land property needs to be incorporated into the same or even bigger scale infrastructural and environmental policy. In Moscow region case that prerequisite is questionable due to sharp difference between “megaprojects” concentrating in the central part of the region and the regional power intentions to develop its intermediate part. Therefore to find ways of balancing amount of “pure” housing stock investor ready to deliver with real capabilities to secure necessary external links and frameworks for that amount become crucial issue to realize key positive features “megaprojects” might offer. Otherwise announced integrated development will be further subdivided and each fragment will be sold as a separate property thus converting “megaproject” in just mega land speculation.

Positive effects of megaprojects are generally related to probably visionary but tempting intention of creating harmonized and integrated urban areas in comparison to other kind of “organic” development that so naturally increase chaos in urban fringe. Large residential areas of new type may gain internal unity of spaces and landscape as any undesirable activities going contrary to strategy of territorial development will be impossible. Based on that principle following opportunities can be realised if effective forms of private public partnership (PPP) of investors and authorities will be found:

- recovery of regional physical and infrastructure planning supported by long term and large scale private investments.
- speeding up development of infrastructure that otherwise could have been postponed or started too late.
- more public attention was attracted to the discussions on quality of housing areas instead of quantity of units provided all over the region. It seems to be a local particular feature that so significant issue was first manifested by big corporations when neither regional and community administration nor planners and non-governmental organisations were able to formulate any requirements or policies in that field.
- long term controlled development instead of chaotic one and more organized regional structure as a result.
- possible ground to establish PPP to reach regional strategy goal to create sustainable system of settlements.

Large scale private projects may provide some hope for more planned development in current chaos of Moscow metropolitan area if they avoid risks to become land speculation due to impossibility to provide external conditions necessary for their success.

## **V. Conclusions: “megaprojects” on regional scale.**

Having identified both risks and opportunities ‘megaprojects’ can bring on local scale, study results were used to create a scenario for future regional structure that may appear when “megaprojects” are realised.

While Rublevo-Archangelskoye occurs to be a relatively small settlement among existing cities of central part of the region other two projects will become the biggest urban areas even with its own new population. Together with inhabitants of adjacent municipal districts difference from existing urban areas grows very significant (fig.7). Moreover being situated in vicinity one from another Greater Domodedovo and A101 with smaller towns nearby will constitute new urban cluster with population about 1 mln. inhabitants. Thus already

existing highly urbanised belt enveloping Moscow from north to south-east will expand to the south.

As far as strategies of the “megaprojects” are focused on Muscovites and migration from outside regions of Russia and even CIS but not on local inhabitants they will lead to shift in current proportions between shares of total population in the area between CKAD and MKAD and Moscow itself. If in the past the capital always dominated less populated surroundings in the future the difference become more equable (fig.7) and will probably tend to further redistribution of the population from Moscow to metropolitan area. In the same time the city likely will

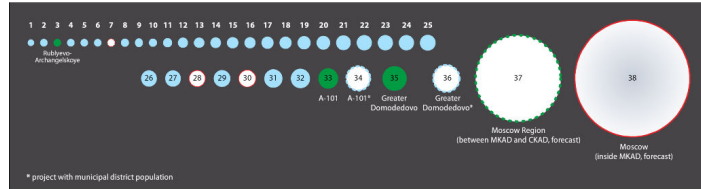


Fig.7 Redistribution of population in Moscow region

absorb more and more people from CIS countries who will tightly live in renting apartments whose owners will prefer to live out of the polluted and experiencing traffic problems capital.

In spite of intentions of the regional development plan majority of the population continue to be concentrated in its central part due to grouping here all types of “organic” development including “megaprojects”. Instead of sustainable systems of settlements or green belt around the capital – ideas of regional and city planners that could have been integrated - new urban region with average radius of 100 km with Moscow in its centre and CKAD as its limit can be seen as the most likely future. With such territory and 17 mln. people of expected population it will have strong influence on national scale too as will constitute more than 10% of Russian citizens and may foster concentration of diminishing population in metropolitan areas. Meanwhile there are no administrative bodies that are empowered to operate on that scale as this integrated area will still be shared among two governments – capital and regional. Amalgamation of Moscow and its region that is now actively being promoted by Moscow mayor looks not sufficient because it will lead to even more concentration of the built-up areas and population in the centre as all urban growth policy will be oriented to satisfy Moscow need to growth outwards current limits without any radical changes in the regional structure. So while proposed and existing transport infrastructure will not be capable to sufficiently serve new urban entity nobody will be responsible for its development and for keeping high quality of life. Authorities will accuse neighbor in egoistic attitude and lack of cooperation as it often happens now.

Urban belt around Moscow stretching then from north-west to south-west will likely have sector social structure that are already promoted by “megaprojects” (fig.8). Sectors will not be absolutely homogeneous as there will be local intrusions of housing of other types due to local conditions or just remaining from previous times. Simultaneously more remote areas of Moscow region will probably lose part of its nowadays permanent population but will become an area where more and more dachas and summer houses will be relocated as natural landscapes closer to Moscow will decline.

Little bit pessimistic vision can be lightened as one of the main parameter rests uncertain. It is ability of authorities to adopt their policy for new reality. As far as there is some time ahead it leaves hope that new urban region can find a way to sustainability. In addition public opinion become more and more anxious on negative trends people face to in public transport, affordability of housing and quality of environment. As an example leading business newspaper recently issued an editorial article where poses a question if living and working in Moscow is

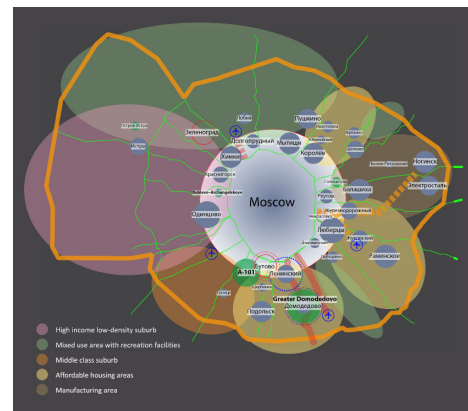


Fig.8 Sector model of new regional structure

reasonable? Public dissatisfaction with the results of urban policies (or their lack in some cases) will be a good incentive for authorities to act.

Unlikely evolving scenario can easily be changed as its driving forces lay deep in economic and political structure of the country and have much inertia in the past concentration of all resources in the capital region. Therefore recommendations our study was possible to suggest were not aimed to radical alteration of discovered tendencies but to give guidelines to mitigate negative consequences of them.

First of all regional government has to pay more attention to the "organic" development. Without coordination and guidelines it not only increases chaos in former rural areas, spoils natural landscapes and provokes further growth of traffic congestion but will undermine main idea of regional plan to create a new structural element in the middle part of region territory. When CKAD will be finished in 2020 lands between it and the capital will be completely filled in with new built-up areas and finalized highway will be all but just periphery of new urban region where most dense areas will be adjacent to Moscow limits.

As far as majority of new real estate developments take part in urban belt surrounding Moscow it is necessary to consider that area as a specific part of the region and to develop comprehensive vision and policy for it as a whole. Now integrated approaches were formulated for the region and for the territories adjacent to CKAD while more close to Moscow areas are considered mainly on sector base within limits of master plans of municipal districts. Part of that new policy can include high speed railroads connecting main airports not only with Moscow but also penetrating mentioned above urban belt of adjacent cities and passing Moscow for connection of those cities directly. Another possibility is to create agricultural parks and other similar forms of landscape preservation that will allow to have in public domain not only woods but part of the open green spaces that together will keep sustainability of the territories with the highest pace of urbanisation.

As far as all three international airports are located in the central part of Moscow region and not related to more peripheral CKAD development zone it is possible to create a kind an anchor zones on the basis of territories adjacent to traffic nodes and neighbor local cities that will attract large portions of investments. These new centres of gravity could soften a bit pressure in other central areas.

Last years proved that administrations of the capital and the region are not able to arrive at a conclusion on how coordinate each ones urban development. Therefore the only chance left is an interference of the national government which should be preoccupied with the negative trends growing in the one of the most important area of the country. The amount of lands in federal property is also enough big to encourage national level authorities to be more interested to monitor and better control development nearby. It is unlikely should take a form of special metropolitan administration but rather coordinating committee initiating and supporting discussions on strategic points of metropolitan development and encouraging investments to new infrastructure suitable for the scale of emerging urban region. In addition some measures to create more incentives to live not in capital metropolitan area but in other regional centres with more rational migration policy could have positive impact too.

Given recommendations do not pretend to be comprehensive and need to be scrutinized and further developed. But at least they contribute to necessary professional and public discussions on threats and opportunities of new urban reality that is now being created in one of the biggest European metropolitan area.

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