



A ULI Advisory Services Panel Report

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**Urban Land
Institute**

About ULI

ULI – the Urban Land Institute – is a non-profit research and education organisation supported by its members. Founded in Chicago in 1936, the institute now has over 30,000 members across 95 countries worldwide, representing the entire spectrum of land use and real estate development disciplines and working in private enterprise and public service. In Europe, ULI has over 2,000 members supported by a regional office in London and a small team based in Frankfurt.

ULI is a think tank, providing advice and best practices in a neutral setting – valuable for practical learning, involving public officials and engaging urban leaders who may not have a real estate background. By engaging experts from various disciplines, the Panel is able to arrive at advanced answers to problems which would be difficult to answer independently.

ULI brings together leaders with a common commitment to improving professional standards, seeking the best use of land and following excellent practices.

ULI shares knowledge through discussion forums, research, publications and electronic media. All these activities are aimed at providing information that is practical, down to earth and useful so that on-the-ground changes can be made. By building and sustaining a diverse network of local experts, ULI Advisory Panels are able to address the current and future challenges facing Europe's cities. We are focused on best practice urban development – providing 'thought leadership' in what makes a city great and how to achieve it.

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About ULI Advisory Services

ULI Advisory Services Panels provide strategic advice to sponsors on land use and real estate development issues. Panels link developers, public agencies, and other sponsors to the knowledge and experience of ULI and its membership.

Since the first Panel in 1947, ULI has delivered over 600 Panels across 12 countries and four continents in cities including New Orleans, Philadelphia, Hong Kong, Brussels, Shanghai and Barcelona. Sponsors praise Panels for their comprehensive, pragmatic approach to solving land use challenges.

ULI's Advisory Panels bring together experienced real estate and land use professionals to develop innovative solutions for complex urban challenges, land use and real estate development projects and government-delivered programmes.

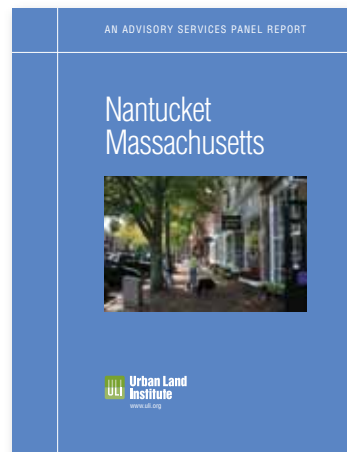
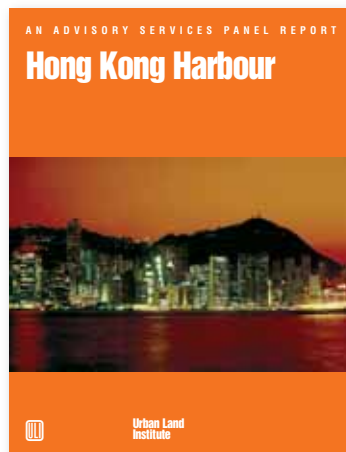
Panels help sponsors find creative, practical solutions for issues such as urban redevelopment, land management,

development potential, growth management, community revitalization, brownfields redevelopment, military base reuse, workforce and affordable housing, and asset management. ULI's services diverse clients including local governments, private developers, community development corporations, and many other public, private, and nonprofit organisations sponsor advisory services assignments.

The objective of a Panel is to provide a consensus view that offers an alternative vision and approach to how a city might deal with the key challenges facing it and take advantage of opportunities on offer.

Panellists are not compensated and freely volunteer their time in order to:

- connect, learn and share with each other as a unique team of experts;
- experience an exciting and special city in a unique way; and
- employ their expertise and play a rôle in helping a city shape its future.



Acknowledgments

The Panel would like to thank each of the stakeholders who made this Panel possible, in particular Mayor Sergey Sobyenin and Deputy Mayor Andrei Sharonov for inviting the Panel to Moscow. Thanks must also go to Sergey Riabokobylko, Chairman of ULI Russia and the Tashir Group, who generously supported the Panel.

The Panel was grateful to IRP Group including Anna Trapkova, Ekaterina Myrikova and the rest of the IRP team who prepared an extensive briefing book, provided onsite logistics and assisted in 'localising' information, enabling panelists to more deeply understand the city and the key issues it faces. We are also grateful to Alexey Plastun, who provided translating and interpreting services and was invaluable in assisting the Panel develop culturally sensitive material. Without their assistance and support, the Panel would not have been able to do its work.

The Panel would also like to thank PwC Russia for providing the facilities, interpreters and support to allow the Panel to engage in stakeholder and community consultation, one of the fundamental activities to allow for informed recommendations.

Thanks also goes to the 60 business leaders, experts, commentators and officials who volunteered their time to be interviewed and present their ideas, vision and concerns about the City of Moscow now and in the future. The Panel was overwhelmed by the diversity, enthusiasm, openness and commitment of all interviewees.

The Panel hopes that their recommendations and comments will provide new ideas and clearer direction in the future, and will assist in developing a stronger and more integrated city centre.



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Introduction

History

Since the 1400s, Moscow has served as the major political, economic, cultural and logistical centre of Russia. It was the capital of Great Russia from 1340 to 1712, the capital of the Soviet Union from 1922 to 1991, and since 1991, the capital of the Russian Federation.

Over the 16th and 17th centuries the city has been spread across five concentric rings, with the Kremlin situated within the innermost ring. These rings were separated from one another by walls, but today are divided by roads.

Moscow's population grew from 250,000 to over a million in the 19th century and from one to ten million in the 20th century, making it the largest city, by population, in Europe and the sixth largest city in the world. Today Moscow has an official population of 11,514,330 according to the preliminary results of the 2010 census, although analysts estimate that the actual population could be as much as 15 million.

Governance

The City of Moscow is the seat of power for the Russian Federation. At the centre of the city sits the Kremlin, which houses the President of Russia as well as the various bodies of national government. Moscow is located within the central economic region, one of twelve regions within Russia who each have shared economic goals. Russia contains 83 federal subjects with Moscow representing the largest in terms of population and smallest in terms of area. The City of Moscow is divided into 10 administrative okrugs, each with their own government representative. The City of Moscow is governed by Mayor Sergey Sobyenin, who succeeded Yuri Luzhkov in 2010. Mayor Sobyenin is supported by four Deputy Mayors including Deputy Mayor Andrej Sharanov, who is responsible for and commissioned this ULI Panel.

The Panel's Assignment

The ULI Panel was specifically engaged by Deputy Mayor Sharonov to assist Moscow's evolution into a leading global city. ULI worked with City of Moscow officials to refine this broad goals into a series of questions that would seek to address the most pressing urban challenges facing the city.

The Questions

The Panel sought to answer the following questions:

1. How does Moscow become a leading global city?
2. What international experience could usefully be applied to ensure the effective integration of the proposed expansion area of the Moscow region into Moscow city?
3. How can Moscow develop a sustainable business model for further redevelopment of the city's former industrial zones?
 - a) How to finance it?
 - b) How to avoid excessive pressure on existing infrastructure?
 - c) Examples of scalable approaches from other world cities?
 - d) How to engage local communities in development of these zones?
 - e) How to leverage former industrial zones to create new opportunities for Moscow city?
4. How can the Moscow underground be developed according to international experience and best practices?

The Panel discussed and debated the assignment questions in order to ensure they provided insights and recommendations to the City of Moscow that were tangible and effective.

Following intense deliberation, including site visits, interviews and other consultation, the Panel determined to respond to the assignment questions through five overarching strategic themes:

1. Big City, Great City or Global City?
2. Global Moscow = Liveable Density
3. Industrial Zones to Mixed-Use Communities
4. Connectivity: Underground and Above Ground
5. It Only Works if Government Works

The Panel's presentation at the Moscow Urban Forum focussed on these five themes and this report follows a similar structure.

The Panel Process

Once the Panel's assignment had been confirmed, ULI staff proceeded to invite professionals from ULI's global membership, with experience and expertise in the fields required for this particular Panel. Each Panel was composed of highly qualified professionals who volunteer their time to ULI without remuneration. Prior to the Panel meeting in Moscow, a detailed briefing book was circulated, which provided background information relating to each of the assignment questions, and the political and economic environment Moscow operates within.

A brief summary of the Panel process is provided below:

Day 1: Cultural tour and organisational meeting

Several members of the Panel spent the morning on a cultural tour of Red Square, St Basil's Cathedral and the Kremlin. In the afternoon, an organisational meeting was held at which Panel members introduced themselves and began to discuss the assignment questions. In the evening, panellists enjoyed a dinner with Deputy Mayor Sharonov, his senior officials and ULI Russia members – where they heard the local perspective on the assignment.



Panel members interacting with Moscow's key political and business figures over dinner



The team on a site visit with the Cathedral of Christ the Saviour in the background

Day 2: Site tour

The Panel spent Tuesday visiting selected sites around the city. They were shown Moskvich, the second largest Former Industrial Zone, which was operational as a car manufacturing plant between 1960-80 but was refurbished into a centre of technology and value-added manufacturing in 2011, and is now managed by a government-funded private company. The Panel visited Red October, which is located on a natural island in the centre of the city and is an evolving site for technology and entrepreneurship. Finally the Panel visited the Federation Tower in the city's new business district and were shown the layout and structure of the city from the 27th floor. In the evening the Panel attended the Stanislavsky Ballet and Opera Theatre for a performance of Giselle.



The Panel carrying out interviews with key stakeholders

Day 3: Interviews

The Panel spent the morning conducting hour-long group interviews with government officials, private-sector experts, academics, developers and local residents. All interviews were conducted in small groups and were completely private – allowing interviewees to remain anonymous. The Panel undertook interviews with a total of 60 individuals whose expertise and insight were invaluable for the Panel. Lunch followed at the historic Pushkin Café after which the Panel met to debrief following the interviews and begin their work sessions in the afternoon and during dinner.

Day 4: Boardroom workday

The Panel continued their deliberations and debate and spent the day forming their responses to the Assignment Questions.

Day 5: Boardroom workday

The Panel spent the day in deep discussion, undertaking additional interviews with key personnel and refining the Panel consensus. The presentation was rehearsed and perfected and at the same time panellists began to develop a draft outline of the report. City officials were briefed on the



The Panel finalising the final presentation



key findings and recommendations that evening prior to the public presentation the following day.

Day 6: Presentation

The public presentation was given on the final day of the Moscow Urban Forum at the Swissôtel Krasnye Holmy Moscow. This was the inaugural Urban Forum hosted by Moscow City Council in partnership with the Urban Land Institute and the World Bank. The Panel presented to a full room of government officials, international business leaders and the local press.

Following the conclusion of the Panel, panellists refined their notes and added detail to their recommendations as ULI staff finalised this report.



The Panel presenting their findings at the Moscow Urban Forum

Theme 1

Big City, Great City or Global City?

The Panel were asked to consider how Moscow becomes a leading global city. This term is not universally familiar but has become common in urbanist parlance to mean: *a city generally considered to be an important node in the global economic system with political and cultural influence.* Saskia Sassen (1991) describes global cities as places with political, trade, financial, information and cultural importance.

The Panel considered the key characteristics of global cities and investigated the strategies Moscow should pursue to enhance the city's global standing.

The internationally-recognised city rankings are a blunt measure of a city's global profile in a number of areas. The Panel undertook research into these global rankings and found that the following characteristics are crucial for any global city, with their measuring indices and Moscow's ranking shown below:



ULI Moscow Panel Team

The rankings above indicate that Moscow has a number of opportunities to improve its global standing across a range of indicators. While care does need to be taken in the interpretation of these rankings – it is important to recognise that they are influential and are studied by investors and corporates around the world when they consider to which cities they are to direct their investments and operations.

The core features and values that are used to compile these rankings are explained below:

World Bank “Knowledge Index” (2009) 60/146

- A global city must be a major magnet for talent and a city must grow and retain skilled and creative people. It is talent that drives city success, and how a city's knowledge base is perceived as being of vital importance.

Transparency International Index, (2011) 31/82 cities

- A strong legal system ensures openness, transparency and vitally ease of doing business

McKinseys “top 25 city rankings”, (2011) 16th

- Effective governance is crucial in delivering economic success – perhaps the most visible part of a global cities profile is how it manages the competing pressures of all the city's different stakeholders

IBM “Commuter Pain Survey”, (2011) 8/20 cities

- Urban mobility is vital to improve the daily life of its citizens and this issue is addressed in detail later in the report.

AT Kearney Global Cities Index, (2010) 25/65 cities

- Interconnectivity with other world cities ensures and increase in trade and cements a city's global standing.

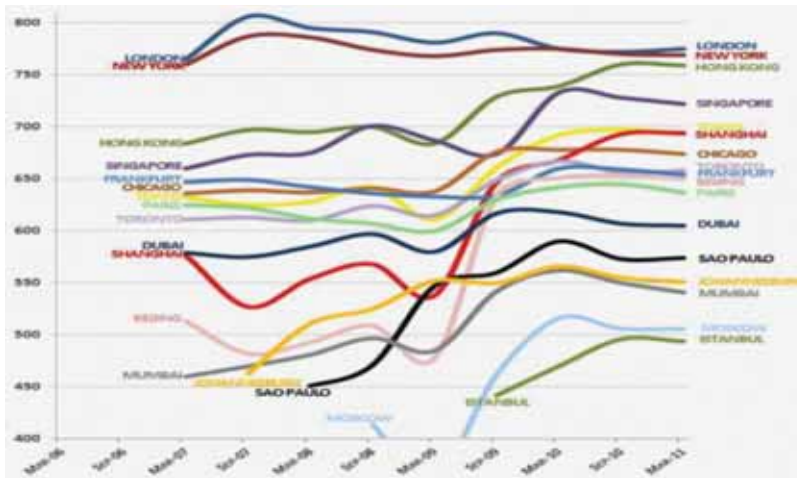
Mercers Survey Quality of Living, (2011) Moscow not ranked in top 50 cities assessed

- Personal comfort with a city dictates how a city is enjoyed internally and perceived externally

Global Financial Centres, (2011) 61st

- Moscow was designated as an “Emerging Global Contender” due to the worldwide recognition of Moscow's potential to be a global financial center. The rapid progress of Beijing (the purple line on the chart) and Shanghai (the red line) prove substantial movement is possible. However, Moscow has a long way to go to achieve its ambition and will have to work not just on financial and business measures, but also towards achieving the aggregate of these core values and features.

Progress of financial centres since 2007



Source: Z/Yen (2007-2011), chart by Greg Clark

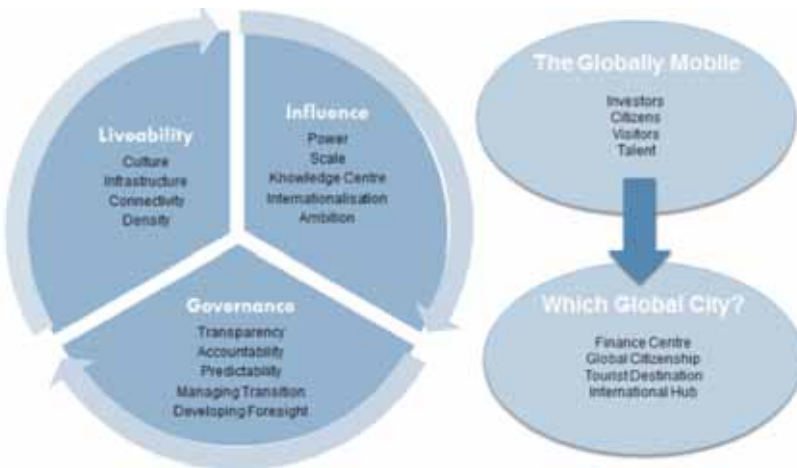
Moscow's low ranking on the global indexes listed earlier does not fit either its stature or its long-term ambition. Global cities are not built overnight and Moscow has performed phenomenally well to grow at such a rapid pace, but it has more challenges to overcome if it is to reach the top rankings held by cities such as New York or London.

The three fundamentals identified in the above figure do not capture all the elements important to a global city, but the Panel believes they are the areas of highest priority for Moscow to address if it is to reach its potential.

There are many more detailed rankings and like any city, Moscow's performance varies across them, but often it is these extensive studies on specific styles of city that get most attention, the Green city, the City of Culture – or indeed the Global Financial City.

The Fundamentals for Moscow as a Global City

The Panel wanted to provide their interpretation of what makes a city global and developed the graphic below, which identifies liveability, influence and governance as the three key characteristics that Moscow should incorporate into future urban and social planning.



ULI Moscow Panel Team

Liveability

All cities strive for liveability and it is perhaps the most desirable of all rankings pursued by cities. Liveability is the quality of life a city can offer, which acts to retain and attract the talented, creative and entrepreneurial talent – exact people that fuel global cities.

One of the key aspects of a city that affects liveability is having quality infrastructure that enables connectivity between people and places, which leads to productivity at an individual, enterprise and city level. The Panel found that connectivity is one critical area that Moscow must address if it is to join the ranks of the world's leading cities.

Quality of life is also reflected in the value and importance that societies attach to culture. Global cities are crucibles of national and international culture. Moscow has an enviable combination of heritage and modernity and it must recognise and capitalise on this asset.

Influence

Being global means having influence over the rest of the world and driving, rather than simply experiencing globalisation. Moscow must look to influence the globalising trends of culture, technology and economics. The city has the power and the scale necessary to make this happen. Moscow is the seat of federal government and has a population of over 10 million people – it has stature and influence. Throughout the world, economies are in transition as well as in competition to become centres of knowledge and in order to set the global agenda in business and research, Moscow must do more to attract a skilled, educated and an international workforce.

One key area where Moscow can build its global influence and improve its ranking as a knowledge centre is by directing investment to internationalising the higher education sector. Not only will this attract talent and provide a pool of innovative thinking and world-leading practices, but it will also guarantee density with the increased population inflow desiring diversity and new approaches to innovation.

Governance

The characteristic that crucially supports the liveability and influence of Moscow is governance. Governance is about providing transparency and a level of predictability for public and private sector investors whose primary consideration alongside returns, is the security of the investment. This translates into simple acts such as clarifying title deeds or guaranteeing the elimination of graft. With good governance, Moscow can build a reputation that inspires long-term financial and economic trust, which will encourage greater investment.

Emerging market economies such as Moscow need to prioritise governance to a greater degree if they are to successfully manage the transition, which demands new ways of thinking and acting. Moscow must also anticipate future global trends across societies and economies and be flexible and responsive in delivering a governance framework that supports continued evolution.

The Globally Mobile

By addressing these factors and working to improve the fundamental characteristics identified above, Moscow will attract a wave of globally mobile consumers, visitors, investors and talent; all of whom demand places where they can establish their business, live and grow. The globally mobile compare and contrast the features of liveability and influence offered by competing cities and Moscow must focus on ensuring it remains a viable outcome of these deliberations so as to maintain its attractiveness.

Which Global City?

It is not simply enough to individually address the characteristics listed above, a coherent vision must be developed that presents global talent with a clear proposition of what Moscow has to offer.

Moscow needs to decide what kind of global city they are going to be? Will Moscow focus on becoming a global financial centre? Is its ambition like that of Shanghai to become a global financial centre by 2020? If so, it will need to attract the foreign-born workforce like other financial capitals such as New York, where 37% of the workforce is foreign-born, or London (31%). Does it want to become a global tourist destination, joining cities like Barcelona, London and Istanbul? Does it want to be a leader in global citizenship, like Copenhagen or Zurich? Will it seek to develop strategies that respond to global challenges such as climate change and lead the way in becoming carbon-neutral by 2020? Or perhaps Moscow will aim to develop into an international hub facilitating links between established and emerging economies – an aviation and logistics hub to link North America, Europe and Asia. China plans to build 100 new airports in the next ten years. This has the potential to deliver an estimated 3,000 jobs (direct and indirect), which studies have tied to every regularly scheduled flight? Will it be Moscow that links them or another strategically situated city such as Istanbul?

These are questions that Moscow must address if it is to realise its ambition of becoming a leading global city.

Theme 2

Global Moscow = Liveable Density



Google images

Moscow residents expressed a concern at the level of density, which they believed to be the cause of the relatively poor quality of the urban environment. The Panel did not agree with this notion and found that Moscow's level of density is actually an asset that should be valued and protected. There may exist a level of confusion between the effects of urban density and the sensation of congestion, in particular traffic congestion. The Panel wants to reinforce the distinct differences between density and congestion, where the cause and effect of both phenomena require careful interpretation.

The Panel listened to city residents who commented on the crowded urban conditions and observed that Moscow suffers from a Soviet-era road pattern, with enormous 'super blocks' that push all the vehicular traffic onto relatively few very large roads.

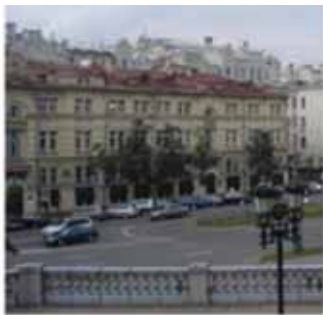
These concerns about both isolation and crowding are valid, as are the difficulties associated with the conditions of residential blocks that often lack scale and character and can create an oppressive environment for residents. However, despite these residences being high rise, overall, the developments are no denser than more attractive low and mid-rise housing in other parts of Europe.

Density

Contrary to many public announcements and personally-held beliefs, the results of the Panel's research and consultation do not point to Moscow being an extraordinarily dense city. Moscow is either in line with, or less dense than many other global cities in Europe and elsewhere in the world.

The average density of Moscow is 10,300-residents/sq km, which is equivalent to the density of inner London (10,900 residents/sq km), while Manhattan, the central area of New York City, is 26,800-residents/sq km, a density that is more than double that of Moscow. Many Asian cities, such as Shanghai, Tokyo, and Mumbai are substantially denser than Moscow.

What is significant about Moscow is that its urban density is relatively constant over its entire settled area, which compares to New York where there is a balance of areas of ultra-high density with other areas of relatively low density. This creates psychological relief for people and is an important quality to consider when developing master plans for new areas.



MOSCOW
10,300 residents/sq.km



INNER LONDON
10,900 residents/sq.km



MANHATTAN
26,800 residents/sq.km



Google images

The Panel considered Moscow's situation and reviewed international experiences in order to maintain sustainable levels of density. The Panel found that a truly global city needs to reach an average density of approximately 10,000 residents /sq km. As has been previously noted, Moscow has already accomplished this level of density. The city should strive to maintain this critical advantage, rather than aiming to de-densify.

Vitality

What makes the economic benefit of high urban density possible is 24-hour vitality and a wide range of mutually supportive land-uses. Throughout Moscow, there exist large areas of monoculture – singular concentrations of urban function. On the outskirts of Moscow are enormous residential areas, retail is concentrated in shopping malls

and areas with office buildings are empty and dark after work.

Mixed-use means urban planning places different functions next to each other in a careful way:

- Residences are located near commercial areas, allowing people to enjoy a car-free commute, and in some cases walk to work.
- Commercial areas are positioned near retail areas, so that people can shop during the day.
- Entertainment and leisure areas are located near both residential and commercial areas.
- Universities are positioned near commercial and hotel areas, so that visiting investors can readily access their Research and Development activities.



london

new york

stockholm

hong kong

moscow

Google images

Google images



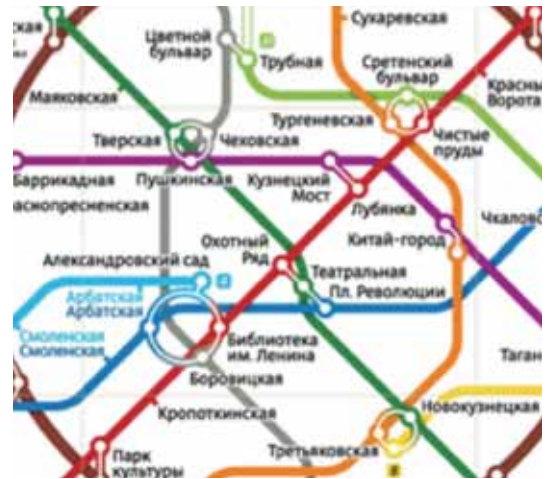
Another attribute that makes valuable urban density possible is high-quality public space. These areas, both small and large, must be carefully designed to be aesthetically attractive and can range from important park areas, to the details of a pedestrian sidewalk. In Moscow, there is room for great improvement in the quality of public sidewalks; the waterfront areas by the Moscow River, better street lighting, signage that can be read by foreign visitors. Moscow drivers also have a role to play in creating urban vitality by following parking laws and ensuring pedestrians are able to access them.

In order to become a global city, Moscow must make every effort to make the urban environment attractive for both its residents and international visitors. Moscow has to prove that it is interested in the wider world, in order to ensure the wider world is interested in Moscow.

Ultimately, a high-quality, aesthetically attractive network of open spaces encourages people to walk. And when they walk, they drive less, and this lowers pressures on public transport.

Connectivity

The positive aspects of urban density in global cities are made possible by public transportation and every great city should constantly strive to improve the mobility of residents and visitors. Global research has found that residents should be able to accomplish 70 per cent of their daily activities without having to rely on private cars. Instead they should be able to utilise public transport to travel for school, work, and socialising and accomplish all of these activities within a 30-minute metro/bus ride or a 10 minute walk.



Moscow Metro Map

No city can achieve this milestone through transit improvements alone; work must be done in relation to land-use planning, with a greater emphasis on mixed land use and high-quality open spaces. But there is no doubt that public transit is the foundation of sustainable urban density.



Google images

A City for the People

The images below show how different the typical Moscow road networks are from other cities with the same level of urban density. Moscow's buildings are organized into super-blocks, where relatively few roads serve very large plot areas. Since vehicular movement is not possible through the centre of these large blocks, they are all pushed onto the perimeter roads, which force perimeter roads to be very wide and result in traffic congestion. The wide roads make it difficult for pedestrians to cross, which encourages commuters to turn to cars and cyclically creates more traffic.

If you look at the typical streets from south London, or the northern part of New York (areas with the exact same density as Moscow), you can see the pattern of smaller blocks, which allow traffic to move around more freely, and also allows the streets to be narrower, which in turn encourages more people to walk. These blocks also distribute a wide range of land uses – schools near residences, residences near offices and shops. Areas of highest urban density are clustered around transportation nodes. All of this encourages people to remain more independent of the car, which in turn reduces congestion and the need to widen roads.



Google maps

Theme 3

Redevelopment of industrial zones

Trends in manufacturing

Employment in traditional manufacturing industries is declining sharply and this trend is true for all developed countries, but especially for the global cities. Modern industries are technology and information-driven and cause less pollution and congestion. Modern industries deliver more value and provide higher-paid employment for a better-educated workforce. Most importantly, these industries require considerably less land to operate on than traditional industries. This means that all the foreseeable demand for modern industrial locations can be accommodated in only a fraction of the existing industrial zones in the city. This presents Moscow with the challenge and opportunity to do something useful with the industrial zones that are to become vacant. By considering the future role of manufacturing and making decisions that support its sustainable expansion, the City of Moscow can at the same time stimulate the transformation of Moscow to an information-based economy.

The redevelopment of inner-city former industrial zones has been a focal point in American and European urban development practices in the previous decades. A comprehensive case study is Hafencity in Hamburg, which is the largest of its kind in Europe.

Case study: Hafencity, Hamburg

- **Type:** Europe's largest inner city urban development zone
- **Dates:** 1997 to 2020/2025
- **Total size:** 157 hectares
- **Features:** 2.0 million m² of gross floor space; 5,500 new housing units, more than 40,000 jobs; 10 kilometres of quayside promenades
- **Transport infrastructure:** New, efficient road network with connections to city centre and motorway; a new U4 underground line with two stops is under construction (operating from 2012).
- **Cultural icons:** Elbphilharmonie (Concert Hall), International Maritime Museum, Science Centre.
- **Higher Education facilities:** Hafencity University
- **Total cost:** EUR 1.45 billion (public), EUR 5 – 5.5 billion (private)
- **Value creation:** Construction of the necessary physical infrastructure and required amenities to provide development sites to extend Hamburg's City Centre. The creation of new development sites and the increased quality and accessibility of existing sites both increased potential land values within the area. The holistic Masterplan for the area created a persuasive vision which also raised demand for sites in the area.
- **Value realisation:** Capital investment and masterplanning by private sector developers and investors.
- **Value capture:** Hafencity Hamburg GmbH, the publicly owned development agency responsible for the development, sold land as freehold to investors and developers.
- **Value recycle:** The increased revenues from the land were re-invested to pay off the loan which financed the construction of the area's infrastructure and amenities.
- **Paid for:** The construction of the physical infrastructure and required amenities to provide suitable development sites.

Availability of industrial zones

The map below shows a small part of the river Moskva, which runs through the centre of Moscow and the location of the city's heritage sites, which are all primed for thoughtful development. These sites present a tremendous opportunity for mixed-use development and similar sites can be found throughout Moscow.



Geocentre Consulting, Tele Atlas, 2010

Moscow must do more to understand its assets and an analysis of the strengths and weaknesses of each zone. This will allow authorities to evaluate which zones are to be maintained for industry and which are most suitable for development? Moscow must combine data and analysis in order to effectively evaluate and prioritise industrial zones on relative opportunity for regeneration. The city should prioritise which locations are to be developed first and develop a coherent strategic vision for these priority zones. The suitability for redevelopment depends mainly on the location, relative to the city centre, to universities and to the transportation networks.

The vision must be long-term as it will take years for these developments to be realised and are impossible to accomplish with a single transaction. Instead, multiple transactions must take place with private companies over the course of several years, based on the strategic vision that enables the creation of value over time and the capture of that value to compensate for the initial public investment.

In the age of continuing urbanisation and globalisation, Moscow's population will continue to grow. It will be important to implement strategies that relieve traffic congestion from the city centre. As part of these considerations, it is reasonable to consider the relocation of government offices and commercial functions.

Regenerating the industrial zones for mixed-use development is an extraordinary opportunity for Moscow. Moscow has the potential to undertake this development as a significant number of these industrial zones are underutilised and sit in very valuable areas, directly aligned with transport infrastructure like the small Railroad Ring. Very few other cities have the chance to develop large areas of prime land so closely supported by transport.

Hamburg is a very successful growing city in Germany, attracting many jobs and residents. The centre of the city is however relatively small, being confined by the harbour and the Alster lake. The central area within the ring road was under severe pressure, leading to congestion and extreme rises in property value, crowding out many vital urban functions. As activity in the harbour decreased, the Municipality saw the opportunity to increase the size of the city by adding the abandoned harbour area: HafenCity. A case study of this development is provided earlier in this report.

The regeneration of these industrial areas should use the relocated government ministries and commercial areas as their core functions. These high density areas should also incorporate residential and supporting community land uses and be planned around transportation nodes including train and bus stations.

These regeneration areas should integrate small urban blocks to ease vehicular movements and decrease the width of streets, while emphasising very high-quality public spaces. There is no need to expand urban density outside of the current Moscow urban area and Moscow should not waste its valuable density.

Value creation

In order to support the ongoing regeneration of Moscow, these industrial areas must be cleaned up as a precondition for future development. The process of cleaning up these areas in itself presents a new sector for innovative employment, with a potential to export.



Russian City Government

Industrial heritage sites represent an immensely valuable asset class that Moscow is not in short supply of and their renovation will create a sense of place and give the zones an identity. While this process of renovation may not be immediately profitable it will increase the value of the land around it and lead to intrinsic value that will serve Moscow well, long into the future. Furthermore, these zones provide Moscow with the opportunity to introduce new infrastructure, such as roads, tramways and parking, which will help mitigate the transportation challenges faced by Moscow. All these investments require substantial public capital investment over many years, which the Panel believes can be recovered by land revenues from offices, housing, retail and other functions.

Define the Market

Based on the global experience of the Panel, one of the great catalysts of regeneration is when government leads the movement and decides to pioneer by relocating their public functions in these development zones. For example, the relocation of government departments from the overcrowded central district to a former industrial zone could act as such a catalyst. This can then be followed by other functions, such as financial and business services, housing, hotels, retail and leisure, parking and open spaces. The final mixed use development will result in a sufficiently high density and create synergy with the modern innovation economy.

In HafenCity Hamburg, public institutions play an important role as incubators of the regeneration of the area. Examples are the spectacular philharmonic concert hall, which is placed on top of a former monumental warehouse, and the science centre designed by Rem Koolhaas. Apart from these substantial public investments, there were investment demands for infrastructure, new parks and soil treatment. The Municipality made a comprehensive business case, in which these investments could be recovered over time by land revenues from development of housing, offices and other commercial functions. The business case made it also possible to engage private party developers and investors into a long-term commitment towards the area development.

The Panel visited the Moskvich complex in the south-east of Moscow, which is an example of a zone that might be suitable for development into a mixed-use environment. Alongside modern industry, there is room for offices, houses and parks, which will directly lift land values around mixed use sites and allow the City of Moscow to realise better returns on investment.

Innovation and Creativity

To accelerate the transformation of Moscow into a modern economy, it is important to realise that the institutions of higher education are potential economic engines. The knowledge they generate must be not only academically relevant but also commercially sound. The city government can be a driving force in this process. Buildings and money are just as important as the ongoing commitment of the city's leadership and the opening up to the international academic world.

This chart shows the importance of research and development for several countries and shows that Russia spends just 1% of its GDP on research and development, which is half the average of all countries on the chart.

The importance of higher education

In the latest international ranking of universities published by The Times of London, Russia has only one university in the top 300 ranked worldwide, which places near the bottom. Universities are increasingly operating at an international level and it is important that professors and students can grasp these international opportunities. To achieve success in innovation and creativity, a consistent investment by the City of Moscow in education is required to ensure Moscow has a minimum of two universities within the top quarter of the international rankings by 2021. The initial building blocks include the internationalisation of academic standards and integration with the world's universities on academic standards, as well as improving the mobility of professors and students to ensure Moscow attracts and retains the best international talent and research. This in turn contributes to Moscow's ranking as a global city.

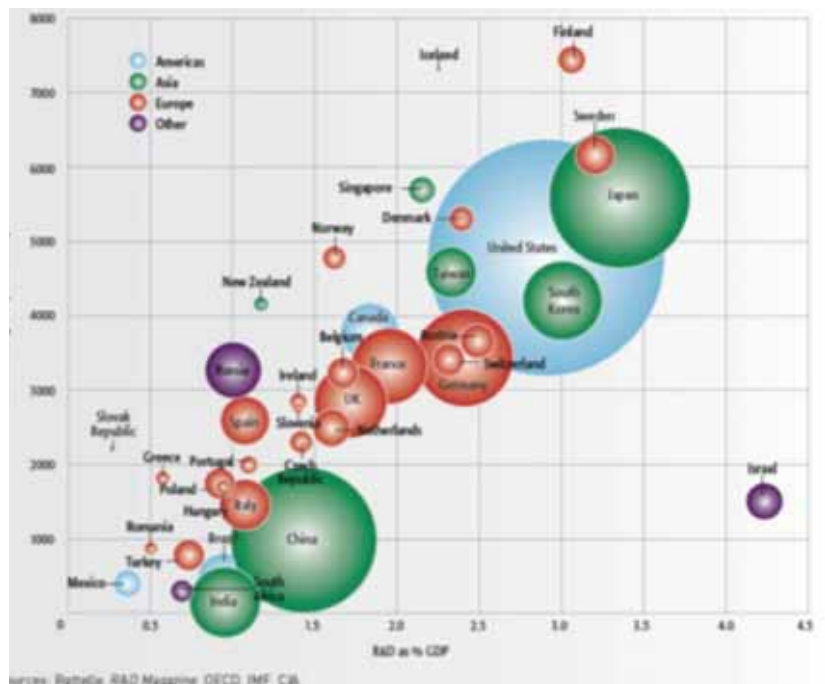
Hamburg took advantage of the redevelopment of the old harbored to found a new higher education institution: the HafenCity University. This modern metropolitan university in fact specializes in the built environment and metropolitan development and is seen as an important growth pole for the area.



Panel members viewing Moskvich

World of R&D 2010

Size of circle reflects the relative amount of annual R&D spending by the country noted.



Theme 4

Connectivity - Underground and Above Ground

Transport is not just about getting from point A to point B, it is about providing connectivity between and within communities through integration with land use. Sustainable Urban Transport Planning aims at ensuring the accessibility offered by the transport system to all by:

- Reducing the negative impact of the transport system on the health, safety and security of all citizens
- Reducing air pollution and noise emissions, greenhouse gas emissions and energy consumption
- Improving the efficiency and cost-effectiveness of the transportation of persons and goods, taking into account the external costs
- Contributing to the enhancement of the attractiveness and quality of the urban environment and urban design.

The EU Green Paper on Urban Mobility highlights the need to create a new culture for urban mobility that demands integrated approaches combining transport, environment and land use planning.

Better connectivity positively affects quality of life by reducing commuting times and lowering car-based air pollution that can affect public health. This connectivity also promotes enhanced economic development opportunities within a city, allowing for the development of innovative mobility concepts like those present within Copenhagen where cycling represents more than 40% of commuting traffic or in Frankfurt where an electronic parking management system is operational.

The Panel was asked to look specifically at the Moscow metro system, but such an analysis would have been too narrow a focus and the Panel therefore considered the entire spectrum of mobility options in Moscow (walking, cycling, bus, tram, metro, commuter rail, private car, mobility management). The Panel was not able to provide detailed transport solutions and would suggest that additional specialist consultancy services are required to further expand upon our recommendations.

An analysis of the existing situation can be illustrated with the following key statistics:

- Some 6% of Moscow's land area contains 40% of employment workplaces, located primarily in the inner core area within the Garden Ring.
- About 9% of Moscow's land is dedicated to roads and streets, which compares to 25% in Western European cities. This result is very low and may be a contributing factor to the obvious traffic congestion problem.
- Cars represent only less than 20% of the overall modal split in Moscow, while in Frankfurt and London, cars account for 34% and 40% respectively, even with the extensive transport systems present within these cities.

This analysis points to the fact that a small reduction of car use could lower congestion and that the transfer of those drivers to public transport would probably not add significantly to existing and proposed transport capacity.

Google images





Google images

Mobility and Land Use

Comfortable and accessible transport begins with a sustainable settlement pattern. An analysis of Moscow's spatial profile indicates that the city's land use and the existing transportation infrastructure are not in the right balance. Moscow is not a city of short travel distances and most trips are longer than they should be. One way to reduce trips into the core of Moscow is to encourage office developments outside the Third Ring Road, especially within the former industrial areas, which could take the form of mixed use developments including housing, shopping, leisure and cultural facilities. The centres should always match with transport access and should surround transport nodes. Additional housing opportunities should be provided in the core area to promote walk to work options thus reducing demand on the metro system. Urban extensions outside the MKAD 4th outer ring road should be in accordance with an overall regional plan and be developed primarily adjacent to the regional railway lines. They should be organised as self-sufficient satellite developments to avoid additional commuter traffic into the city centre. The obvious first areas for consideration are those sites around the airports: Vnukovo, Sheremetyevo and Domodedovo.

Public Transport

The Moscow metro is a good system that serves a very large volume of passengers. Its problem is that it is too popular. That is a problem that many cities around the world would envy. However, it is also a detriment, with the problems of overcapacity discouraging people from using it and, in some cases, causes a switch from public transport to private car.

As noted, an analysis of the continued expansion and operation of the metro is a subject that, given the limitations of this Panel, requires a more detailed study. However, better use of the existing multimodal transport system should relieve pressure on the metro system. One way to do this is to integrate all modes of transport into one centrally-controlled government agency, which provides such things as coordinated ticketing and schedules that allow for easy transfer between modes. This will enhance the use of connections between transport modes as well as provide alternatives for getting around that do not rely exclusively on the metro. For example, in London (where the Underground is also at capacity in some places) commuters are encouraged to walk, cycle or use the bus between certain inner city stations as a quicker alternative.

Improving signaling to allow for more trains per hour would also help add capacity as would the introduction of through-gangways from one car to the next. This provides extra room for standing passengers and creates a greater sense of security. CCTV is provided so that the driver can see into every car, while track-to-train video links enable him or her to observe the entire exterior of the train before pulling out of a station.



Google images

The Panel found significant evidence to support the use of the Small Moscow Railway Ring for passenger transport services, which could be electrified with transfer points connecting key metro lines. The Ring provides connections across the radial metro system and could help to ease passenger volume on the metro. Such a development would also open up development opportunities around the Ring in former industrial areas as described more fully in Theme 3

The existing regional rail lines that come out of central Moscow already serve certain outlying areas where the metro does not go. They can provide relief to the Metro and ease the urgency of building new Metro lines.

There is also the option of transport-by-bus rapid transit and these routes could be added within the right-of-way of ring roads and radial roads as a cheaper alternative to additional metro construction. Moreover, use of the tram and bus system could be directed to serve outer district areas and also to feed into Metro and Regional Rail stations to provide better connectivity, thereby reducing the need for more metro construction. This will ensure the city is directing investment towards the most critical transport needs and not doubling up with the building of new metro lines in places where other less expensive forms of transport are possible.

Street Management

Only 9% of the Moscow area is made up of roads compared to 25% in Western Europe. The insufficient road network contributes to congestion as there are not sufficient alternative ways to access parts of the city without using the Ring and Radial route network. Because the existing road system has limited access points and difficult turning movements at intersections, it is very sensitive to small changes in traffic load which causes traffic jams quickly.

The Panel is not advocating the building of more roads to solve this problem because congestion is not a problem that a city can build its way out of, as road building simply creates induced-demand. However, the Panel does support the enhancement of the road sub-network, as a second layer in some circumstances. For example, a distance of 1km between two places can take up to 16km to travel using the road system. Some of this inefficiency is due to the legacy of Soviet-era residential development where little thought was given to the notion of the private car. This is explored in more detail in the Theme 2 discussion on density. A possible solution would be to retrofit selected street networks in key residential areas, which would take the pressure off arterial ring roads. Another way of reducing the use of the ring roads is to add crossing points over/under railways and over rivers to provide additional access points.

Off-street parking is another area that requires better management in terms of both pricing and location. It also affects the public realm as sidewalks and public squares are now surrounded and in some cases covered over by parked cars. By putting a price on car parking, primarily within the Garden Ring, demand can be better controlled and an additional stream of revenue is created, which can be directed to other parts of the transport system that require investment. Another potential solution would be the addition of 'Park and Ride' lots that could be located at selected regional rail stations and not a terminus of metro lines where capacity is already constrained.

Mobility Management

To reduce the need to travel – especially by car – and to promote model travel choices, behaviour can be modified through mobility management. Some policies the City of Moscow may consider implementing include:

- traffic and parking management using travel information signage and telematics;
- travel planning by businesses; and
- regulatory reform that requires transport impact assessments for new developments.

In addition, the overall system would benefit from the promotion of different modes of travel through enhancements such as bus lanes, car sharing schemes, improved taxi services, bike lanes, bike parking and cycle hire, pedestrian walkways and streetscapes, as well as

using the river for water taxis. Another impact to traffic flow is one that is often overlooked; delivery vehicles and freight trucks impact the street network, particularly when loading and unloading and the city needs to manage delivery services and inner city freight transport by monitoring delivery times, vehicle size, etc.

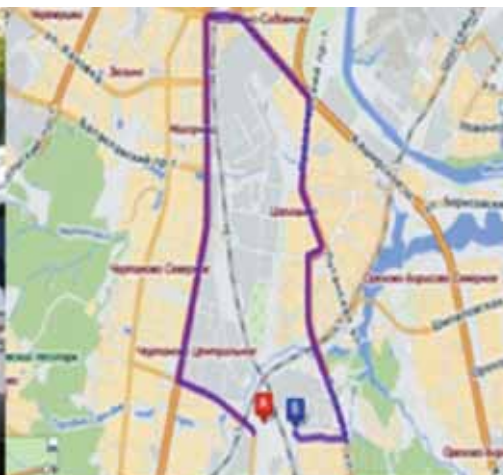
The Panel understands that many of the recommendations that have been suggested are already being considered by city authorities and we support and encourage their implementation.

The Panel concluded that better strategic management of Moscow's mobility system and the linking of transport with land use will reduce commuting times and result in a better quality of life for commuters and greater workforce productivity.

Google images



Uncontrolled On-Street Parking



Low connectivity street network

Theme 5

It Only Works if Government Works

Cities should be about hope and creating a path where individuals can see a future for their aspirations. To do this, city governments need create liveable cities that are clean, safe, efficient, accountable and cost effective.

Strong leadership must be displayed by government who must manage but also delegate responsibility and authority to individuals across departmental lines to deliver clear communications and results. The institutional capacity of government must be demonstrated through the redevelopment of former industrial areas, involving the clean-up, financing, legality clarification, construction, and delivery of a value-added outcome with the right private partner. This process must be supported by a bold and strategic vision that unites the different players, and is not short-sighted or transactional. The vision must be of a scale that redefines the area and one that gains support both within government and from local and international investors. Government must drive this vision and ensure the project is managed through to completion, and is not left with outstanding actions.

Consideration must be given to the mix of public vs private financing. The city should aim to finance the necessary projects with a combination of internal funding and external capital. There are numerous examples of successful public-private partnerships, not just for major infrastructure projects but also for mixed-use developments, exactly the same as the opportunities represented by the former industrial zones identified in this report. This financing mix would share the risk involved in the investment cost of the clean-up and the building of infrastructure and at the same time would share the rewards of the development as they were realised.

There will be hesitation amongst investors if they see any risk to their capital as a result of a lack of consistency or anything short of transparency. If a development is undertaken, which is then plagued by delays and shifting rules, that information will quickly spread to other potential investors and warn them against future involvement.

Addressing the various urban challenges facing Moscow also requires a closer relationship between the City of Moscow and the Moscow Region. These two regions are separated by a lack of connections and appear to have developed separately over the last two decades. There is a need for greater co-ordination given the fact that some 3 to 5 million people who work or study in the City of Moscow, originate in the Moscow Region and must deal with dated railway infrastructure and limited highways on a daily basis.

Good mixed-use developments should be attractive places, built to the highest standards of quality and standing the test of time. These developments should make a statement about the kind of community and city that Moscow aspires to be and require a strong and reliable government. Government should look at maximising value creation from redevelopment by engaging in creative, lasting partnerships while maintaining a steadfast and absolute commitment to the future vision of the city.

Expansion

The Panel, given its breadth of international experience in city and town planning issues, was perplexed by the proposal to expand Moscow's boundaries (as shown in the image below). While there was agreement that agglomeration could be a positive development if the primary purpose is to create a consistent vision and administrative control for the Oblast, as well as its surrounding natural and regional resources. This follows best practice around the globe. To ensure sustained economic and strategic value, a 20-year plan and strategy for managing these resources and allowing for controlled growth is crucial, and this must be developed with input from relevant stakeholders and tested at all levels of the administration.

Based on analysis and consultation, the Panel found that the proposal to move significant amounts of new employment and government into this area will result in several unintended consequences. While there may come a time when new construction in this area is necessary, the Panel did not believe that time is now, and may not be for several generations. There is much work to do inside of MKAD, and plenty of opportunities are still present to develop the city. Redirecting talent and capital to the development of greenfield areas is an exercise many other cities have previously attempted and, after decades of effort, they are universally seen as a failure in their ability to create vital and economically dynamic communities. These new areas fail to create new economic value or increase the competitiveness of the cities they replaced, and are often viewed as the least desirable places to live.

Despite this conclusion, the Panel acknowledges that the expansion is an established fact. The Russian Parliament has voted for the annexation of 11 municipalities in the south-west corner of the Moscow region and therefore the Panel aims to provide advice taking this into account and draw on their international experience to suggest possible strategies for the usage of the new Moscow territories. There is a case for government departments to move to this area and lead its development and growth. There is also scope for the establishment of university campuses and innovation hubs, both of which have the potential to become world-leading thereby attracting human and capital investment. Another option may be establishing the area as a centre of industry and logistics, designed to ease congestion in Moscow's city centre, which must cope with both commuter and industrial traffic. Or alternatively, the expansion area may be maintained as a green belt and develop into an internationally renowned green zone that attracts international visitors as well as improving the quality of life for Moscow's residents.



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Putting it all together – MOSCOW 2025

Moscow faces an incredible opportunity in its long evolution. The entire Panel team appreciates the opportunity to share the lessons and experiences learnt in other corners of the globe and provide options and recommendations to ensure Moscow can benefit from the lessons learned - and mistakes made - by cities that have faced similar challenges. By incorporating these recommendations and implementing them thoughtfully and rigorously, the Panel is confident that within ten years, Moscow can continue its progress forwards becoming a leading global city.

Based on stakeholder consultation, the information gained from site visits and the quantitative and qualitative analysis undertaken by the expert Panel, the following recommendations are offered that should be incorporated into the future strategic vision for the City of Moscow.

- Welcome the world and create an authentic and accessible city brand.
- Use government as a catalyst for regeneration and improve the functionality of government with the simple act of creating new, more modern facilities that encourage collaboration and service, and symbolically break down the siloed bureaucracy. Investment in these facilities should be directed to strategically identified former industrial sites to act as a catalyst to drive new investment and foster private development on the balance of the site.
- Change focus from industrial zones to mixed-use and think beyond simply replacing industrial uses, instead creating new models of mixed use, fine grained (i.e. not large block) developments that have a variety of living and working options. This can be achieved by mandating a variety of housing price points so as to allow a diverse population to live near where they work and while at the same time creating significant open space, which should become a feature within every development – as much as 25% of the land area could be set aside as public space.
- Connect the city, the people and the sites linking transport and land use and look to fulfill the potential of the Small Railway Ring as a significant connector of the radial metro system.
- Improve mobility for people through transport networks and management that aggressively manage existing assets in addition to developing metro and other transport modes.. Better street and parking management.
- Elevate higher education to world class status and support an innovation economy with a highly educated and aspirational population. This population must be both cultivated locally and attracted from abroad, and the ability to retain and attract this talent is only possible with world leading education facilities.
- Change the culture of government and move from silos and approvals to collaborations, partnerships and facilitation. Government should be at the forefront of developing ideas and implementing plans to modernise practices and drive sustainable economic growth.

The Panel Team

Panellists



David Adam

Managing Director, Global Cities

David Adam is Founding Director of Global Cities, a strategic consultancy specialising in advising cities, commercial and cultural organisations on positioning themselves in global markets.

David held roles such as Head of Emerging Markets at the London Development Agency and led on positioning London in the key markets of China, India, Russia and South America. He spearheaded Mayor Livingstone's branding and market activation initiatives in India in 2007 and - with Mayor Johnson's administration - was responsible for London House: London's brand platform during the Beijing 2008 Olympic Games.

Global Cities has advised London, Beijing and Shanghai on brand development and implementation. They are currently working with the city of Aarhus, Denmark's second largest city on their brand development and international promotion strategy. Global Cities is also currently developing a research project for London - a Global Cities Cultural Index - and also advising on London's brand implementation during 2012.

Global Cities is also currently developing a research partnership to secure EU funding on the topic of how cities can capture and secure investment from the global market place.

David graduated with 1st Class Honours in Politics and International Relations. He has worked in policy formulation at the Institute for Public Policy Research one of the UK's leading think tanks, and as an independent consultant in the economic development industry.



Christopher Choa

Vice President/Principal AECOM

Christopher is a thought leader in major masterplanning and economic development projects. He focuses on creating sustainable value through high-performance urbanism. He also

specializes in aerotropolis planning - urban development and trade zones around airports. A prize-winning architect and native New Yorker, he is based in London and leads the firm's urban development studio.

Ongoing and completed projects include Hyderabad Aerotropolis, Cairo Airport City, BHCITY/Birmingham, Barajas Airport City/Madrid, Nova Luz Regeneration/Sao Paolo, Saadiyat Island Masterplan/Abu Dhabi, Zeitinburnu Seaport/Istanbul, and the masterplan of Shanghai's North Bund. Christopher has also served as co-chair of New York New Visions, the design coalition for the rebuilding of Lower Manhattan.

A graduate of both Harvard and Yale, he has been a visiting critic at the Harvard School of Design, Columbia University, and UCL/Bartlett. His work, citations, and professional columns have been published in a wide range of journals, including World Architecture, Architectural Review, The Shanghai Daily, The Wall Street Journal, and The New York Times. He speaks regularly about urban design and sustainable development.



Erwin Daalhuisen

Senior Consultant Area Development, Fakton

Erwin Daalhuisen is a graduate economist and Master of Urban Management from Erasmus University Rotterdam. He has extensive experience

working as a policy advisor at the Development Company of the Municipality of Amsterdam, advising on land price policy, land lease policy and application, and area developments such as Zuidas, IJburg and the IJ-waterfront.

In 2006, he joined Fakton as a real estate consultant. His core expertise is transforming complex area developments into clear multiple business cases, helping to reach sustainable negotiation results between all stakeholders.

As a senior consultant, Daalhuisen is responsible for a wide range of projects in varying fields, both in The Netherlands and abroad. He is also a lecturer at the Amsterdam School of Real Estate in the field of Risk Analysis and Risk Management in Complex Area Developments.



Dr Michael Denkel

Urban Planner, Al-bert Speer & Partner GmbH

Born in 1959, Dr. Michael Denkel studied Spatial and Environmental Planning at the University of Kaiserslautern from 1980 to 1987.

Until 1990 Denkel worked at the University as a research assistant for the chair in Urban Planning, Professor Albert Speer. With his topic, "the function of leisure in urban planning concepts" Denkel earned his doctorate.

Since 1990 he has been working at AS&P - Albert Speer & Partner GmbH as a member of the executive board, responsible for a multitude of urban planning projects. He has been a partner of the internationally active architecture and planning office in Frankfurt am Main since 1996. The projects range from the Master Plan for the EXPO 2000 Hanover, framework planning for the Frankfurt Europaviertel and the Urban Master Plan for downtown Cologne in Germany to urban development and land use planning in China, the Arabic world and Nigeria.

Dr. Denkel is a member of the German Academy for Urban and Regional Spatial Planning (DASL), the Vereinigung für Stadt-, Regional- und Landesplanung (SRL), the Urban Land Institute (ULI) and is listed as an urban architect and planner in the Chamber of Architects and Urban Planners in Hessen (ASKH).



Rosemary Feenan

International Director Global Research,
Jones Lang LaSalle

With 30 years experience in the property industry Feenan has worked in various roles ranging from town planning, property market analysis, business strategy and consulting. A frequent international conference speaker and author, she has built a reputation for innovation and future oriented strategic thinking in the real estate industry and has worked alongside some of the world's leading occupiers, investors and developers on the "future of property" projects.

Feenan is now an International Director in Jones Lang LaSalle and runs the firm's Global Research Programmes, which include themes on World Winning Cities, Global Real Estate Transparency and Sustainability. She is also responsible for the firm's "Property Foresight" work and for research based product innovation and operates across all the firm's businesses and geographies.



Jim Heid

Founder of UrbanGreen

Jim Heid is a sustainable development advisor, land planner and real estate developer, whose thirty years of experience focus on creating developments that provide a positive contribution to their environment, region, and residents. In 2000, he founded UrbanGreen to advise government agencies, established real estate companies and legacy families seeking a better approach to developing land.

Over the past decade he has pioneered many of the Urban Land Institute's contributions to sustainable land development, climate change and responsible property investing. For ULI he serves on the Climate, Land Use, and Energy (CLUE) Committee and is a founding member of the Responsible Property Investment Council. In 2010 he was invited to join the U.K.'s BioRegional's Expert Panel to guide the expansion and deployment of their One Planet Living program for community design and development.

Jim is known to effectively resolve the complex layers of community design and real estate development. He is motivated by the need to deliver high quality developments in an increasingly complex world of entitlements and financing – without compromising environmental, economic or placemaking objectives. To achieve this objective, he earned a Masters Degree in Real Estate Development from MIT, as a way to more fully

integrate his landscape architectural background with real world development strategies. This experience gives him the ability to work from "30,000 feet to 3 feet" –while delivering inspired, market-responsive advice.



Paul Jeffrey

Business Development Director, Ecorys

Paul Jeffrey has been a director of Ecorys since 1994 and has worked with the organisation since 1983. In this period, Mr Jeffrey has held a number of senior positions but has specialised in the urban regeneration and housing policy areas. He directed a major evaluation of the EU Urban Community Initiative and earlier this year worked on a project to develop a sustainable urban development framework for Portugal. In 2010 he presented at the INTA 34 conference on international urban development, held in San Sebastian.



Tom Murphy

Senior Resident Fellow
ULI/Klingbeil Family Chair for Urban
Development

Tom Murphy is a senior resident fellow, ULI/Klingbeil Family Chair for urban development. Murphy, former mayor of Pittsburgh, joins three other ULI senior resident fellows who specialize in housing, real estate finance and environmental issues.

His extensive experience in urban revitalization—what drives investment, what ensures long-lasting commitment—is a key addition to the senior resident fellows' areas of expertise.

Since January 2006, Murphy had served as ULI's Gulf Coast liaison, helping to coordinate with the leadership of New Orleans and the public to advance the implementation of rebuilding recommendations made by ULI's advisory services Panel last fall. In addition, he worked with the Louisiana state leadership, as well as with leadership in hurricane-impacted areas in Mississippi, Alabama and Florida to identify areas appropriate for ULI involvement.

Prior to his service as the ULI Gulf Coast liaison, Murphy served three terms as the mayor of Pittsburgh, from January 1994 through December 2005. During that time, he initiated a public-private partnership strategy that leveraged more than \$4.5 billion in economic development in Pittsburgh. Murphy led efforts to secure and oversee \$1 billion in funding for the development of two professional sports facilities, and a new convention center that is the largest certified green building in the United States. He developed strategic partnerships to transform more than 1,000 acres of blighted, abandoned industrial properties into new commercial, residential, retail and public uses; and he oversaw the development of more than 25 miles of new riverfront trails and urban green space.

From 1979 through 1993, Murphy served eight terms in the Pennsylvania State General Assembly House of Representatives. He focused legislative activities on changing Western Pennsylvania's economy from industrial to entrepreneurial, and authored legislation requiring the Commonwealth of Pennsylvania pension fund to invest in venture capital. In addition, he authored legislation created the Ben Franklin Technology Partnership, which is dedicated to advancing Pennsylvania's focus on technology in the economy; and he authored legislation to encourage industrial land reuse and to transform abandoned rail right-of-ways into trails and green space.

Murphy served in the Peace Corps in Paraguay from 1970 through 1972. He is a 1993 graduate of the New Mayors Program offered by Harvard University's Kennedy School of Government. He holds a Masters of Science Degree in Urban Studies from Hunter College, and a Bachelor of Science Degree in Biology and Chemistry from John Carroll University.

He is an honorary member of the American Society of Landscape Architects; a board member of the Pennsylvania League of Cities and Municipalities; and a board member of the National Rails to Trails Conservancy. He received the 2002 Outstanding Achievement of City Livability Award from the U.S. Conference of Mayors and was selected as the 2001 Pittsburgh Man of the Year Award by Vectors Pittsburgh.



Robert Ravelli

Associate Director, Contemporary Transport

Mr Ravelli has been a planner for more than twenty years in the USA, UK and Australia. He earned a Master's degree in City Planning from the University

of Pennsylvania.

He advises the public and private sectors through his international best practice experience in the fields of sustainable transport strategies, linking transport and land use, travel demand management, the impact of transport on public health and creating outreach campaigns to affect transport mode behaviour change. He has been a frequent panellist and speaker on these topics. He is the author of the "Car-Free" transit guide series for New York and Philadelphia.

He was an Assistant Deputy Mayor for the City of Philadelphia Mayor's Office of Transportation for 8 years. He currently works in London working for clients such as Transport for London, the European Union and the Olympic Delivery Authority as well as clients in the US. He has participated in past ULI Advisory Panels in the USA dealing with developing around transport and transport corridor analysis.

Panel staff



Alexandra Notay

Vice President, Strategic Programmes, ULI Europe

Alexandra is a strategic thinker, problem-solver and skilled people manager with a global network of board-level relationships and strong record of successful project delivery. Alex has diverse experience of complex programme management and corporate communications and is an experienced conference speaker and workshop facilitator.

Alex is the Vice President for Strategic Programmes at ULI - the Urban Land Institute, a global not-for-profit education and research institute that focuses on issues of land use, real estate and urban development. ULI has 35,000 members in 92 countries worldwide. Alex oversees the research, advisory services and thought leadership for ULI in Europe.

Alex also sits on the World Economic Forum's Building Retrofit Steering Board, the UK Green Property Alliance and the UN ECE Committee on Housing and Land Management.

Alex holds a B.A. (Hons) in International Relations from the University of Sussex and is a registered Practitioner of PRINCE2 Project Management and Fellow of the Royal Society of Arts. Alex is also on the advisory committee for an independent charity promoting educational opportunities for disadvantaged young women in the UK.



Joel Bevin

Research Associate, Strategic Programmes, ULI Europe

Joel has a strategy consulting background across various industries. He is an analytical and creative thinker, able to merge ideas and disciplines to solve the multi-faceted urban challenges facing organisations and cities.

Joel is currently the Research Associate for Strategic Programmes at ULI. He manages the European research agenda for ULI and contributes to the advisory work of the Institute, as well as coordinating the Young Leaders Programme.

Joel worked as a policy advisor for the Australian government in economic development before shifting into KPMG's real estate and demographic advisory practice in Melbourne. He has also held roles as an economist at FocusEconomics (Barcelona) and environmental consultant at Mobium (Melbourne). Joel led an international study investigating labour migration trends while at KPMG and studied migrant integration patterns in global cities for his Master's thesis. He has presented at conferences in Tokyo (The Demographic Impact of Changing Lifecycles) and at the Australian Institute of International Affairs (Global Skills Convergence) and is also a trustee of the Refugee and Migrant Forum of East London.

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ULI – the Urban Land Institute – is a non-profit research and education organisation supported by its members. Founded in Chicago in 1936, the institute now has over 30,000 members in 95 countries worldwide, representing the entire spectrum of land use and real estate development disciplines and working in private enterprise and public service. In Europe, we have over 2,000 members supported by a regional office in London and a small team in Frankfurt.

ULI brings together leaders with a common commitment to improving professional standards, seeking the best use of land and following excellent practices.

To download a calendar of ULI events and activities for 2012, please visit www.uli-europe.org

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