



Moscow

Living on the Edge

Moscow

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DipArch Stage 4 2013/2014 Research Project

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*“Moscow is a green city with
great amenities”*

Gehl Architects



Introduction

Prof Brian M Evans, Head of Urbanism, MSA

As a metropolis, Moscow, like Russia itself, struggles to find its identity in the post-Soviet era in order to achieve recognition for what it already is – a world city. Using many urban indices Moscow can lay fair claim to this accolade, but with many others – such as crime and corruption – it falls far short.

In terms of size, Moscow is at least a metropolis, perhaps even a megalopolis – the population of the City lies somewhere between 11 and 14 million souls. No one knows for sure since the Russian Census records the residency of Russian people according to their place of birth. This means that many immigrants to Moscow – and there are many – are accounted for elsewhere ... and then there are the illegals. But by all accounts the population lies somewhere in this range. Moscow is by far the largest city in the Russian Federation and it lies at the heart of Moscow Region (the Oblast) slightly larger than Switzerland and with a similar population if one overlooks the fact that somewhere between Zurich & Geneva there is massive city with the population of Istanbul.

What would it take to move Moscow from being a big world city to becoming a great world city? Improvements in infrastructure – physical and social – certainly, fiscal and legal reform and ecological regeneration would benefit Moscow's competitiveness and environment. But perhaps most of all, it is the housing of its citizens that could contribute most to their standard of living, quality of environment and quality of life. In short the somewhat soft concept much favoured in planning circles today – 'livability'.

A common metaphor for Moscow is that of the onion – a series of rings built out over time from the original fortress or 'kremlin'. These rings of urban dendrology date the city outwards from the medieval core, a renaissance overcoat, a 19th century industrial city and beyond, the infamous 20th century soviet city. Commentators would generally agree that through the early years of bolshevism and communism

the city was well designed and constructed until the mid-twentieth century. It was the years after Stalin that did for Moscow: in the outer reaches of the City in the decades under Brezhnev and his successors central planning in the Soviet Union struggled to keep up with the west, the palsied hand of soviet modernism built district upon district of system-built 'micro-raion'.

This outer ring between inner and outer orbital motorways – the third ring (think North Circular) to the MKAD (a Muscovite M25) – extends to some 900 Sq Km with about 8 million people. Poorly built and suffused with all the obsolescences of modernist planning, this periphery is one of the legacies gifted to the post-soviet Mayors of Moscow i.e. 1991 onwards. In this period, Moscow has, in effect, been governed by only two men: Yuri Mikhaylovich Luzhkov (1992 – 2010) and Sergey Semyonovich Sobyenin (2010 – to date). Lushkov, personified the 'wild east' of the post-soviet decades with unbridled clearance and redevelopment. Sobyenin, now in his second term, has brought more recognisable policies of urbanism to the city. These include a move a way from redevelopment to regeneration of the historic city and former industrial areas. Within the last year after stabilising development processes in the city core, the Mayor has turned his attention to Moscow's periphery.

One of Mayor Sobyenin's innovations has been the introduction of an 'Urban Forum', an annual international conference on the future of cities seen through the lens of Moscow. The first Forum was held in 2011 and the third in December 2013 concentrated on the challenge of the urban periphery.

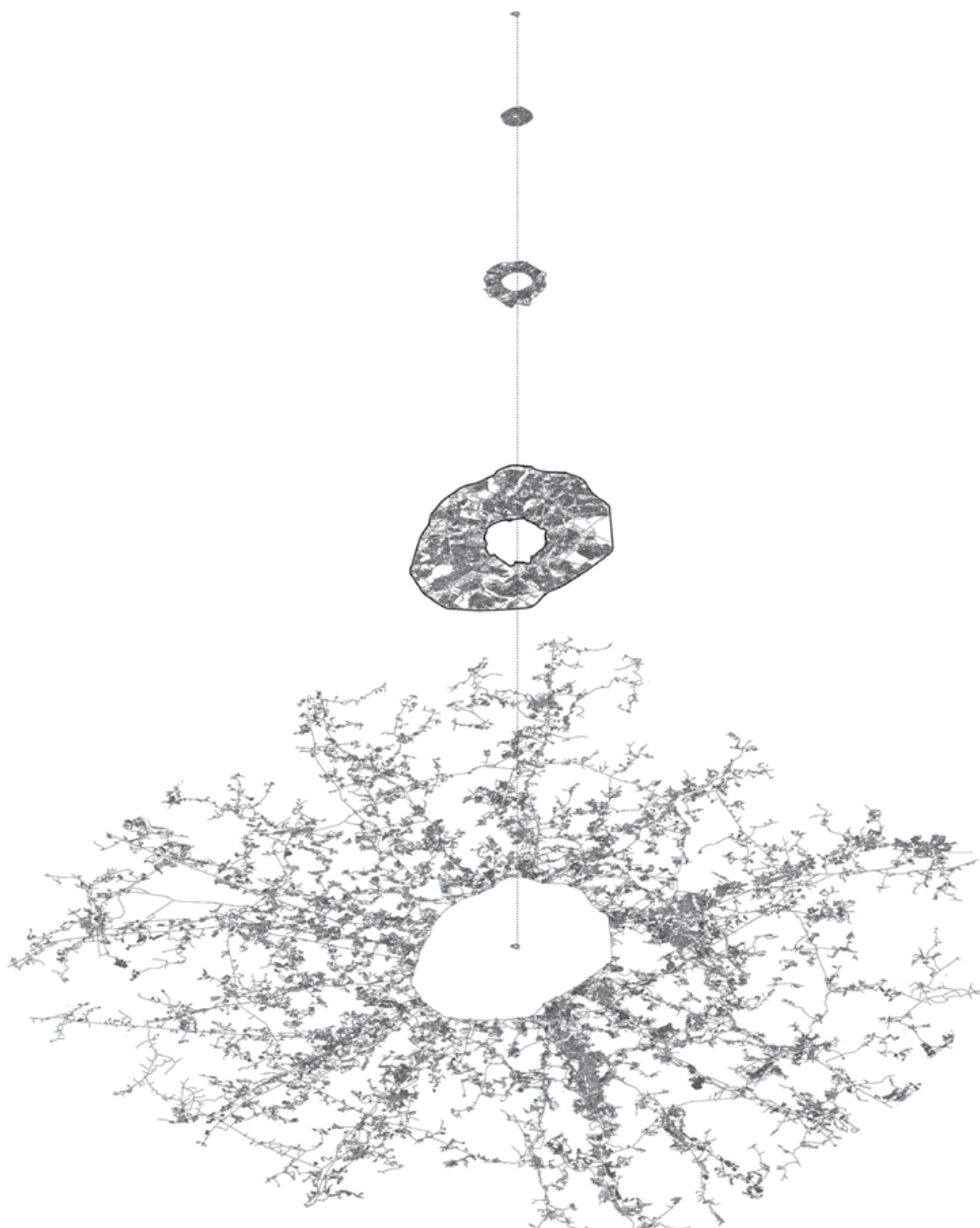
For this event, the Mayor's office commissioned research from the Strelka Institute for Media, Architecture and Design. Strelka put together an international team including Prof Brian Evans from GSA to investigate and speculate on the 'periphery' in the future.

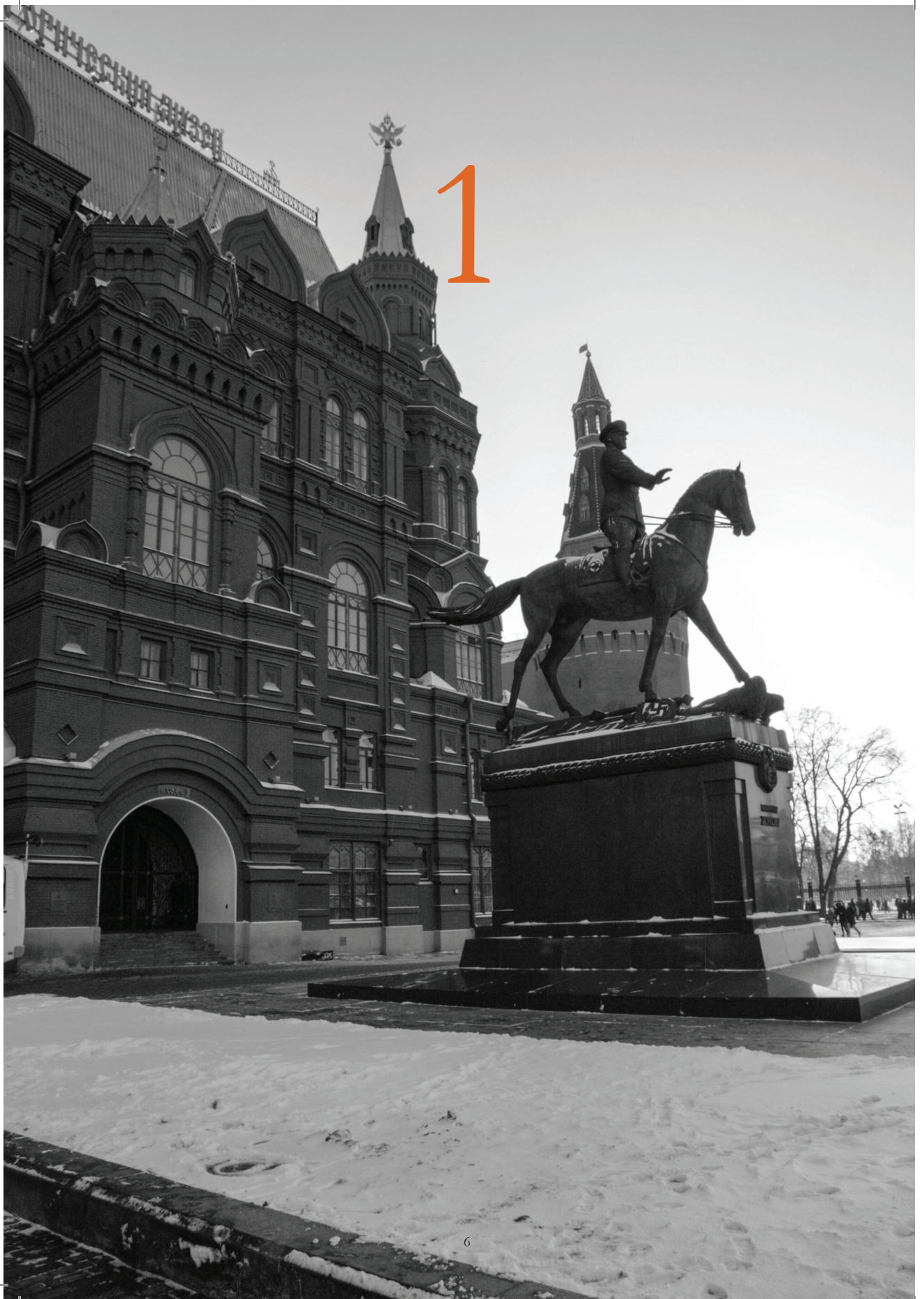
Published under the title 'The Archaeology of the Periphery', the work examined a wide range of issues: connectivity (physical, social, digital), ecology, urbanism and the like. The work postulated the concept of 'superpark' for the area between the inner and outer transport rings of Moscow where 'super' was used in the sense of 'supermodernism' and 'park' as in garden city.

There have been many bottom-up initiatives over the past 20 years designed to breathe new community life into the 'micro-raions' of outer Moscow but the mayorial sponsored research undertaken by Strelka et al is the first effort to provide both a researched and polemical overview that it is hoped will provide new stimulus to the debate about Moscow's future 'liveability'.

This document, prepared by Dragovic, Vickerage, Forrester, Oikonomou, Ibrahim & Casas from MSA Stage 4, is the result of a 6 month investigation into Moscow's periphery. The work is in 3 parts: the first sets the scene with a review of Moscow today that looks at structure, demographics, space and economy; the second part presents a series of personal reflections on lines of enquiry that are highly relevant to the pursuit of urbanism today; and, the third examines the architectural and spatial characteristics of the micro-raion of peripheral Moscow following a timeline from the inner city of 1920s to the edge city of the 1990s. Finally conclusions and insights are drawn about the livability and functionality of Moscow's periphery.







Initial Impressions

High-density, high-rise accommodation would result in high levels of anonymity within the microrayon.

This in turn would result in unkept grounds, signs of vandalism and feelings of vulnerability to the outsider.

The quality of the buildings themselves would be low with little care shown the exterior facades.

Disconnected external space under used.

High seasonal variations in climate result in confused identity of external space

Lack of foreign tourism (mainly internal) may mean signs in Cyrillic only making it difficult for foreign tourists to navigate the city.

*Georgy Zhukov on horse-back
Outside the State Historical Museum*

Initial perceptions of Russia and much of the Eastern European region are often negative and bleak when viewed from central Europe. These impressions in large stem from the media who feed back images of crime, corruption and conflict.

As the largest country in the world, Russia is in fact an incredibly diverse country that spans nine time zones and two continents. This perhaps offers some explanation for the lack of knowledge and first hand experience which has led to much misunderstanding.

Russia is seen as a country where bureaucracy, official indifference, bribery, corruption and urban decay are rife. We know a lot about its past, but not about what lies ahead. The recent Winter Olympic Games and the conflict with the Ukraine has bought a concentration of media attention to the country in recent times. However, the enquiry of this paper is focused on the housing stock on the periphery of Moscow.

The specifics of the paper challenge unfounded impressions based on second hand information. With respect, the adjacent list was preconcieved.

Key Terms

Microrayon.

a complex of apartment buildings and systems of institutions of cultural and community services that meet the daily needs of the population. It is located on the territory adjacent to the highways, but which has no transit roads. Microrayon includes kindergartens, nurseries, schools, stores of essential goods, gardens and sports grounds.

Oblast.

an administrative division or region in Russia and the former Soviet Union, and in some constituent republics of the former Soviet Union.

Okrug.

a territorial division for administrative and other purposes.

Kremlin.

The citadel of a Russian city.

MKAD.

The Moscow Automobile Ring Road is a ring road encircling the City of Moscow. The growth of traffic in and around Moscow in the 1950s made the city planners realise Russia's largest metropolis needed a bypass to redirect incoming traffic from major roads that run through the city.

Seven Sisters.

locally as “Stalinskie Vysotki”, the Sisters were built from 1947 to 1953 in an elaborate combination of Russian Baroque and Gothic styles, and the technology used in building American skyscrapers.

Muscovite.

A native or resident of Moscow.

Megacity.

metropolitan area with a total population exceeding ten million people.

Russian Ruble.

the currency of the Russian Federation. Formerly the ruble was the currency of the Russian Empire and the Soviet Union before its dissolution.

2



City Structure

Moscow sits at a latitude of 55.75° N which is very similar to that of Glasgow and Copenhagen. In the context of Russia, Moscow is the capital city which acts as the major political, economic, cultural and scientific centre of the country. As a result, it is a thriving and diverse city with a population of around 12 million making it the second most populous city in Europe, after Istanbul.

The city radiates out around the Kremlin which was the historic centre established at the beginning of the 14th century. Today it is a radial city, bound by four 'rings': the garden ring, the boulevard ring, the third ring road and the MKAD (Moscow's M25). These are bisected by arrow straight intersections that pierce into the city centre.

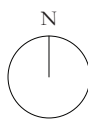
This enquiry is an exploration into the life of Muscovites on the cities periphery, examining how 21st century Moscow is overcoming discredited political systems, outdated infrastructure, rapid population growth and booming car ownership levels in a bid to become a competitive world city. It aims to review, synthesise and document life in Moscow, distinguishing the difference between perception and reality.

*Moskva River and the Kremlin wall
View from Bolsboy Moskvoretsky bridge*

The Concentric City



1:20000



Moscow has grown outward from the Kremlin since the 12th century. In 2012, Moscow region extended its borders South West into the Moscow Oblast to increase its area by two and a half times what it was previously.

The city of Moscow is defined by five concentric 'rings' that form the city's street plan. At the core, the Kremlin (Moscow's medieval citadel) is surrounded by the former moat and the central squares of Moscow which run along the former walls of Kitai-Gorod.

Beyond the Kremlin, Moscow's second centre-most ring road is known as the Boulevard Ring. This incomplete ring creates a horseshoe shaped route to the Western, Northern and Eastern sides of the historical White City of Moscow. To the South, the ring terminates on the embankment of the Moskva River.

Out from this, the Garden Ring forms a closed circle around the downtown areas along a route which was previously the city ramparts. The carriageways vary from six to eight lanes of traffic in each direction which carries the bulk of Moscow's inner city traffic. Despite the size and capacity of the road, often at rush hours, it becomes a stationary gridlock of frustrated motorists.

The newest ring is the Third Ring Road which was built to help ease congestion, however since its completion in 2004 a Fourth transport ring has been planned as the carrying capacity is still insufficient. It is used commonly by Muscovites who live in the suburbs and wish to avoid passing through the city centre as it conveniently connects with newer high-rise districts and notably the Moscow International Business Centre to the West.

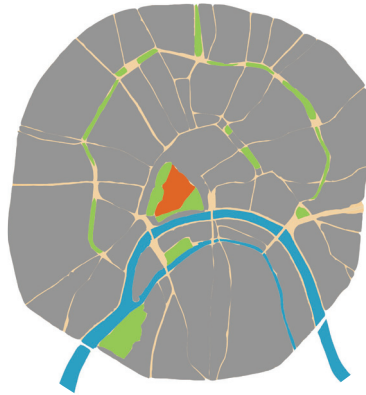
The city's Outer Ring Road, *MKAD*, diverts traffic away from the city centre and was intended as a city boundary for the 21st century. As the city continues to grow, recent territory expansion have outgrown the restrictions of the *MKAD* and now one can find metro stations beyond this belt. It no longer defines the city limits but as it is the *MKAD* is located about 28 km (17.4 mi) from the city centre and is around 100 km (62 mi) long.

The Concentric City

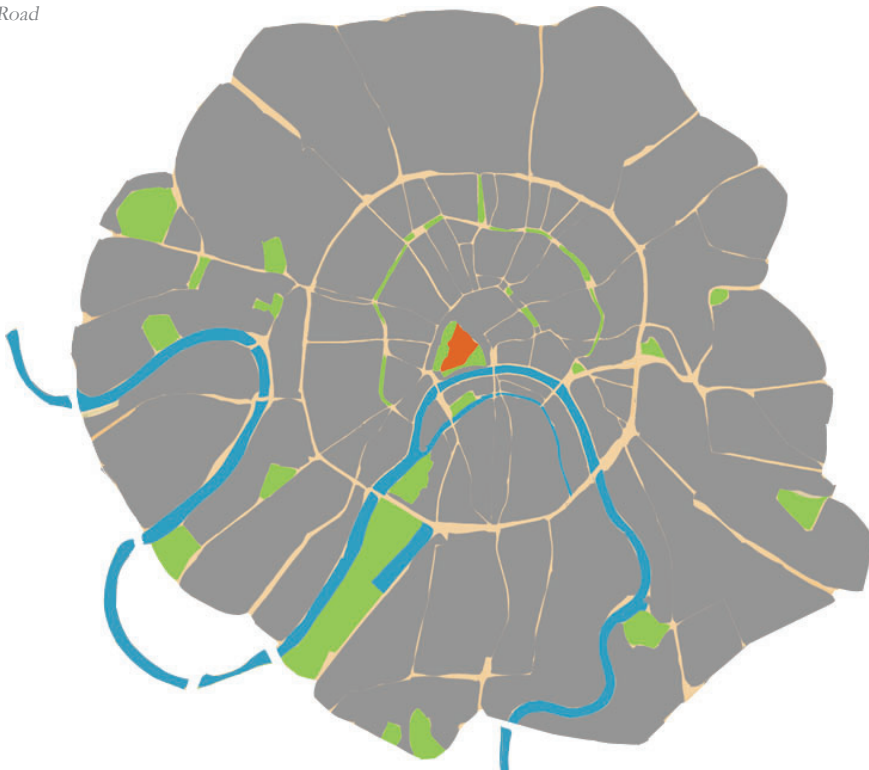
The Boulevard Ring



The Garden Ring

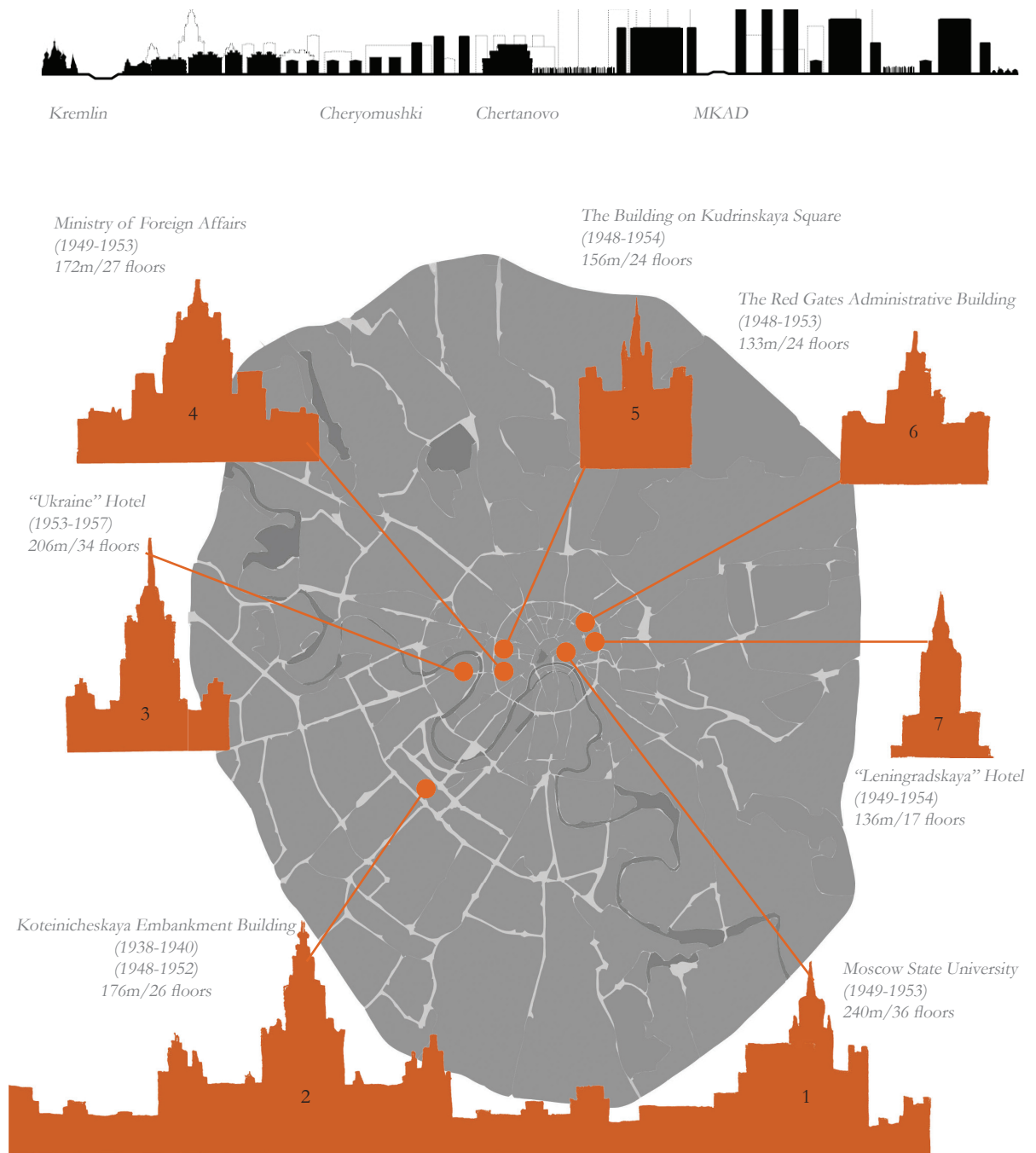


The 3rd Ring Road

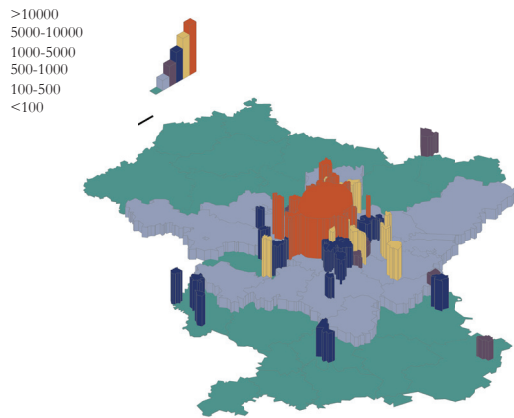


The vast majority of architecture in Moscow is part of the hierarchical system of Soviet city planning. Similarly to a cross section of tree trunk that exposes rings grown over years, Moscow can be sliced from its centre outwards showing the different architectural decades accordingly.

The Seven Sisters are a group of landmarks commissioned by Stalin as emblems of victory and symbols of a new era. The seven colossal skyscrapers still stand out amid new high-rises and help people navigate around the city. These monumental landmarks surround the centre like a wall, themselves resembling a fortresses.

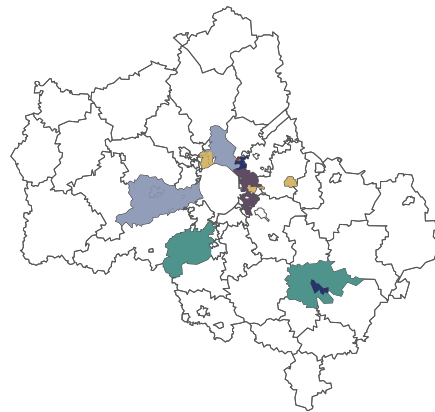


Demographics



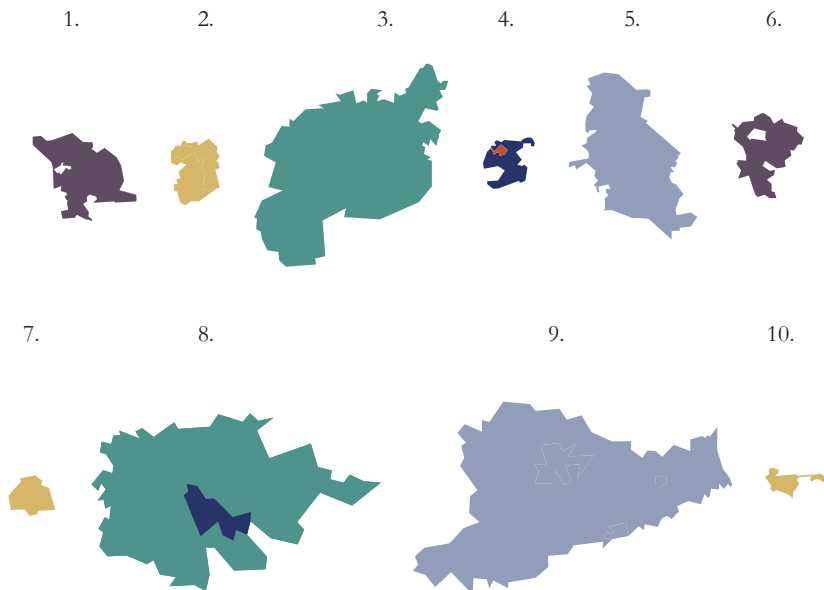
Population density of Moscow Oblast (People/ Km²)

The diagram presents the clear gravitational pull of Moscow city on the surrounding Moscow Oblast. Typical of most cities, densities per km² fall away as you move further away. Notable exception Kolomna to the South East of Moscow developed around the Moscva and Oka rivers.



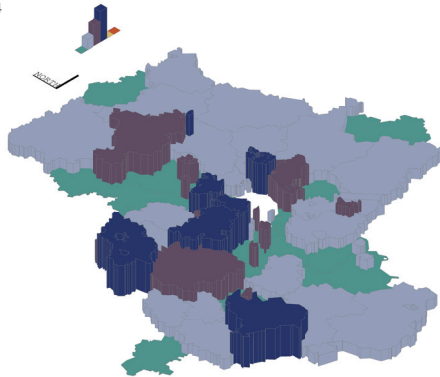
Below, is the top ten most populated towns/ districts, after Moscow city. Refer to plan on right for position relative to Moscow city.

1. Balashikha 2. Khimki 3. Podolsk
4. Korolyov 5. Mytishi 6. Lyubertsy
7. Elektrostal 8. Kolomna 9. Odintsovo
10. Zheleznodorozhny



Employment uptake distribution (i.e. Ave' no. of employed vs. working age unemployed population)

>0.5
0.4-0.5
0.3-0.4
<0.3



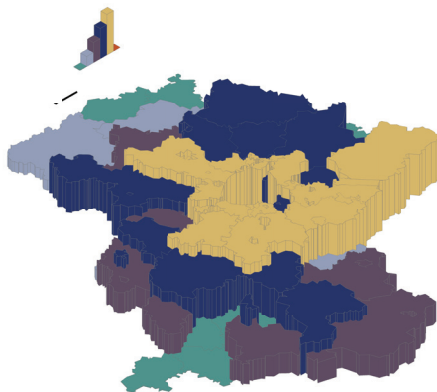
Higher employment, generally, can be seen on the perimeter of the city and to the South-East.

The Northern districts show at best, of the population residing there, 60% non working age population.

This should be considered along with the diagram to the left where the lowest density of people of moscow oblast can be seen.

Average annual wages within Moscow Oblast (thousand rubles)

1000-2500
500-1000
300-500
150-300
0-150



Study of average annual wage, again, emphasizes Moscow city as the centre of the region.

The North-Western districts show a high average income when considered against the diagrams above where non working age population is high and has relatively low density of people.

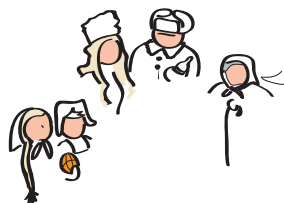
Demographics

Meet the Kuznetsovs

Ol' lady Kuznetsov, born in Moscow, lives with her son, daughter-in-law, and her 1.8 grandchildren.

They live in the Central Federal Okrug, within Moscow region, within Moscow Oblast, specifically within Balashikha.

According to 2010 census, 215,300 people live in Balashikha - making it the most populated town outwith Moscow city.



I was born in Moscow; I'm taking full advantage of my higher life expectancy - by taking up Skeleton! I was inspired by Sochi.



We represent:
88.6% Moscow, and
84.9% Moscow Oblast
of the working age population
(Foreign labour makes up the remainder).



From 2002 figures, of the 145,166,731 population of the Russian federation; 142,559 were considered 'homeless'. That is 0.1% of total population. 94.3% of homeless people live in urban areas

73.7% of total population live in urban areas across Russian Federation

Comparatively,
There are more old people
Than us kids...
23.7% To 12.8% In
Moscow;
23.7% To 14.3% Moscow
oblast.



We represent:
5.2% Moscow, and
9.5% Moscow Oblast
Of the nonworking age
population



Now, let us examine
gender differentials.



We men represent
46.1% Of the
Population...



...While we are
53.9%!



		Russian Fed ¹	CFO	Moscow Oblast	Moscow
We men represent 46.1% Of the Population...	2009 Life expectancy	62.8	63.5	62.0	69.5
	Single parent households	10.1%			
	Employed (including self)	51.5%			
	Widowed (% of married pop ²)	5.7%			
...While we are 53.9%!	2009 Life expectancy	74.7	75.3	74.5	77.7
	Single parent households	89.9%			
	Employed (including self)	48.5%			
	Widowed (% Of married pop ²)	34.3%			

		Urban	Rural
	Total	40,810,805	14,596,273
	No primary education	121,446	160,665
	General -		
	Secondary education	7,490,899	2,847,523
	Vocational -		
	Secondary Education	11,141,649	2,734,970
	Undergraduate level	7,375,654	1,035,852
	Postgraduate level	187,125	14,195
	Total	49,308,811	16,584,346
	No primary education	393,052	524,827
	General -		
	Secondary education	8,200,688	2,737,445
	Vocational -		
	Secondary Education	15,131,886	3,920,653
	Undergraduate level	9,344,558	1,253,201
	Postgraduate level	156,231	11,583

Moving beyond the fact that nearly 3 women live in urban areas for every 1 rural female, the female populace's educational attainment by urban and rural areas follows the consistent trend of higher education within urban areas.

By gender, females vary incongruously compared to males.

Higher number of females with no primary education worries me greatly, however we do consistently better, up until postgraduate level, which is more encouraging.

Postgraduate level educational attainment represents the greatest disparity among women from urban and rural areas. Over 13 urban women to every 1 rural female.

As is the case for females, nearly 3 men live in urban areas for every 1 rural male, the male rural populace is consistently less represented as educational attainment increases.

Postgraduate level educational attainment represents the greatest disparity among men from urban and rural areas. Over 13 urban men to every 1 rural male.



With a population of over
11,500,000 Moscow is the
largest city in Europe

Moscow ranks 15th amongst
world's most dense megacities

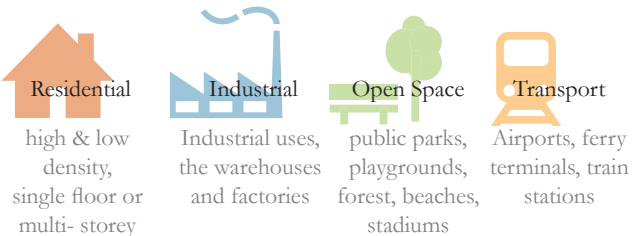


Having 84 billionaires, Moscow
holds the title of the billionaire
capital of the world

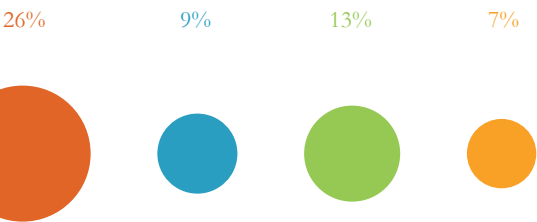
With median age
of 38 years, Russia ranks
below the European
average 39.8



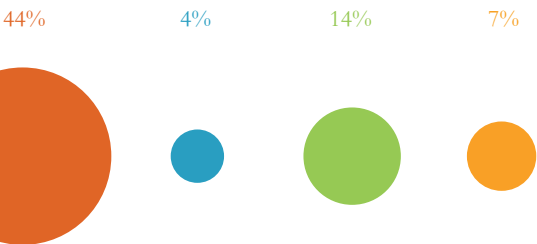
Land Use Comparison



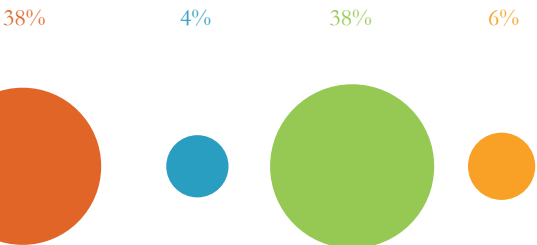
Moscow



New York



London



Urban Characteristics

Area

sqkm

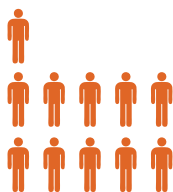
1080km²



Population

within the
metropolitan
area

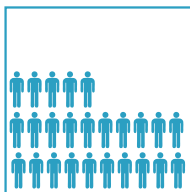
11,510,097



Population density

per sqkm

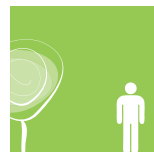
10,550



Green space

sqm per
inhabitant

27m²



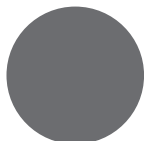
Metro ridership

Average daily
passengers

6,550,000



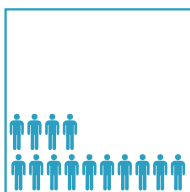
1,213km²



8,175,133



6,739



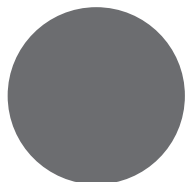
23.1m²



4,530,000



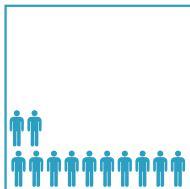
1,570km²



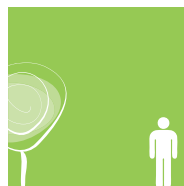
8,278,251



5,272



38.4m²



3,210,000



Green Space



forestland



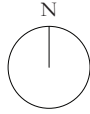
tree lined walkways



river-side



park activities



- _ The site of Moscow was originally dense forest
- _ Green space is relatively evenly distributed across Moscow
- _ Larger areas of green space are towards the periphery
- _ Variety of green public spaces provided; parks, tree-lined avenues, riverfront, forest
- _ Seasonal tree canopy offer shade from the summer heat

Built Form



high rise



low rise



walk-up



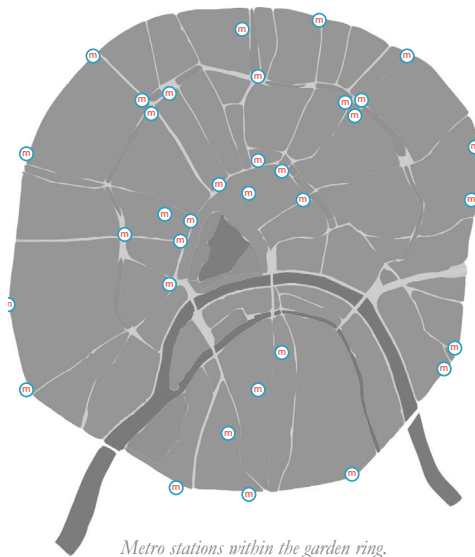
additions

- _ The majority of residential buildings on the periphery are high-rise, resulting in more open space
- _ The densest ground cover is located in the centre, within garden ring
- _ Residential apartments are concentrated around the periphery
- _ Highest population and density in comparison with London and New York
- _ Most microrayons are located around the MKAD so public transport is used to commute in

Transport

A high capacity metro system connects the city centre to the suburbs. Underpasses are hives of activity, with small kiosks and shops. Bus and tram systems are inadequate due to street congestion.

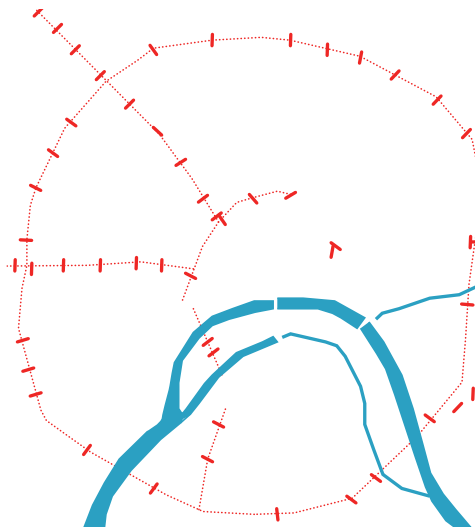




City centre metro stations are within walkable distances from shops and offices; but are difficult to get to as the priority of the street is given to the car.

Roads are dangerous and difficult to cross. Underpasses dominate over pedestrian crossings on the street. This can be a good thing in the extremes of winter as they are much warmer than the street temperature or cooler in summer. But generally, they make the city less walkable and more difficult to get around.

Further out from the city centre, metro stations are further apart, resulting in longer journeys or more changes to reach desired destinations.



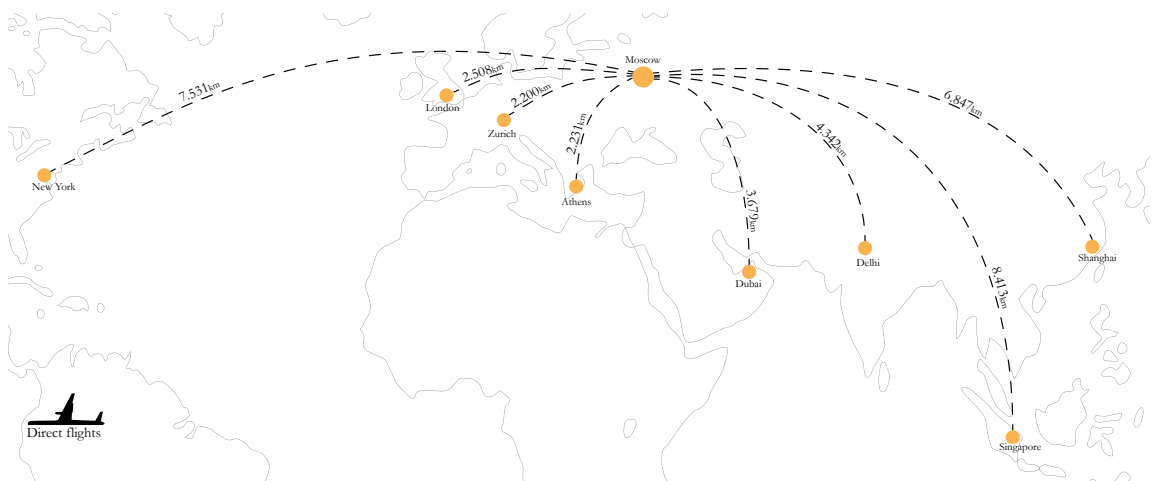
..... Street with no crossing
 - - - - Underpass

Connectivity

International

Moscow's 3 international airports offer direct flights to all important business destinations worldwide. Sheremetyevo, Domodedovo and Vnukovo serve all major airlines and alliances.

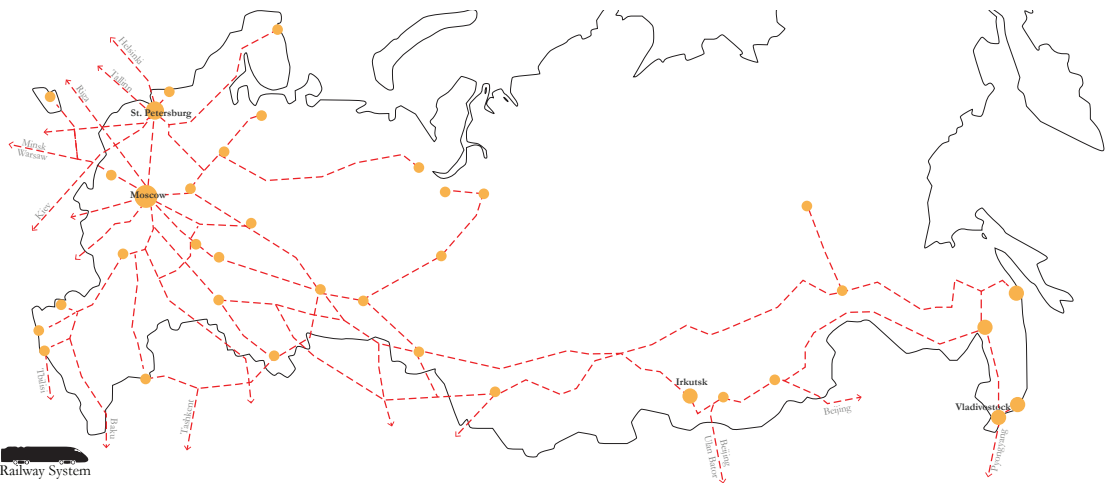
Russia has one of the most extensive transport networks in the world. Ports in 5 seas, (Baltic Sea, Black Sea, Caspian Sea, North Sea and Pacific Ocean) act as important trading gateways which in combination with the railway network that extends about 7700km from Kaliningrad to Kamchatka Peninsula create an efficient freight network.



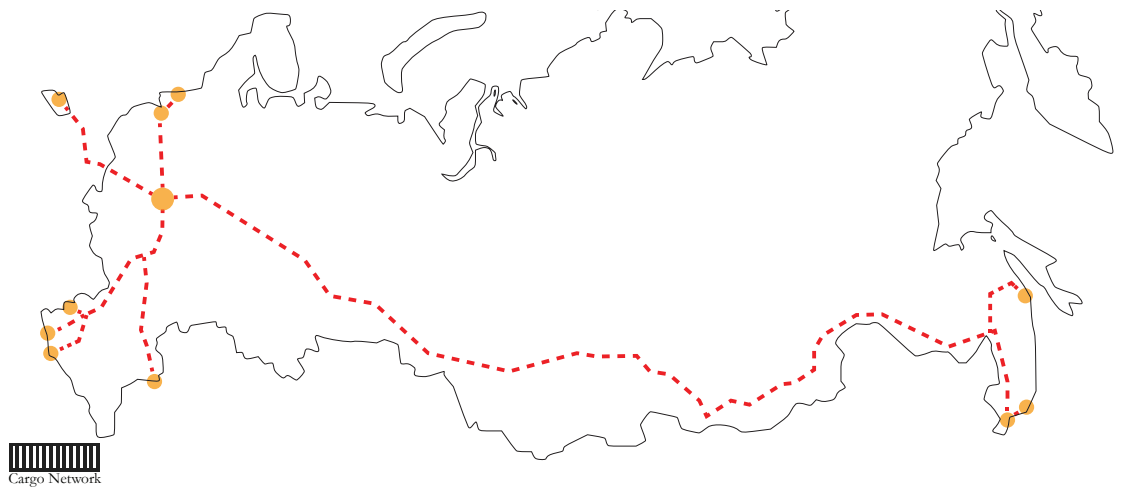
National



 Highways



 Railway System



 Cargo Network

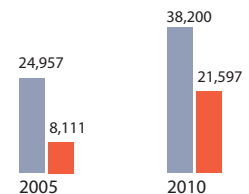
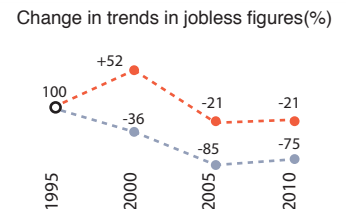
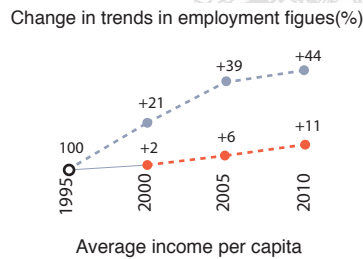
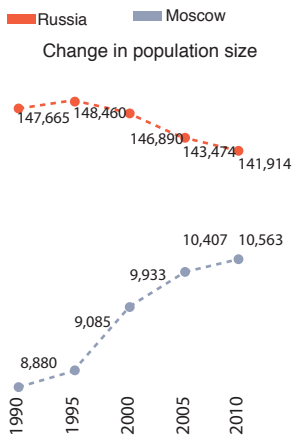
Economy

The desirability of a neighbourhood in Moscow determines density, the type of social classes that gather there and most importantly, property value, which usually results in the type of housing and the level of investments for further housing development in the area.

Average Income Distribution

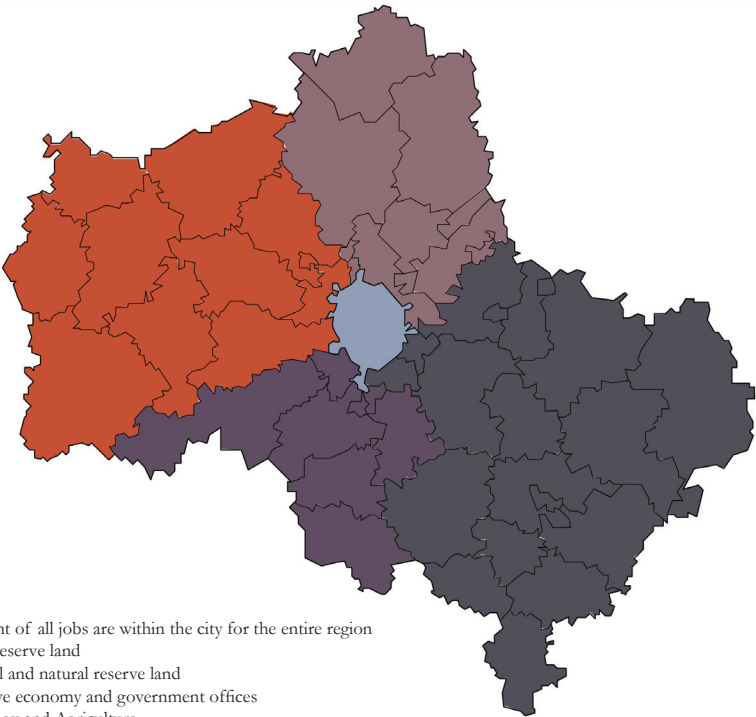
Average income per person of each Administrative and municipal division is a strong indicator of which divisions are more desirable, this map diagram implies that the proximity to the city is far more important to an average professional Muscovite than old social boundaries.

- Affluent Neighbourhood
- Middle Income Neighbourhood
- Economy Class Neighbourhood

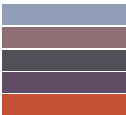


Division by Occupation

This colour coded map illustrates where much public money will be invested in the coming decades (mostly in the South West division). This is because the South West division contains a large portion of white collar industries of Moscow; scientific research, education, and where the federal government will soon be relocated. The South-West has also been historically the most desired areas outside the outer ring.



Districts

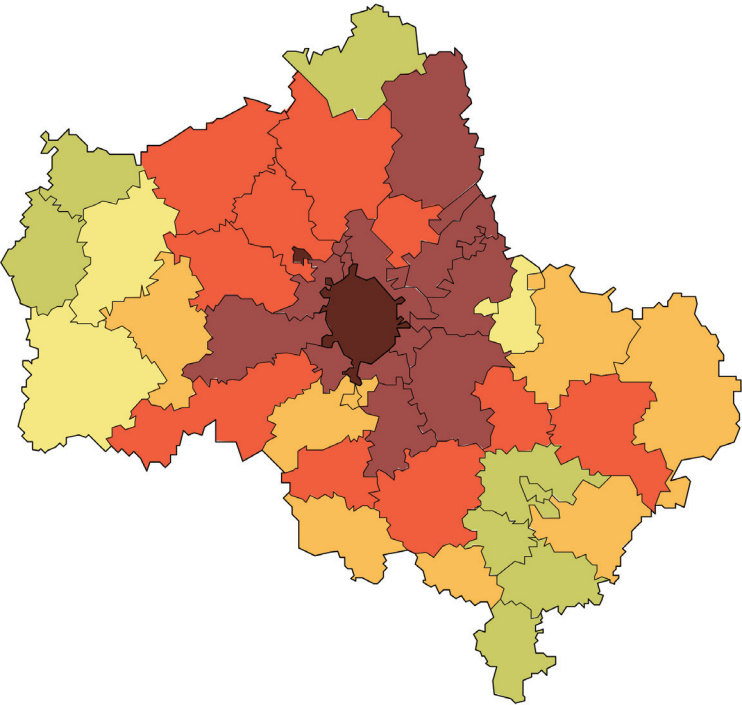


City Centre
Northern Sector
Eastern Sector
Southwestern Sector
Western Sector

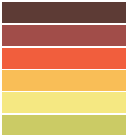
70 percent of all jobs are within the city for the entire region
Natural reserve land
Industrial and natural reserve land
Innovative economy and government offices
Technology and Agriculture

Average Income Distribution

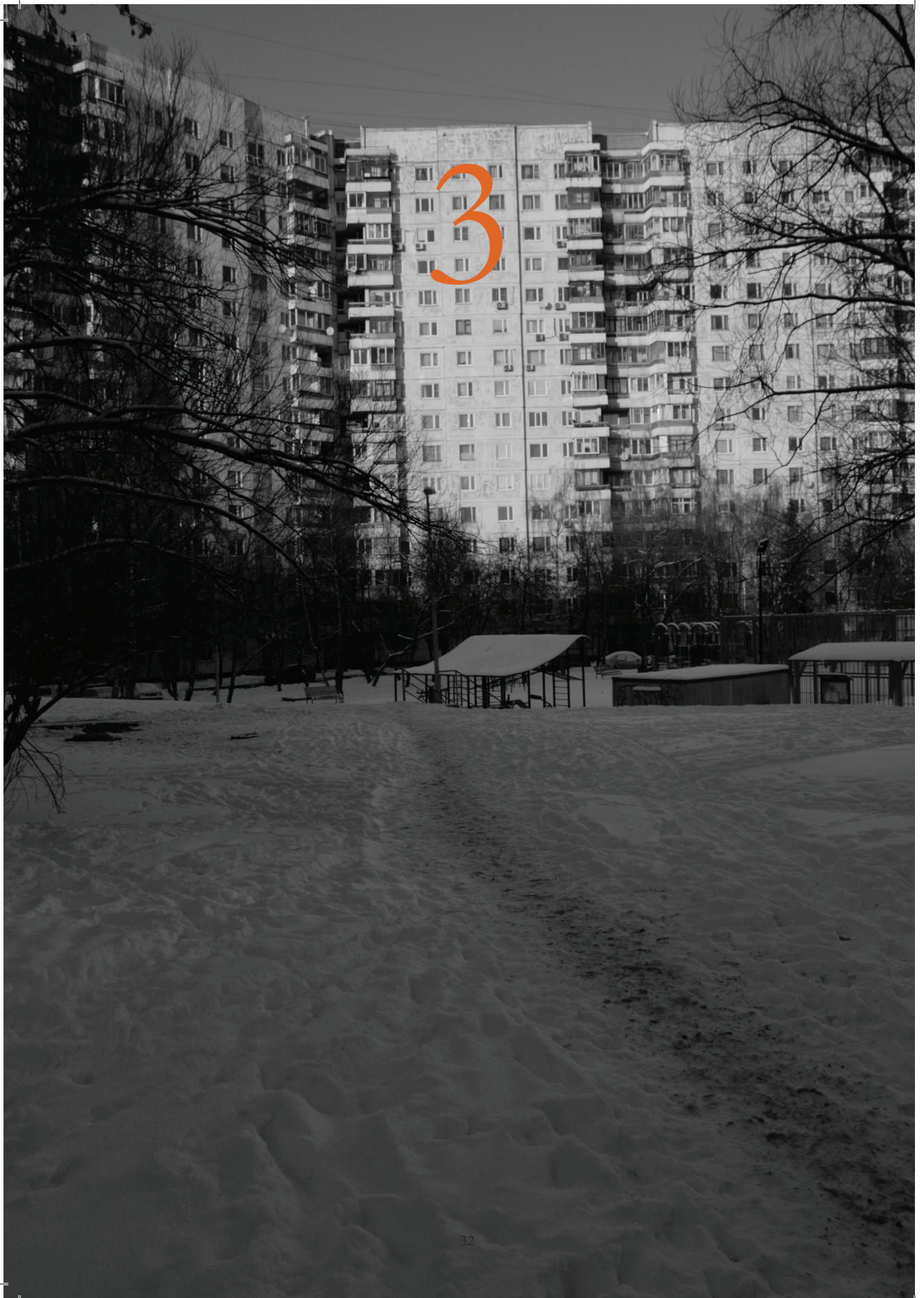
Average income per person of each Administrative and municipal division is a strong indicator of which divisions are more desirable, this map diagram implies that the proximity to the city is far more important to an average professional Muscovite than old social boundaries.



Annual Income in Russian Ruble



£42,000 +
£42 000 - £17 700
£17 700 - £8 350
£8 350 - £5 010
£5 010 - £2 505
£2 505 - £0



Lines of Enquiry

Russia spans nine time zones and two continents covering one eighth of the world's landmass. Moscow is has the second largest population in Europe, and the sixth largest globally which also means it is the most Northern Megacity on Earth. As the capital city of such a vast country, it is a major political, economic, cultural and scientific centre within Eurasia.

As the city grows, there are certain issues that Moscow together with the rest of Russia must address in order to evolve into a truly competitive world city. The resources are in place and the infrastructure advancing, however there are certain throw-backs to the Soviet era, especially in respect to the current state of the housing market and the state support many Moscovites rely on which must be investigated.

The underlying lines of enquiry this paper sets out and explores in regard to Moscows development towards a Competitive World City is as follows:

- *Home Ownership*
- *Retrofitting Existing Neighbourhoods*
- *Political Influences that shaped the City*
- *The Use / Adoption of Technology*
- *The Affects of Tourism*
- *The Socioeconomic Divisions in Housing*

*Desire lines in the snow
Chertanovo Severnoye District*



*Father and Son
Chertanovo Severnoye District*

Ownership in the Soviet Union:

In line with communist principles of Social Justice

By Oliver Vickerage

There was once a clear structure and defined edge to the City of Moscow; densely populated but contained within its radial form, connecting with smaller settlements in the Oblasts via rail links and traffic arteries. Recent urban sprawl has frayed this clarity as rapid growth and development has blending the boundaries by amalgamating the city centre with its suburbs. Growth initially spread along the primary transport corridors before clustering between the Garden ring and the MKAD. These areas became densely populated by high and low rise buildings which created the microrayons of the Soviet era. Residential accommodation for Muscovites in a post-Soviet era is a subject to new private ownership; for those who can afford it it signifies a departure from state control and limitation.

Private ownership of urban dwellings was dissolved by the Soviet Union in 1918 with an agenda to achieve equality across society. Despite this, during most of the Soviet period there was an urban housing shortage as the state was unable to accommodate the high rate of urban migration. Supply couldn't keep up with demand as Russia went through intense industrialisation and consequent urbanisation in the first half of the twentieth century. This was in large due to propaganda campaigns promoting urban migration for employment and prosperity.

"At the time of the Revolution in 1917, eighty percent of the population of Russia lived in rural villages and towns".¹

The communist principles of social justice "stated that every family had the right to a dwelling of not less than 5 square metres of living space per person"². As Moscow expanded, the creation of residential neighbourhoods began to dominate the peripheral areas. These microrayon were intended as self-sufficient accommodation for the cities population in an extreme socialist economy. The imperatives of such meant the social justice movement which endorsed socialism aimed to rectify capitalism and achieve social equality by reducing individual liberty and opportunity for personal gain.

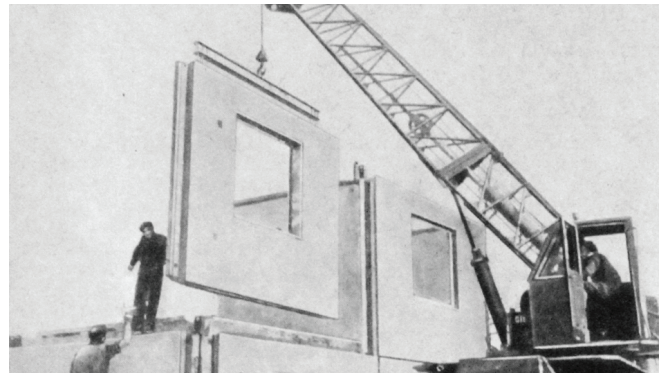
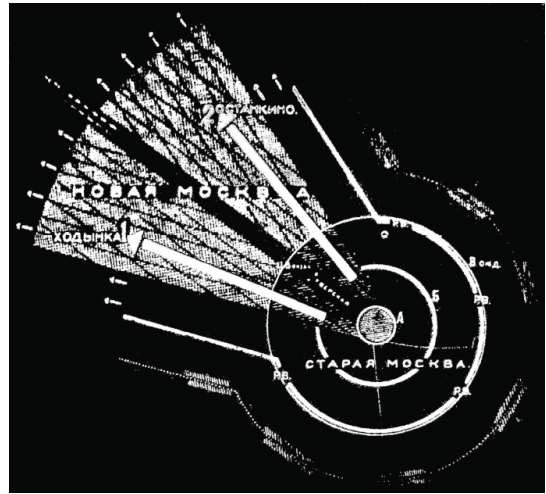


Figure 1 (top)
Nikolai Ladovskii's dynamo-"parabolic" vision of "New Moscow" housing
Figure 2 (bottom)
Prefabricated panel system construction

In the 1930s, the Soviet Union emphasised an aim to provide a private apartment for ever family in the near future. Around 1950, large-scale construction gained momentum in creating microrayons. Given the scale of this ambition, many of these new buildings were low quality, prefabricated concrete panel 'kits', cheap to manufacture and quick to erect. The first series of such houses to be built in the USSR on mass were the khrushchovka (K-7), a five-storey prefabricated panel construction; faceless in design, inferior in construction and repetitive in aesthetic. Nicknamed Hrushchoby, a word derived from khrushchovka and trushchoby

(shack), they were unspecific to their context and unappreciated by their residents.³

In 1936, article 6 of the USSR constitution said “The land, its natural deposits, waters, forests, mills, factories, mines, rail, water... and the bulk of the dwelling houses in the cities and industrial localities, are state property, that is, belong to the whole people”.⁴

Housing in the Soviet Union, was mostly the property of the state thus its responsibility; responsibility to construct, to manage and to maintain. As tenants of state-owned property, no tenancy agreement was in place, simply a permission to occupy, *propiska*.⁵ Residents where allocated an apartment without choice or preference, what was offered was dependant on ones employment and position in society. There was no rental cost, just a percentage of utility costs, set and controlled by the state. Bills did not burden families as subsidies meant that up until the nineties, “residents paid not more than 10% of the real cost”.⁶ The adverse effect of subsidised utility cost and poorly constructed houses was excessive and irresponsible use of energy and a ninety percent shortfall that the government was financially responsible for. This ongoing dependency restricted government expenditure which was ultimately responsible for the deterioration the housing stock and the urban infrastructure.

With a limit on space entitlement, if an apartment was to large for the tenant then they had no choice but to allow it to be divided up and co-occupied with whomever the housing committee permitted. This could occur despite the fact the tenant may have privately owned it pre-1918, and if so, could quite understandably generated resentment between residing families. The kitchen, the hall and the bathroom where communal amenities and only the bedroom was private space of the individual family.

The housing system in Russia where private ownership accounting for just ten percent and rental being illegal⁷ could not be considered a competitive or free market. It

meant there was no place for private investors or developers as Russia emerged into a post-Soviet era.

The dissolution of the USSR and the denationalisation and market reforms of the Russian economy that followed eventually reached the housing market. In 1992 the introduction of the Federal Housing Privatisation Law⁸ offered tenants of state-owned housing the opportunity to transfer the property into private ownership without the expense of fees or taxes. For the first time, it gave tenants the sell, donate and inherit property on the free market. The adverse effect of this law, as a result of previous strategies in suiting residents with residence effectively legalised discriminatory distribution in accordance with Soviet social hierarchy. Those of higher social status in previous years, legally obtained ownership of the most expensive and desirable accommodation, further extending the gap between the haves and have-nots in Russian society today.

In Moscow specifically, state-ownership still makes up the majority of the market as the period of privatisation has since been extended from the deadlines set in 1992. Over a two year period however, we can see there is an increasing trend away from state ownership. it should be noted that private ownership is a higher in rural settlements and suburban areas as shown in figure 5.

Fig 6.

Communist influence ever-present in the post- Soviet society



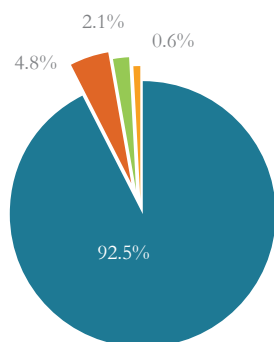


Fig 3.
Land ownership 01/01/2008

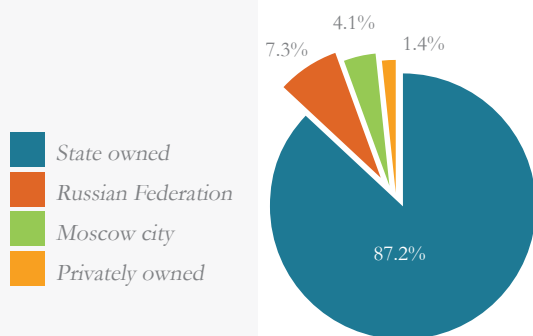


Fig 4.
Land ownership 01/01/2010

The law has meant that in the past two decades, almost fifty percent of the national housing stock has been privatised⁹, a significant result of the new Russian government which has permitted new opportunities of social mobility for its population. Unsurprisingly though, new owners were unprepared to maintain property without assistance. As a result, dependance on the state has remained in the form of subsidies. Bills are capped proportionately to income, meaning that although Russia is moving away from state-ownership, the shortfall and financial burden is still apparent.

The housing system established in Soviet Russia still has a long way to go before it can be considered a housing market. There is a vicious cycle of dependency and instability at large where Russians have become accustomed to government support which when removed creates instability within infrastructure, increasing dependency on local government. Until the bulk of Russia's housing stock is transferred into private ownership, significant development of the housing sector cannot be established, thus dependency will continue.



Fig 5. Residential ownership comparison Russia: Moscow

RESIDENTIAL OWNERSHIP (%)	RUSSIAN FEDERATION	MOSCOW REGION	MOSCOW CITY	MOSCOW OBLAST
Land total, incl.	100	100	100	100
State / Municipal	92.3	73.1	98.6	72.5
Private	7.2	16.3	0.3	16.7
Legal entities	0.5	10.6	1.1	10.8



Retrofitting Post Soviet Neighbourhoods By Emma Dragovic

'Microrayon' is the name given to neighbourhoods and districts located in the peripheral regions of towns and cities across Russia and former Soviet Union republics. They are usually located in zones bounded by major roads and highways, without any through roads and an emphasis on public transport.

Microrayons are made up of multi-storey housing units with shared common areas (staircases, lobbies and courtyards) arranged in inward looking complexes that vary in order and scale.

They are usually self-contained systems, providing essential services and institutions for residents' daily needs such as shops, cafeterias, nurseries, schools, public gardens, sports and recreation grounds. Each Microrayon is like a town in itself, with some housing up to 20,000 people.

In Moscow, the Microrayons lie between the outskirts of the 3rd ring road and the MKAD (Moscow's M25), housing the majority of the cities population since the 1920's. The earliest examples were workers settlements constructed during the 1920's, made up of 2 and 3 room apartments, mostly in blocks of around 5 storeys surrounding a communal courtyard.

German workers housing built during the Bauhaus period often inspired the size, style and arrangement at this time. Similarly to workers tenements and terraced housing seen in British cities of this period, they were often overcrowded, unsanitary and lacked essential amenities.

In Britain and America by the late 1940's and early 50's, post war slums were being cleared and replaced by new high-rise, modernist housing blocks. Using new materials and techniques they could be built on mass and at a rapid rate, believed to be providing a solution to sprawl and building humanely at high density.

By the mid 1950's industrialisation and standardisation of mass housing construction seen in Anglo-American cities

was soon believed to be the solution to the urgent housing problem of overcrowded soviet cities. Architecturally uniform complexes were quick and cheap to construct and soviet planners and research institutes began working on standardisation of construction methods and regulations.

The mid to late 1950's was a period of experimentation for the Soviet leader Nikita Khrushchev. Microrayons such as Cheryomushki in the southwest periphery of Moscow were some of the first experimental housing quarters of prefabricated panel blocks. The panels were stripped of any decoration, and new materials were tested such as plastic roofs and glass blocks in the walls. Construction was quick - the first sixteen blocks at Cheryomushki were built in less than two years.

Both internal and external planning was



simplified and similar to the workers housing from the 1920's. Unlike the workers housing, landscape architects designed the courtyards of microrayons built in the 1950's. Residents of both high and low social statuses occupied them.

By the 1960's the term 'microrayon' was widely recognised as a key term in city planning and soviet architecture. Housing of this period was much larger in scale,

with denser populations. The microrayon adhered to the ideology of 'open planning' whereby, neighbouring buildings were composed symmetrically between public spaces double the distance of the height of the highest building. Larger public spaces improved standards of ventilation and density. Parking spaces and garages were added later for residents as car ownership began to increase.

Severnoe Chertanovo, another peripheral Moscow microrayon was built in the late 1970's. At the time it was planned to be almost a city within a city, with a scale much larger than any microrayons built previously. Buildings are a minimum of twelve storeys high and public spaces between blocks are vast lack intimacy.

Since the fall of the Soviet Union in 1990,



Chertanovo Severnoye District



the transformation has gone from state regulation where new construction and management was neglected; to private ownership. This has brought about benefits for the residents, but also put them at risk of corruption and poverty due to high rent cost and identity politics.

Flats and apartments are now privately owned or rented from landlords but the common areas – including staircases, lifts and courtyards – are to be maintained collectively by residents. Neither public nor private property, they are treated as a kind of no-man's land.

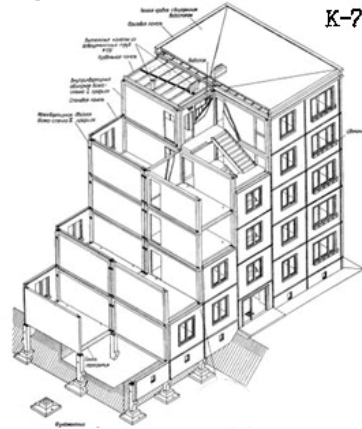
Microrayons are of little importance to those in economic and political power, and innovative regeneration and retrofitting is mostly concentrated the city centre. The communities themselves often attempt to adapt and the design of their microrayons to suit their own preferences. This shows that people actually like their environments and want to improve them. It's the design and quality of the architecture that is the problem.

During the mid 1990's to early 2000's politicians examined the future of microrayons and divided the stock into two categories 'to be demolished' and 'not to be demolished' based on type and period of construction. Retrofitting wasn't even considered in the plan.

Most of their attention focussed on the demolition of five storey housing due to poor and outdated living conditions. Many politicians argued that it would be more of an expense and a slower process to alter them to meet modern standards; an easier and cheaper solution would be to demolish them and build new buildings. There was also discussion of demolishing nine to twelve storey panel housing for similar reasons, but this was never enforced.

Fig. 1

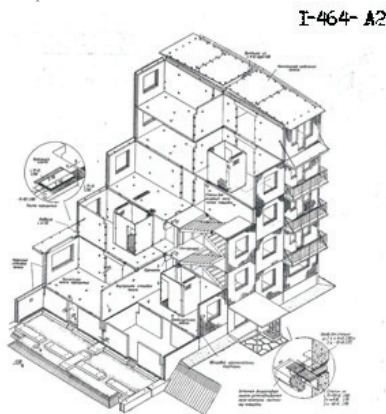
Example of 'To be Demolished' block



- Thin external walls with inefficient thermal insulation
- minimal kitchen (5-6 m²)
- physical depreciation more than 20%
- combined bathroom unit
- narrow corridors without storage
- no waste shoots

Fig. 2

Example of 'Not To be Demolished' block



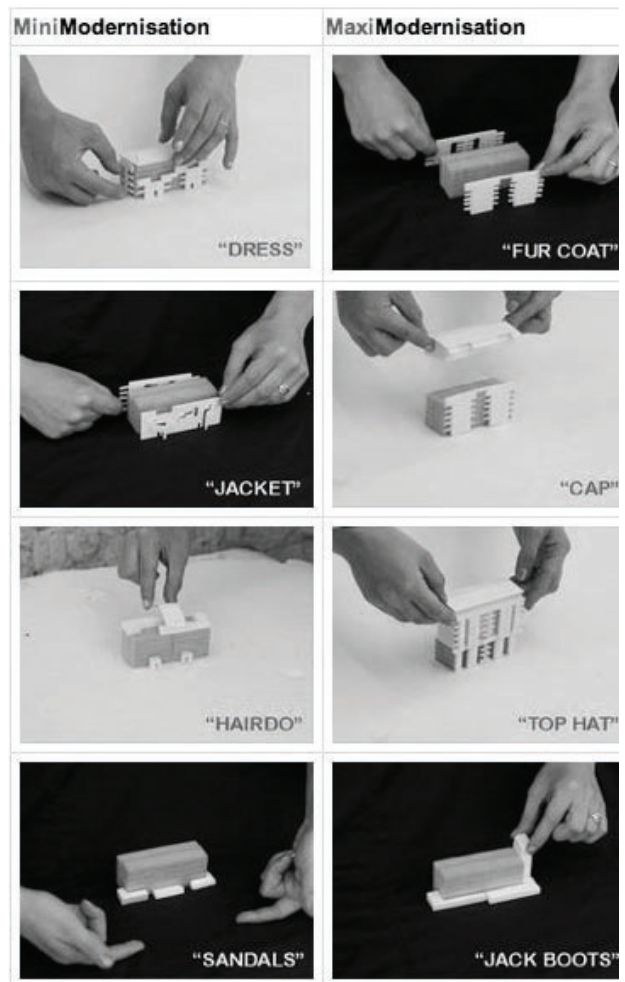
- better thermal insulation
- better apartment layouts
- physical depreciation no more than 20%
- combined bathroom unit
- MEP system needs to be replaced
- external walls 400 mm thick, internal - 270 mm
- floor slabs- reinforced concrete 220 mm thick
- no waste shoots
- ceiling height- 2, 48m
- no elevator shafts



A plan was drawn up to demolish all unsatisfactory blocks by 2025. Experts called the decision to demolish so many microrayons 'historic' as the profitability of the construction business in Moscow in the following 18 years would involve every fifth Muscovite. According to experts, the average price of demolition of 1sqm costs \$30-50. Therefore the cost for demolition of 20 million sqm will range from \$600 million to \$1 billion.¹

When Sergey Sobyenin came to power in 2010, he proposed a programme of reconstruction for the 5 storey buildings on the 'not to be demolished' list, by adding two new storeys on top. He said that this would be quicker and cheaper in serving those on housing waiting lists than a programme of demolition and new build.

According to The General Plan of Moscow Development project even after a complete demolition of the "to-be-demolished" series, there will be 35 million sqm of prefabricated housing left in Moscow that was built between 1958-1973. This remaining stock will reach the 60% limit of physical depreciation by 2025.²



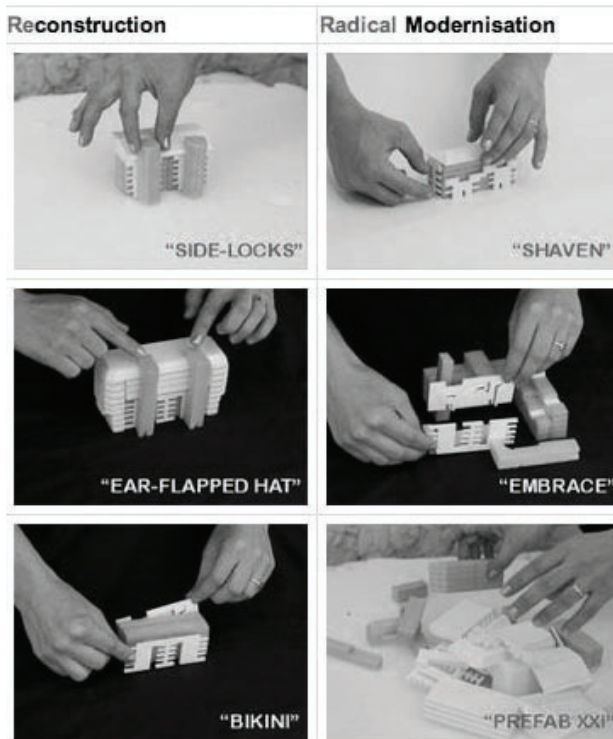
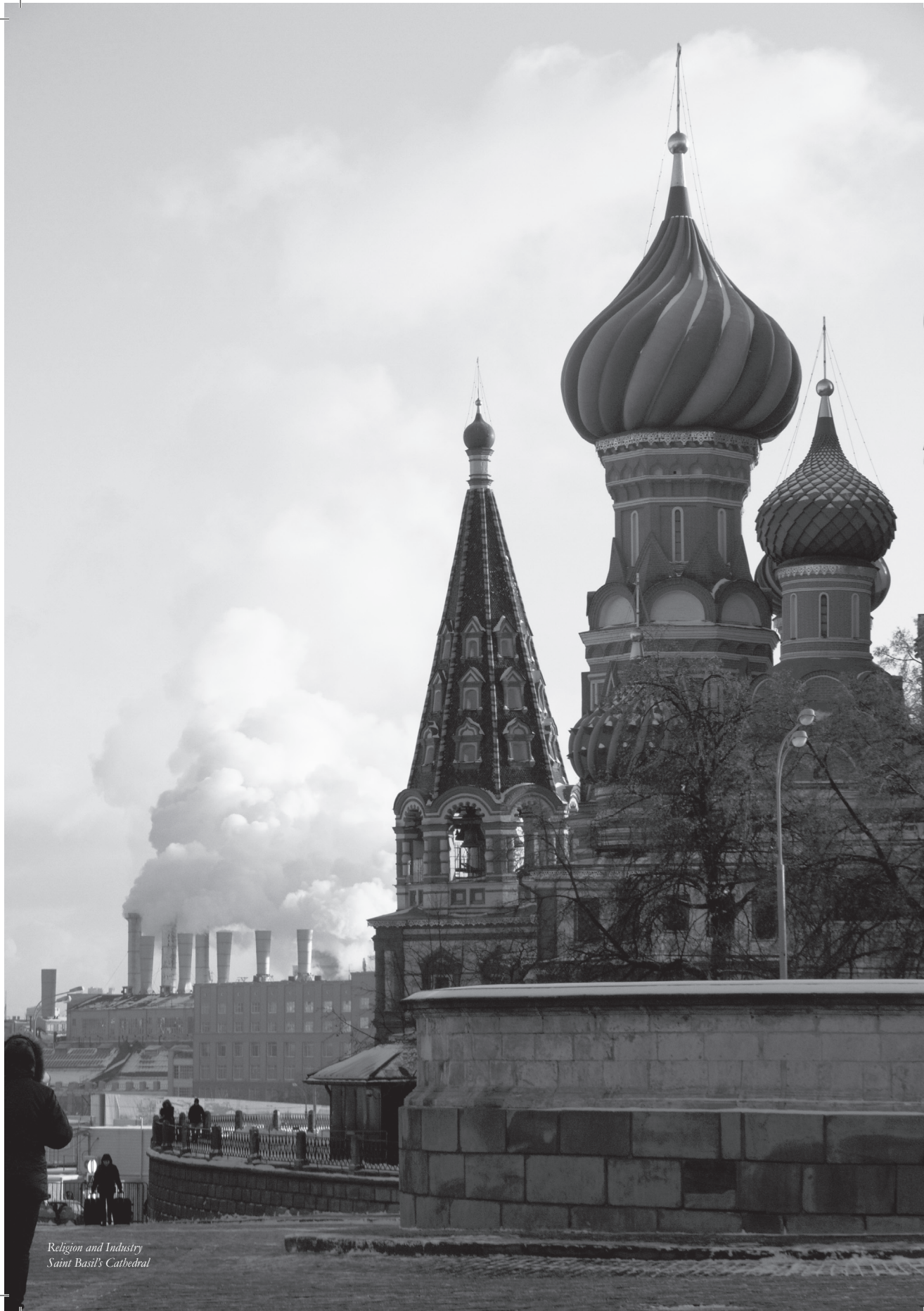


Fig. 3
 This series of entries shows examples of existing retrofitting concepts for the five storey panel housing blocks. Most add on or replace elements, leaving the original structural 'base' more or less intact.



*Religion and Industry
Saint Basil's Cathedral*

Political Influences That Shaped Moscow By Sotirios Oikonomou

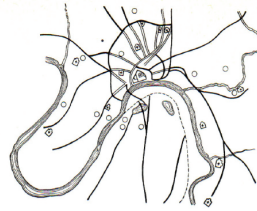
When looking at a map or approaching Moscow by plane, the unique radial shape, created by a series of rings and the meandering Moskva river that flows diagonally across the city, is easily noticed. But what is not easily understood are the forces that have shaped the city.

It is said that the characteristic radial form of Moscow reflects the long tradition of centralised authority in Russia. From the early Christian times, when the Russian sovereign was not only leading the Russian Orthodox Church, but also the state, until the communist era, and even today, Russia was always centred on a single person. And the Kremlin was always hosting the leader of each era.

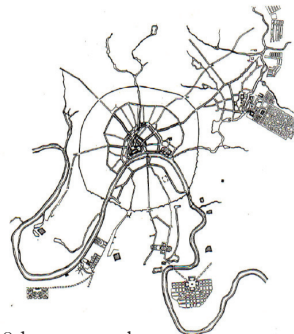
Moscow was established in 1147 and the Kremlin was constructed to protect the aristocracy and the ruling class. The town grew due to the strategic geographical position, but at the same time the overall area was vulnerable to attacks due to the geomorphology. Therefore a site of privileged topography and natural conditions had to be selected. As with many other historic cities, the river became an ideal natural fortification.



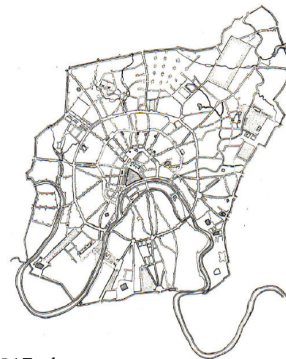
Fig1 Moscow's aerial view



15th century plan



18th century plan



1917 plan

Fig2 Radial development of Moscow

The shore of the river together with its streams determined the location, while the radial embankments that were erected to safeguard the Kremlin established the initial shape. While the town was growing it was the new fortification that kept defining the shape of the expansion. Protective walls were erected around the Kremlin in Kitai Gorod, Bely Gorod, and Zemlyanoy Gorod. The fortification of the Palace brought peace and Moscow started expanding around the Kremlin walls with the establishment of monasteries and the settling of traders and artisans.

Although the creation of the Kremlin and its defensive walls were initially responsible for the city's layout, it was during the last century that the city was shaped the way it is today. The establishment of Moscow as the capital of the new socialist state, indicated a new era of urban development.

The architectural and planning influences that had formed St. Petersburg the previous years, had not affected Moscow, which still retained a characteristic picturesque irregularity. Two main reasons, one practical and one symbolic, led the new regime to choose Moscow as the new capital; it was located to the inland which makes it better to defend and, unlike St. Petersburg, Moscow was a Russian archetype that was not "infected" by the ideas of Europe and of capitalism.

During the following years, various plans were developed for shaping the ideal first socialist capital city. The most important and influential that formed the city the way it is today are the Moscow General Plan of 1935 and of 1971. A common



Fig.3 Moscow General Plan 1935

characteristic of the General Plans, which were influenced by the modernism ideas, was to see the city as the sum total of large scale complexes that are constructed simultaneously and not a series of individually constructed buildings. This principle, in combination with the totalitarian regime that was in power, resulted in an unprecedented construction of uniform buildings of excessive size that enhanced the radial pattern of the city but also repressed and levelled any form of individuality. The General Plan of 1935 is considered as Stalin's attempt to imply the dominance of socialism and its supremacy towards the history of Russia. Although in the end the Plan was not fully realised, most of the work that took place has shaped Moscow irreversibly. To begin with the downside, symbolically important buildings like the Christ the Saviour Cathedral and Arc de Triomphe were demolished. On the

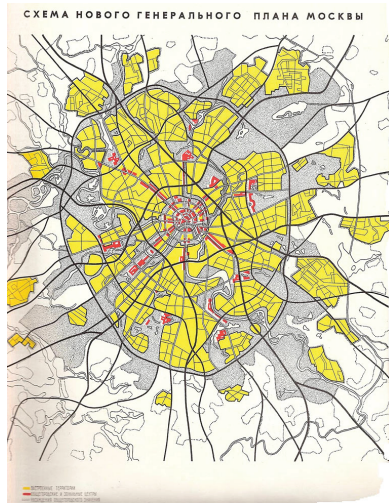


Fig.4 Moscow General Plan 1971

other hand, Red Square was expanded while the colossal Hotel Moskva was erected on the grounds where the Ohotny Ryad market used to be. The main streets were widened, straightened and aligned with important government buildings. Tverskaya street was widened and the Garden Ring Road was expanded. In addition, some important infrastructure works took place. New embankments, urban reservoirs, ports and bridges were built. The stunning metro opened for the first time in 1935. Some new parks were created to offer recreational as well as cultural opportunities to the Muscovites, while it was the first time that the creation of a large, centrally located park (Gorky park), was proposed. But World War II paused all the planned urban developments.

Both 1935 and 1971 Plans gave emphasis on the functional zoning of land use. This was important because it enabled high sanitation standards and pollution maintenance as the harmful industrial uses

were now kept away from the residential districts. To do this successfully, Soviet planners separated the heavy industry and the residential areas with the use of large open spaces acting as buffer zones. The 1971 Plan proposed the creation of a unified open space system throughout the city that would aim to the maintenance of a healthy environment while providing the residents with abundant space for recreation within a short distance. The aforementioned Plan nevertheless was more flexible on the zoning principles, as it did not enforce a vertical uses' segregation. Taking into account Ebenezer Howard's principles and apprehending that there was an opportunity to reduce commuting, it proposed, whenever possible, housing and industrial uses side to side. This did not involve heavy and large scale industries, but rather light, nonpolluting and car dependent industries, which could be safely located in close proximity to residential areas. Due to the steadily increased population of Moscow in both Plans there were proposals for the densification of the city. Therefore they are contributed to the high compactness and density distribution throughout the city. Another noteworthy fact is that the ring street system that was imposed doesn't necessarily relate to the city's topography. This result to some areas that almost avoid any structural connection with the city's radial concentric system, establishing them as independent entities that relate more to the surrounding green space. In these cases the radial street system has been replaced by the more functional grid network. This way a very interesting counterbalance is created that does justice to both systems.

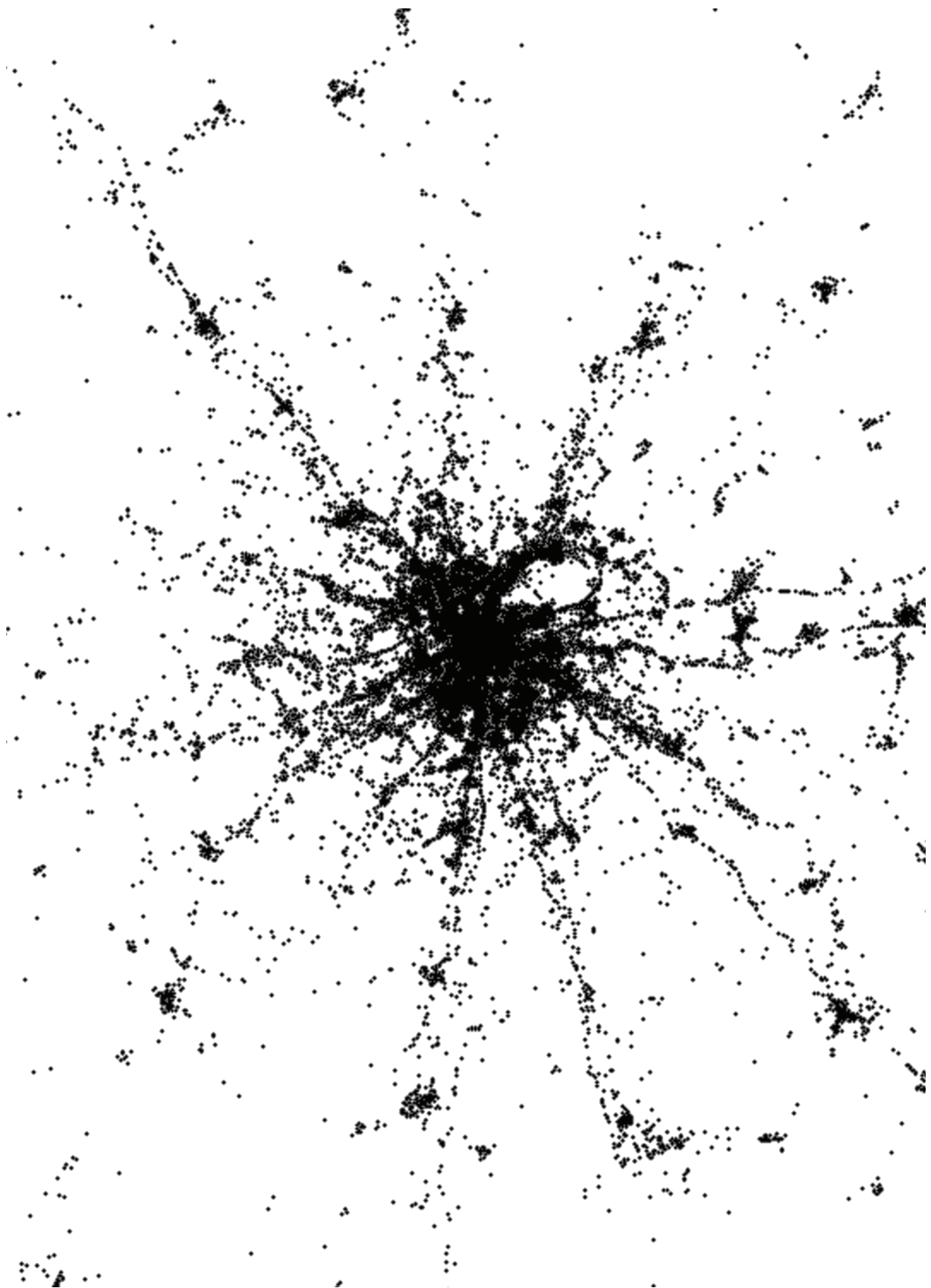


Fig. 1 - 24 hours of geo-located tweets in Moscow

Technological Utilisation in Moscow

By Jason Forrester

The “Townsmen of Moscow possessing voting rights are the source of authority in the city of Moscow” ; this authority can only be received by a Muscovite where they are quantified i.e. Recorded in census, and registered to vote.

During the 2010 All-Russia Population Census (ARPC 2010), specialist software was employed by Government to assist in the huge task of quantifying citizens and gathering their information. Data in this context allows officials the ability to take more nuanced decisions when utilized considerably.

ARPC 2010 is in effect a snapshot of Moscow over the period of the census; establishing ‘who we are’. Representation is improved and the people empowered when a clear picture of whom they are, where they are, and how they are is available. The ARPC 2010 was ultimately carried out by census personnel visiting all, identified, residences within the 171 million square km that constitutes the Russian Federation, across 9 time zones. ArcGIS, a cloud based mapping software that has developed apps to allow use of software on mobile devices i.e. smartphones, tablets etc., as well as on desktop machines formed a key part of the census working practice. It was utilized for the initial ‘face to face’ (peer to peer) data gathering exercise to define census regions accurately and to then quantify the residential buildings within. The software allowed for routes to

be plotted by census staff to assist in navigation to the various addresses across Russia. The cloud based nature of the software allowed census staff on the move

access to the maps that they could update on site, creating a virtual representation of physical world Russia.

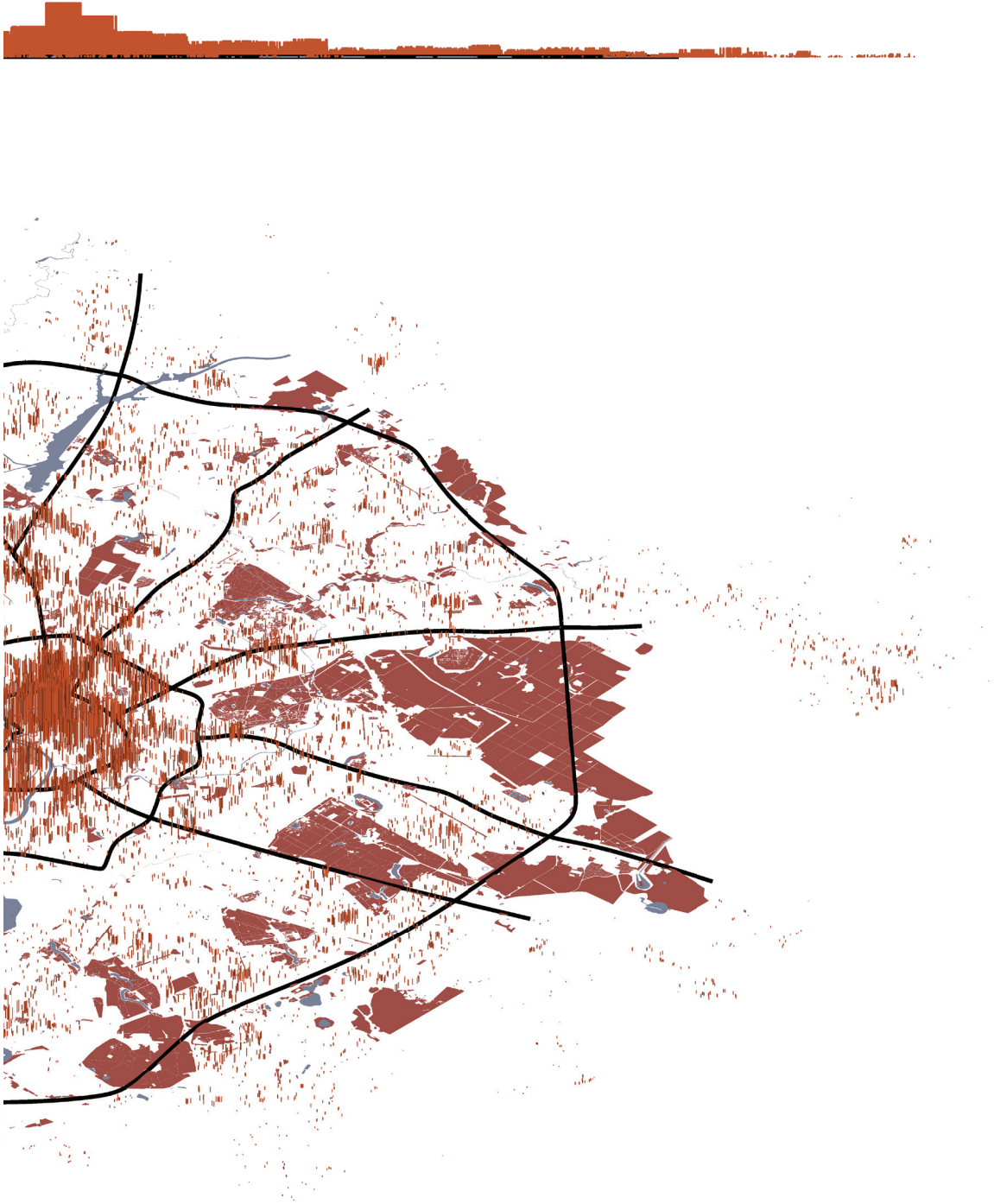
Content rich maps were gradually created and then processed via the ArcGIS software, organizing the huge volume of people and their data into visualized and contextual form.

IBM, a company who’s history originates in census data gathering – developing for rent the first Tabulating Machine for the United States Census of 1890 , provided software to ARPC 2010 that could visualize the raw data outwith the mapping graphic allowing for further interrogation of census data to begin.

Ultimately, the test of whether increased utilization of technologies by the Russian federation, and Governments across the world, improves the quality of life of ordinary citizens is down to use and understanding of data gathered, rather than ‘how’. The first in a series of steps has been taken by the Russian Federation to get an accurate picture of those it represents.



Fig. 2 - 24 hours of geo-located tweets in Moscow, density study by Km²



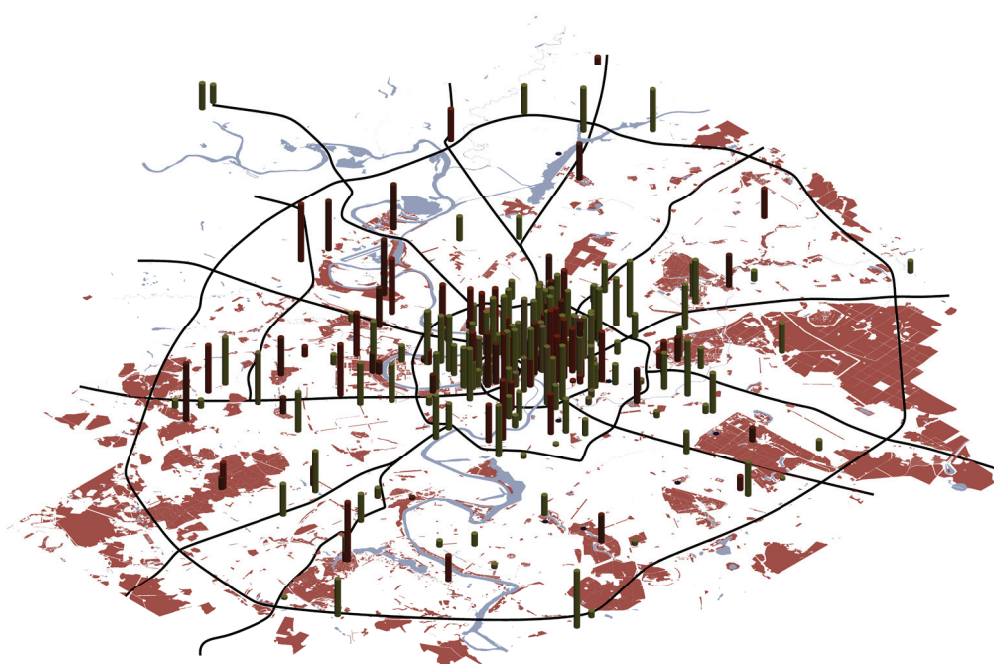
Empowering these people to communicate directly and immediately with policy makers and officials seems to be the next step in ensuring technology and data gathering are made to work for the people and not a more accurate way of categorizing them. Building upon the Harvard University global tweet map that overlays all geo-located tweets onto Google maps, other tweet mapping browser software were utilised to get more refined filtering to include non geo-located tweets. Multiple search criteria was defined looking for key verbs e.g. going to...visiting...leaving... as well as specific nouns e.g. metro, park, café, etc.

This data was then rastered into a CAD program allowing for over 18,500 tweets to then be traced and extruded on top of my simplified map of Moscow City to illustrate tweet density per km². While the resultant info graph illustrates a greater proportion of tweets in the city centre of Moscow, it does demonstrate smaller hotspots across the wider city. The section view of tweets also demonstrates a gradual fall away from the centre than might otherwise have been expected.

Improved access to the Internet on the move can be seen to be a way empowering citizens by exactly allowing them to communicate instantly and directly to their representatives. Around 350BCE, Aristotle wrote: "For if liberty and equality, as is thought by some, are chiefly to be found in democracy, they will be best attained when all persons alike share in the government to the utmost." . 2,364 years later the unlikely facilitator of liberty, equality, and democracy for Muscovites has come in the form of large telecommunications (ICT) networks in Russia. Yota, on such company, partnered with Huawei, a Chinese ICT company, to roll out LTE (aka 4G) networks in Moscow in 2012 .

According to the Global Mobile Suppliers Association (GSA): "263 LTE networks have commercially launched in 97 countries (to January 15, 2014)" meaning in effect the populations of 97 countries across the globe, with access to a smartphone, have access to each other 24 hours a day. According Advanced Communications and Media, "There were 213 SIM cards in use per 100 population in Moscow... as of September 30, 2013" a significant indicator that people are committed to staying connected and value it as a multifaceted resource. This continued access to the World Wide Web brings many advantages to people's lives; they are able to navigate an arguably pedestrian hostile city via online mapping services like Yandex, Openstreetmap.com, and Google Maps, changing the way people use the urban realm creating virtual landmarks more prominent often than one of the Seven Sister's, for example.

Mobile access to the Internet affords people connection to others at all times, and to find new friends with similar interests. Global networking site Meetup, the "world's largest network of local groups" acts like a virtual message board where people can organize georeferenced groups and events that can be searched by proximity to user and theme. Searching for opportunities to meet face-to-face in Moscow finds a relatively extensive, varied list. The proliferation of Open Data is among the interest groups represented and regularly meeting via the site. The Russian Open Knowledge Foundation (OKFN) has 62 regularly meeting members who note the priorities of their group as being to promote "citizen activism" through the use of "big data" . A group connecting expectant mothers is particularly active on the site, The 'Moscow Mommy Milk Meet up' Group made up of nearly 280 members, who meet up in cafes to discuss





*Tourist Attraction
Izmaylov Park*

The Tourism of Moscow

By Albert Casas Alvarez

The tourism industry for a lot of post-industrial cities has been a tool to change and transform its economy, especially during the last decades of the twentieth century. It has been a tool to change their own image and this has been used to attract new investors of the third sector. We will see how it has had a physical impact in the cities, in terms of architecture and urbanism. In one hand the architecture has been used to create building symbols as a way to reflect their particular identity or as a symbol of prosperity and richness, and in the other hand the urbanism has been used to improve the citizens' life quality for cohere the population. The essay will explore the actual situation in Moscow in terms of tourism then we will try to understand how the contemporary cities have to represent them-self.

This essay will begin by exploring the history of Tourism within the Russian Federation, from post-Second World War up until the present day. During the 1940's the U.S.S.R began to expand its Tourism industry within its national context. Stalin, declared, "the tourism movement must become a mass movement"¹. At a pragmatic level this was translated by large investment in infrastructure, which was important for the growth of tourism. From 1958 to 1983 the number of domestic destinations inside the U.S.S.R grew from 3500 to 6167 destinations. Also, the number of aerial passengers within the country increased almost 80 fold² from 1950 to 1987. Also it is important to note that the fiscal helps or the fiscal facilities that the U.S.S.R population had for travel inside their nation, i.e. the price of a flight ticket in the Aeroflot Company was around 25RUB in 1985, this was around the same price as 5 bottles of Vodka in the same

year³ But while in the U.S.S.R the majority of tourism was a local tourism not an international tourism, how other cities of the world were starting to consolidate or they already had consolidated as Paris did or London, New York, Tokyo, Rome and so on. It was not until the post-soviet era (in the beginning of the 90's) when Russia started to look for an important touristic industry based in international visitors.

In terms of tourism, currently Russia has around 20 million visitors each year, according to the Federal Security Service of Russia (FSB), the Russian Federation had 22.3 million international visitors from 224 different foreign countries in 2010. The five main countries where these visitors were from are: Germany with 347,200 visitors, United States of America with 162,400, China with 158,100, Finland with 139,200 and United Kingdom with 126,500. While it is true that the tourism industry in Russia has grown very fast during the past decades, it still trails the world leaders when judged against key indicators for development. If we see the importance of tourism in Russia's economy we see that the

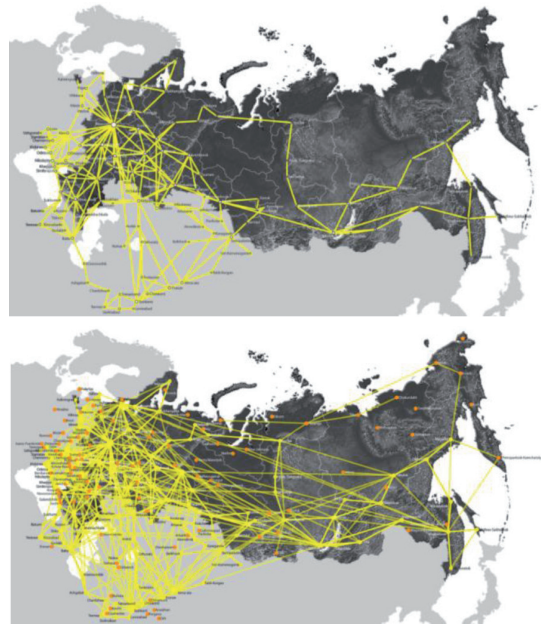


Fig.1

tourism in Russia's GDP in 2007 was 6.6%, while the global average was 9.7%⁴. Actually Moscow and St. Petersburg have become the most visited cities in the country; Moscow has approximately 5 million international visitors per year, the majority of which come from Germany, China, France, USA, Italy, Japan, Turkey, Great Britain, Vietnam, Israel, Brazil and Spain⁵. The city of Moscow is trying to attract visitors not only with its medieval city, Tsarist city or geopolitical centre during the Soviet era. It now wants to reflect the aspirations of the Federation, a growing, complex and creative city.

Each year the number of the international visitors in Moscow is becoming bigger and bigger. The statistics of the Federal Security Service of Russia (FSB) show that the numbers of visitors have increased in 2009 4'4% more. Actually Moscow receives 5 million international visitors; this is a large number of visitors but is still far from the 15'3 million that London⁶ has, the 10 million of Paris⁷ or the 10.9 million of New York⁸.

Moscow's city authorities are determined to change this situation and have set a goal of 10 million annual visitors by the end of this decade⁹. But we have to be careful and see how a city such as Moscow, a city that is open to the international tourism on a huge scale, only 25 years after the collapse of communism, if it has the ability or the tools to control this incipient tourism and not fall into the trap of uncontrolled mass tourism. Moscow has to have a sustainable tourism and has to know how to combine the monumental and historic tourism, the artistic or museum tourism, the night-party tourism, the creative tourism, the business tourism, and the education tourism... In fact to create a good infrastructure that is not only focused on satisfying the tourism demand, an infrastructure for the city and for the Muscovites that at the same time could be part of a richer offer for the international visitors that came to Moscow, expand their supply, develop areas of the city trying to decongest the most visited

areas of the city and at the same time trying to prevent the dangerous schematisation of Moscow.

As discussed already, if Moscow has to increase its tourism in less than one decade by more than 5 million of visitors this has to be done carefully. Trying to explain another Moscow complementary at the famous Moscow; one Moscow more decentralized, more opened. Because during a lot of decades we have seen how the famous touristic cities have done a huge exercise of self-representation based on what is supposedly its identity as a city; for example we can name the famous I love New York "I(L)NY", or the exercise that the city of Paris has done as a bohemian city; the city of the Vanguards, the Paris of the flâneur, all of that with the intention to create a City brand able to be sold to the masses. We can agree that all the important cities of the world, as Moscow is, want and need to have a diversified economy where the tourism industry can and has to play an important part, for that reason the city needs a tourism brand, a NAME that sells, but, is the self-representation understood as an exercise to improve the identity of the city the correct answer or the correct tool that the city needs to improve its tourism? Maybe we could try to create a Moscow Brand based on the Tsarist era, or an important view of the constructivist era of Moscow that could improve the tourism industry, but that exercise based on the "identity" could end in a closed circle with any sustainable developing. As Rem Koolhaas said in the essay *The Generic City* in 1994:

"The stronger identity, the more it imprisons, the more it resists expansion, interpretation, renewal, contradiction. Identity becomes like a lighthouse- fixed, over determined: it can change its position or the pattern it emits only at the cost of de-stabilizing navigation. (Paris can only become more Parisian- it is already on its

way to becoming hyper-Paris, a polished caricature. There are exceptions: London- its only identity a lack of clear identity- is perpetually becoming even less London, more open, less static.)”¹⁰.

It seems that Koolhaas wanted to say with this is that today a contemporary city doesn’t have to focus all its attention to create a strong identity with the intention to attract more visitors, because the identity is a particular thing of a particular place from a particular population, and contrary the cities actually are becoming more and more global; with more cultural mix and more social mix, that’s why the hyper-identity could characterises the cities selling an image that in a lot of cases could be not true. Of course that the city tourism has to shows its own identity, its own past; the old city, the Museums, its culture, the monumental buildings, its heritage... all the things that have created the city that we know today because we don’t have to forget that the communist heritage is an intrinsic factor in Moscow; approximately $\frac{3}{4}$ of Moscow was built during the U.S.S.R era¹¹, but also has to tries to generate another kind of identity, an identity more Global, an identity of a Global City, able to have a dynamic and rich cultural-scientific-business-sport-education activities.

For a moment we will pay attention to Barcelona and try to analyse some of the decisions that even if today are not working very well, they could work in the close future. After the Olympic games in 1992, the city of Barcelona was introduced directly in the international tourist market (more or less at the same time as Moscow was opened at the capitalism market after the U.S.S.R). The number of visitors has

improved a lot since that time, according to the statistics from the Tourist Board of BCN: in 1993 the number of visitors that the city had were 2.455.249 visitors, This has improved to 7.440.113 in 2013¹² being now the 4th international destination in Europe after London, Paris and Rome. But, we can say that since not long ago, Barcelona was a city that depended a lot of its “centre”; in terms of city’s facilities (bureaucratic buildings, offices areas, shopping areas) and also touristic infrastructure. We can see how BCN has decided from the beginning of the new millennium to move some of its institutional facilities to the periphery, or to some “forgotten areas of the city”; as for example the City of Justice designed by David Chipperfield which is situated just in the border sharing land with the neighbour city L’Hospitalet de Llobregat. Or the congress pavilions “Fira de Barcelona” designed by Toyo Ito, also in the city of L’Hospitalet forming part of an urban plan called Europe Square with offices/ housing/commercial facilities, etc with buildings by Toyo Ito, Rafael Moneo, Jean Nouvel, RCR... These examples and some others that we can consider such as the Forum Area in the border with Sant Adrià del Bessos or the 22nd district in the old industrial area from the 19th century called Poblenou, or the unripe Sagrera District in a popular industry area from the second part of the 20th century, or one of the last council interventions Fàbriques de Creació (Factories of Creation) all of them in abandoned industrial complexes around popular quarters. All these examples together with the research done in Barcelona, show that these facts even if sometimes they are under some kind of

political-urban-social-economic polemics they obtain more activity decentralization and what is more important for our essay, the city identity as a cause of the tourism. Making the periphery more attractive, making “more Barcelona” parts that in the past were not considered the “real” Barcelona even for the Barcelonan people, but without falling in the trap of the thematisation of the city, or the hipper centralist identity, having a more open, global and free IDENTITY. That the success of a city branding is not only good architecture or good urbanism, it has to be done with the citizens’ participation and the citizens have to feel that they are forming part of the project. It has to be done with the relation and the dialogue between the public and the private sectors, trying to extract benefits for both of them (system that is part of the social-democracy), that the periphery is also as important as the centre is, that the identity is complex and different, and that look for an own identity is in fact look for a NO-IDENTITY, because the identity has to become more the values and the ideas of a society.



Fig. 3 - **SURPRISE + SMILE = WOW**
Personal initiative for the Moscow city brand
by Nicholas Pereslegina and Alexander
Pershikova.



Fig. 3 - Blue points on the map are photographs taken by locals, Red points are photographs taken by tourists



21st Century Housing
Chengyuanhe-Krartal District

Housing and Socioeconomic Division By Ayon Ibrahim

Throughout the history of the Soviet Union, and currently now, urban housing has been in critical short supply relative to the needs of Moscow's growing population. As Moscow continues to drive Russia's economy with one of the lowest unemployment rates amongst global cities, and a median income that is three times higher than the nation's average; the city has seen a steady influx of job seekers from within the nation's borders and from its former breakaway states. Currently, the official census estimates the city's population to be at around 11.5 million, but the actual number could be as high as 17 million and growing; resulting in enormous pressure on the city's existing housing stock. Native Muscovites and recent arrivals have found ways around such pressing issues as affordable accommodation through methods that haven't changed much since the time of the Soviet Union. Communal apartment known as *kommunalka*, where multiple families once share a single household continues to accommodate a significant percentage of the city's population, a concept that predates the Union, and have existed since the reign of Peter the Great. Under the Union, majority of Muscovites lived in *kommunalka* until the 70's, when large modern apartment complexes known as *Microrayons* with its prefabricated panel style construction began to ease some of the pressure of housing demand for the city. The *Microrayon* fact book, an online source about the recent history of housing in Russia, confirms that the *kommunalka* still exists till this day by stating that, "this practice still continues, mostly housing migrant workers, students and seniors who are accustomed to living in city centres and cannot fathom moving to the outskirts of the city" (*Microrayon* Fact book, Feb 2012). Another alternative housing type mentioned by The *Microrayon* Fact book, which existed since the time of Josef Stalin's Premiership and can still be found housing people on the outskirts of the city, was a workers/military style barracks. These types of barrack housing was the precursor to the *rayons* and were mostly found around industrial and military zones of the

city until they were mostly abandoned or replaced by the newer constructed *rayons*. Barracks style housing was the dominant residential buildings being constructed to address the city's housing shortage prior to the development of *microrayons*.

As the Urban housing stock began to improve under the leadership of Premier Nikita Khrushchev, a proponent of modernist construct. Muscovites began to move into *rayons*, a building type favoured by Khrushchev as being the most economical and feasible solutions to meet the housing demand of post



Figure 1
Stalin's Barracks



Figure 2
Communal apartment



Figure 3
prefabricated panel style construction

war Russia. The Microrayon district in many ways resembles a small city, where each building housed a particular amenity besides apartments to service the local group of buildings. The Soviet Encyclopedic Dictionary describes the rayons as, “a complex of apartment buildings and systems of institutions of cultural and community services that meet the daily needs of the population. It is located on the territory adjacent to the highways, but which has no transit roads. Microrayon includes kindergartens, nurseries, schools, stores of essential goods, gardens and sports grounds (Microrayon Fact book, Feb 2012). The origin of the rayons has its roots with the modernist moment, where the socialist state identified itself with the modernist dogma as being the most progressive, and reflective of their own aspiration. “The production of the industrialized, rationalized and massively urbanized society as envisioned by modernist movement was embraced by communist ideologists after Second World War – not only as architectural style, but more importantly, as a major ideological foundation for the construction of new ‘modern’ societies.” (Neelen and Dzokic 2004, 81) Khrushchev understood that if the housing stoke didn’t improve, it had the potential to set of internal unrest within,

resulting in ‘counterrevolutionary’ activities that could threaten the states apparatus. The Red Army’s experience in Europe has exposed the average service man about the realities of his own conditions at home, where they found the workers quality of life in a capitalistic society was in fact far better than their own, contrary to what they were made to believe by the state. Khrushchev realized that their was no going back to how things were, therefore it was crucial to implement a mass housing scheme that showcase Soviet capability to demonstrated to the people that their condition were improving under Soviet rule. Khrushchev, who disliked modern art, but embraced its architecture, did so due to the fact that modernist architect’s understood the sensitive role architecture had on society, and the movement determination to adapt to the mechanical age. “Le Corbusier, in common with many architects of the modern movement, was convinced of the social role of architecture. In an era of great social and political change, Le Corbusier perceived architecture as a crucial instrument in addressing the ills of contemporary society. An appropriate architecture would combat social unrest. Architecture could prevent revolution.” (Leach 1999, 112). The Microrayons had remained the Soviet Union’s, and now the Federation’s most formidable defence against their greatest threat, the disillusion of its people about the state.

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Figure 4
Modern Microrayon

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It is not surprising that the microrayons

are still functional, and in many ways, thriving unlike similar style of mass housing scheme that can be seen in the west. The resale value of a flat in a rayon indicates that they are highly sawed after and Muscovites are essentially happy with them for the time being. That may have more to do with the fact that there are very few alternatives as far as affordable housing is concerned, and newer housing development are priced beyond the reach of most middle class Muscovites unless its located in areas beyond the city limit. Currently, the affordable housing that are being developed are essentially an upgraded version of the Microrayons. Industries that produces the panel style construction since the Soviet time are kept employed due to the fact that construction can be carried out quickly all year long at an initial cost considerably lower than the alternative. As the city prepares to reorganize some of its existing functions, and tackle some of its pressing issues in the coming decades; *The Case for Affordable Housing in Moscow*, and *The Need for Diversity Within Its Housing Market*, investigates the current and future plans for affordable housing in Moscow, and why it is important to tackle this issue in a holistic manner. The city is currently divided in socioeconomic lines, which effects the intensity and diversity of new building types being construction within those boundaries. The essay looks upon the changing demographic of Moscow, especially beyond the city centre, and what it could mean for future of housing development for the city. By 2020, over 80 percent of Russians will be considered middle-class, and therefore, neighbourhoods that are considered middle class now, has the most potential for growth.

3



Peripheral Neighbourhoods

The guide through the chronological development of Moscow's microrayons highlighted the changing image they represent. The concept was conceived to create efficient environments, accommodating the population in self-sufficient districts well connected to the city. As political influence changed in Russia through the twentieth century, experimentation resulted in a 'hit and miss' approach. In a strive for efficiency, the human scale has been forsaken and the architecture has become a self-promoting image rather than a inhabitable environment. New construction techniques and material experimentation means much of this housing stock has reached its 'use-by' date but the problem of its legacy is the simple fact that it houses 80% of Moscow's population.

Standardised housing may have been more appropriate in a political era of social equality, but as Russia begins to privatise ownership and people can express desire, aspiration and individuality once more in society, is this approach to housing applicable any more? It begs the question as to whether the microrayon is justifiable in a post-soviet Russia or is it time that Russia looks for alternatives from western civilisation?

Microrayon Tour

January 19th 2014

Taking full advantage of our time in Moscow, as a group, we visited examples of microrayon neighbourhoods synonymous with the city.

Our tour guide, Denis Romodin – a very knowledgeable Muscovite – lead us through car riddled streets, Cyrillic coded Metro stations, and bustling shopping centres; all in -23°C conditions.

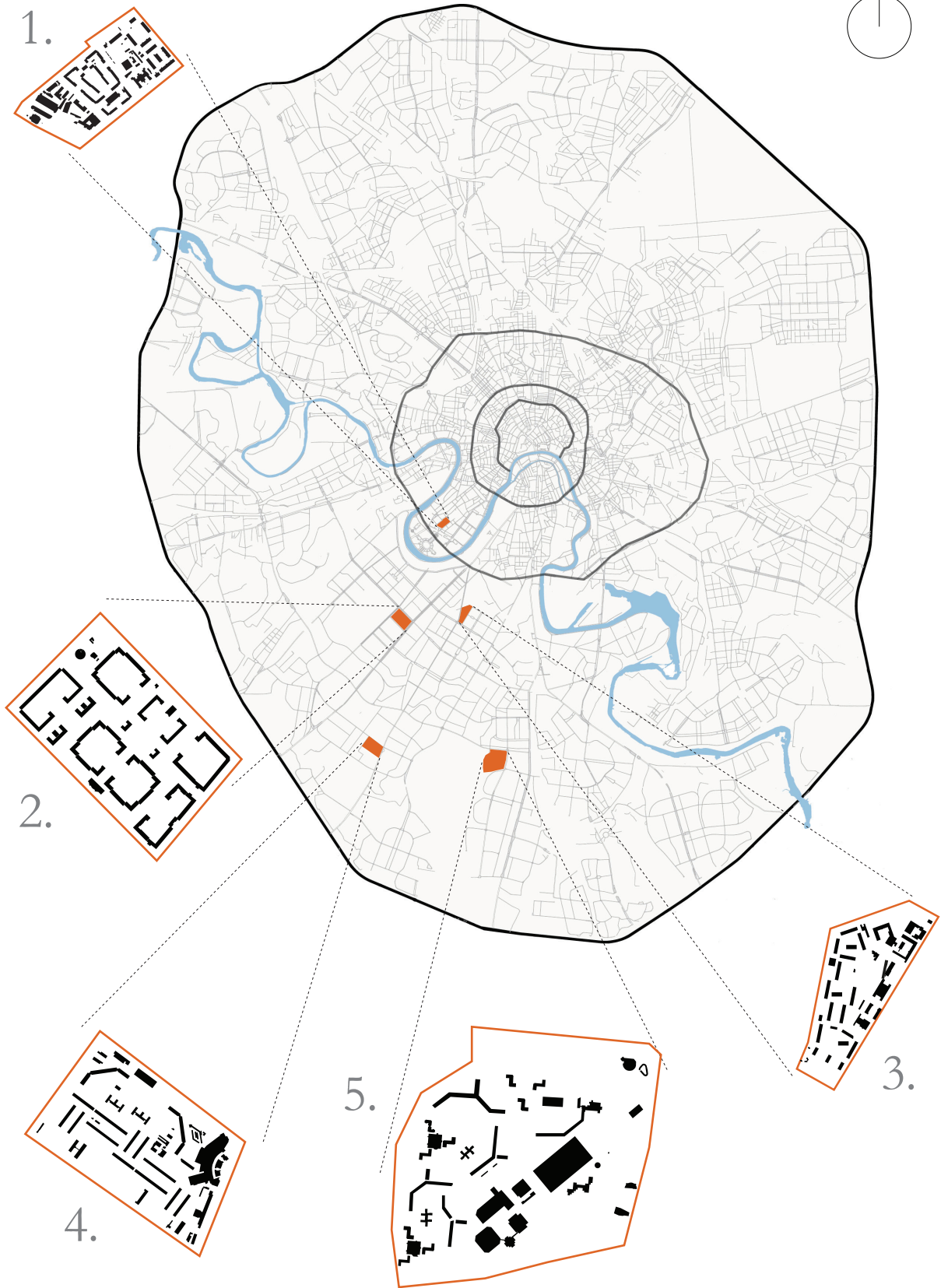
We explored them in chronological order, beginning with one of the earliest examples, constructed in the 1920s. Still in use today, we were often recipients of puzzled stares from residents who were acutely aware we were not from ‘here’.

The huge variety in character and scale of the residential blocks as we moved through the ‘30s and ‘40s developments to the increasingly modern schemes of the 1960s was impressive.

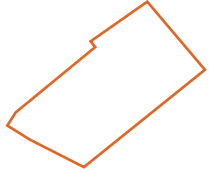
Their experimental nature covered many aspects of urban living. The importance of courtyards for social encounters, and the separation of pedestrians, vehicles, and services were consistent themes of experimentation within the residential complexes. Adornment gave way to efficiency, where building decoration was omitted in favour of expedient construction. A mix of important amenities serviced the microrayons, having their own pharmacist, supermarkets, kindergartens, cafeterias, clubs, and playgrounds.

1. **Usachyovka** [4 - 7 storeys]
Built: 1925 - 28
2. **Gagarinsky** [4 - 8 storeys]
Built: 1948 - 50
3. **Cheryomushki-Kvartal** [4 - 5 storeys]
Built: 1956 - 58
4. **Belyaev** [4 - 16 storeys]
Built: 1962 - 80
5. **Chertanovo Severnoye** [12 - 16 storeys]
Built: 1969 onwards





Usachyovka District



The first microrayon, 25 ha in size, was built 1920's as a settlement for workers. It comprises of municipal housing and cooperatives, of which the housing stock is mainly of two and three room apartments. The blocks are five storey, red brick constructions with a white plaster render. The cooperative amenities include shops, schools, a sauna, a department store and a dining hall.

When the blocks were built, there was communal toilets and a public bath house. In recent times, apartments have been modified to include private bathrooms. Other modifications of recent times include the addition of lifts on the exterior above the main entrance doors, and balconies as a way of extending internal floor space.

The courtyards at centre of housing block are shaded in summer months by the tree canopy, allowing residents to enjoy a cool, external green space. These spaces were initially maintained by the residents but now more recently, government support is responsible for their upkeep.

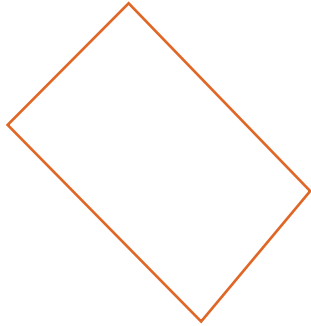


IMAGES

1. Five storey blocks surrounding a public courtyard.
2. Public open space along the street.
3. Self-built additions.



Gagarinsky District



Built in 1950's for academics of the university, this district was planned in the Stalinist period which was from the 1930's to the 1950's. It is non-municipal housing for the social elite; professors, academics and scientists. Amenities include restaurants and theatres as after the second world war, travel abroad bought back foreign culture and thus a requirement to compete.

Microrayons of this time were larger than the blocks of the 1920's, comprised of between three and five bedrooms as well as private bathrooms. Blocks are arranged to create central courtyards which have been landscaped professionally. Ground floor units are used for retail and commercial purposes.

This was one of the first areas of housing that used prefabricated details and ornament. There is a divide in the architecture depending on when it was built. 1952-1955 buildings have decorative motifs and are clad with ceramic tiles. Post 1955, the detail was removed and the facade is plain brick in order to lower costs. The floor plan is the same regardless.

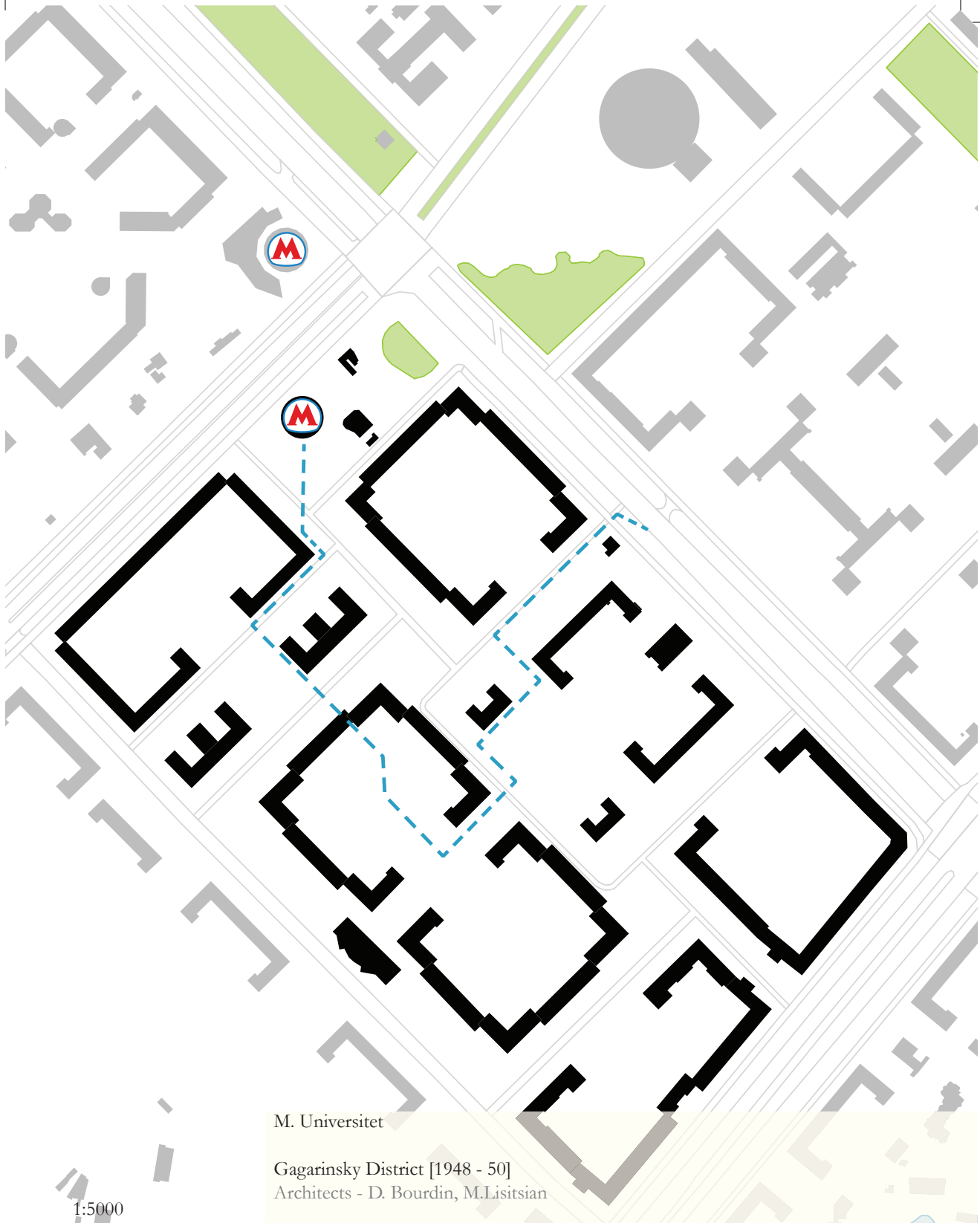
IMAGES

1. Retail and commerce concentrated around the metro station.

2. Perimeter fence, sheltered off-street parking

3. Eight storey blocks, terrecota cladding.





M. Universitet

Gagarinsky District [1948 - 50]
Architects - D. Bourdin, M.Lisitsian

1:5000



Cheryomushki-Kvartal District



Built in the late 1950s, 9C block of Cheryomushki was the first microrayon to derive from Khrushchev's housing construction mania in Moscow. It was an experimental housing quarter of prefabricated panel blocks; small panels, large panels, brick panels and three panels. Construction was quick, building the first sixteen blocks in less than two years. These panel blocks embodied were stripped of decoration and laid out to form regular courtyards that allowed access to amenities without crossing main streets.

Both internal and external planning is compact, similar to the earlier examples from the 1920's, but similar to other examples of its time, the courtyards were professionally designed and landscaped. The microrayon was occupied residents of both high and low social status. Amenities included schools, cinemas, and close proximity retail units.

Some of the architecture experimented with new materials; plastic roofs and glass blocks in the walls. Garages have been added in the 1960's, offering residents secure, off-street parking.

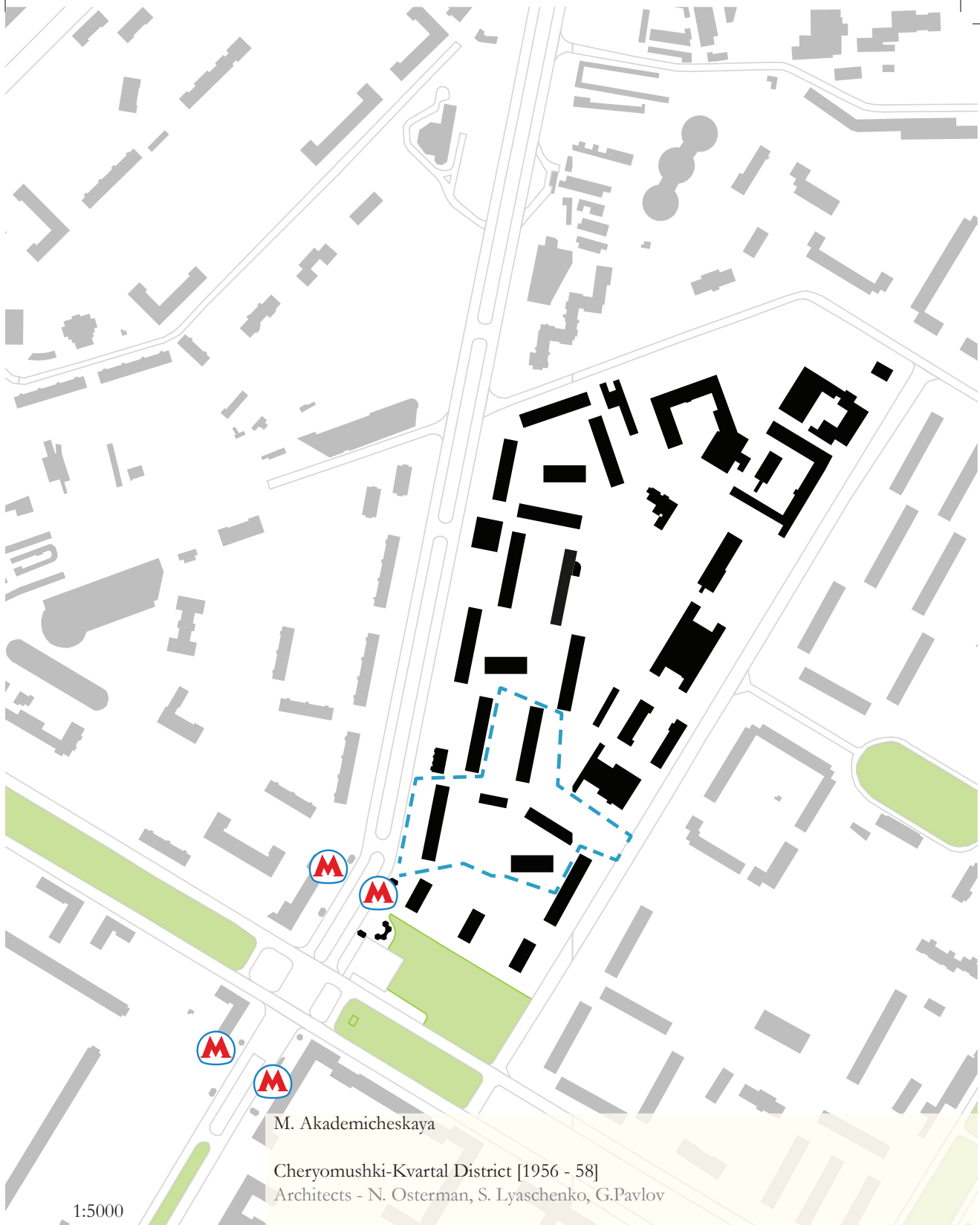
IMAGES

1. Four storey blocks, central courtyard, experimental slab housing.

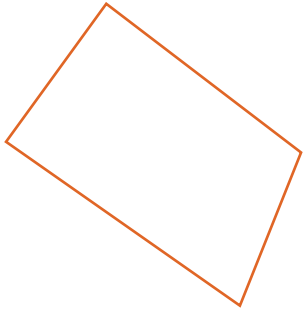
2. Closed balconies, construction varied; brick or concrete.

3. Stepped back from street edge, separated by tree-lined walkway.





Belyaev District



Construction in Belyaev began in the 1960's. The plan of the micro-district utilises a sixteen storey 'sound wall' between the main road and the residential area. Apart from this concrete block on the perimeter, much of the housing blocks are five storey panel constructions.

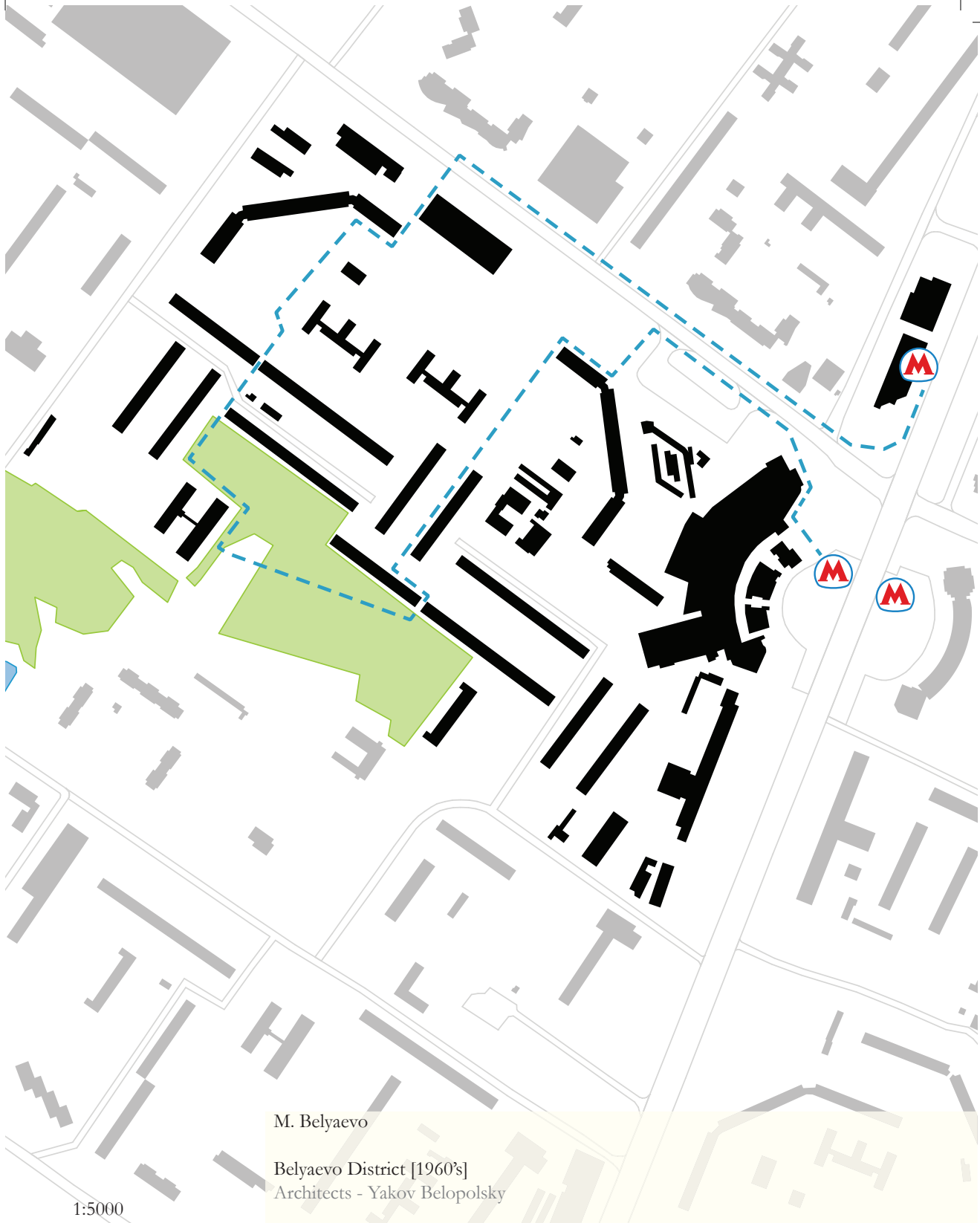
Shops and cafes are located along the main street, as well as transport stops for buses and the metro. The scale of the microrayon is much larger, population density is higher than previous district and the open green spaces are bigger; there is an apple orchard for residents.

The arrangement of the blocks is not as linear or compact as before which means there is a lack of small courtyards. Parking spaces are located in front of main entrance doors and occupy a large percentage of the street scape.



IMAGES

1. Sixteen storey blocks act as a sound barrier between the microrayon and the main street to the North.
2. Five storey blocks behind, concrete panel construction.
3. Vast communal grounds around, trees planted by residents.



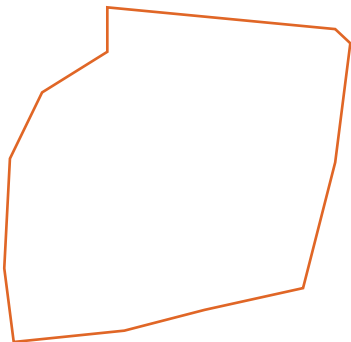
M. Belyaevo

Belyaevo District [1960's]
Architects - Yakov Belopolsky

1:5000



Chertanovo Severnoye District



Severnoe Chertanovo was built in the late 1970s as a cutting edge model for the life of Soviet people. Of its time, it was considered as avant-garde for housing. This microrayon was an ambitiously experimental project that suffered from poor execution. Significant to this project is the service network beneath the ground. There is a network of vacuum garbage accumulation pipelines as well as road network giving residents direct access into their building from their car.

The scale here is larger than any of the previous microrayon, buildings are a minimum of twelve storeys and there are no intimate courtyards between blocks. The grounds are a vast, open plane which the buildings sit within rather than define.

Severnoe Chertanovo was planned to be more than a microrayon, a city within a city. Consequently there are good amenities in close proximity but there is also a far larger population served. Construction is on-going of new blocks in the district which results in a diversity of architectural styles throughout which gives the microrayon a bourgeois image

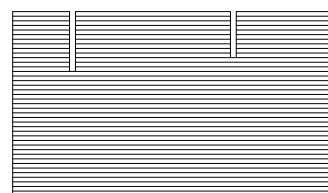


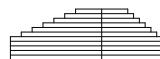
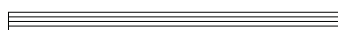
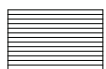
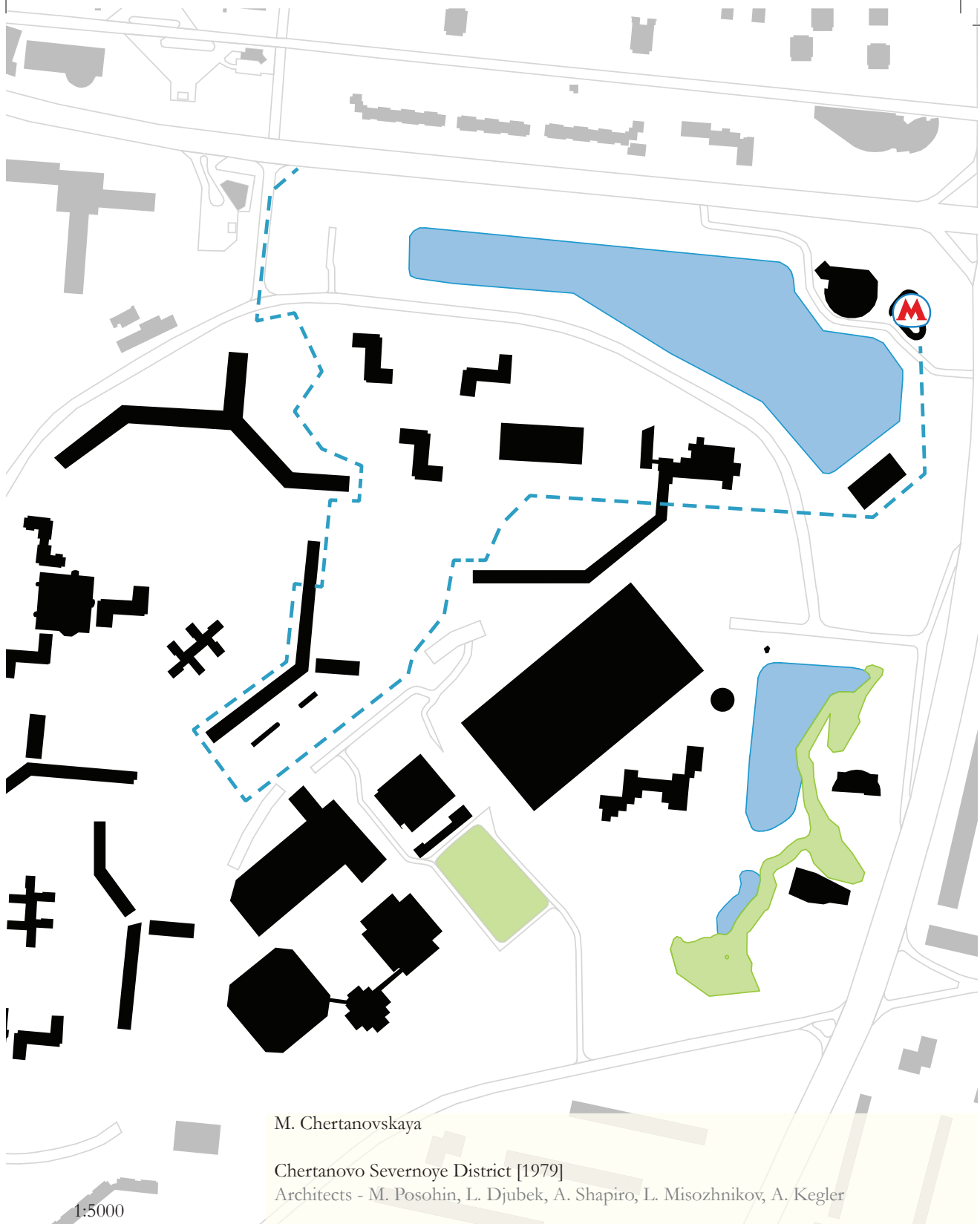
IMAGES

1. Anonymous grounds, blocks connected by paths.

2. Fifteen stories + studio, closed balconies

3. Underground road network direct access - car to lift.







4

*High - Rise, High - Density
Chertanovo Severnoye District*

Life in the Periphery

Through preconceived lines of enquiry, this study has developed a knowledge of Moscow's; political, economic, and social structure. As the capital city of the worlds largest country, materials and man-power support an urban settlement of global recognition. As it stands, the communist legacy remains evident in the approach and interpretation of the city. Specific areas of interests within the group refined avenues of investigation in the exploration on the current situation.



Conclusions

The repercussions of private ownership remains evident in the physical form of the microrayons; monotonous and repetitive, but individual expression through modifications and 'add-ons' embodies pride and ownership of the otherwise indiscriminate, substandard environment. Independent attempts to improve the private domain demonstrate a duty of care which radiates in to the surrounding external environment. A seasonal identity exists in the external environment due to the extremes of climate. Blemishes are concealed by snow in the winter months whereas tree canopies provide shelter to green spaces through the summer months. Moscow must rejuvenate the urban fabric to improve standards of living for its residents, however whilst demand remains high as the city expands efforts should be concentrated in the new zones of development within the oblast territory.

Communal spaces, both internal and external, were well kept and maintained throughout; evidence shown by residents inquiring as to our presence upon visiting the neighbourhoods and the lack of graffiti. In comparison with similar topographies in Glasgow, vandalism was much less apparent and only increasing marginally in the larger microrayons.

Moscow observes its heritage of forests as it continues to provide plentiful open space for resident and tourist, both as a means of compensation for apartment culture and respite from urban densities. As these spaces radiate from the centre, the quality and control demonstrated is apparent in the reduction of lighting schemes and landscaping.

Abundantly available free WiFi allows data connections for both short term visitors and long term residents. The recent release of 'Governmental data for use by mobile app' developers embodies the increasing willingness of Russian government to share information beyond the country borders which is significant to its development as a country open to a global audience. This is hindered by the limited use of Latin characters in way-finding in use of the Cyrillic alphabet. This indicates an insular approach to international links which leaves foreign visitors forced to rely on mobile apps to navigate. The lengthy process and cost of obtaining a letter of invitation to process the visa application is also another obstacle for the visitor to overcome before travelling.

The development of a free market economy and political shifts within Russia have provided the base for Moscow's progression towards a global city. While great stride have been made, development in the infrastructure is still required to better serve the existing population, facilitate future growth and ultimately elevate Moscow into a truly global city.

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