



UCL REPORT
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The UCL London 2062 Commission

An interdisciplinary perspective of London today
and a London of tomorrow

Long-term forces and factors shaping London

London is the capital city of the United Kingdom and the location of central government, global business interests and the financial markets, a site for significant arts and cultural facilities, a place of tourism and a renowned centre for education. London is home to a diverse population, bringing tension as well as vibrancy.

This pamphlet is the distillation of a series of workshops held at UCL in 2010, intended to provoke debate and inform decision-making. The UCL London 2062 Commission workshops addressed the future of London as a sustainable city, a healthy city, a thriving city and a world city. Contributors came from disciplines across UCL, including engineering, urban planning, epidemiology, crime science, architecture, heritage management, economics, transport studies, geography and demography. They were asked to consider the key features of London today, the driving forces that led to this point, what might happen in the future, what decisions and actions could be taken, and what London might look like in 2062.

The discussions across different disciplinary perspectives led to three overarching themes: resilience, wellbeing and sustainability.

SUMMARY

The UCL London 2062 Commission aims to gather evidence about the forces and factors that shape London and to identify points of debate and decision regarding what the city might be five decades from now.

This process involves synthesising the diverse expertise within the academic community at UCL and elsewhere, together with London's citizens, government, professions, artists, media and other public institutions.

The condition of London

A range of interventions by government have demonstrated a commitment to promote and strengthen London over time as the UK's premier city in the face of global competition. This is evidenced by decisions to support massive regeneration schemes in and around the capital such as the Thames Gateway, to invest in infrastructure and transportation developments like High Speed 1 (the Channel Tunnel Rail Link) and Crossrail, to lead on the Olympic Games 2012 bid and to support the City financial hub of London as a focal point for global business.

This is London as a 'world city', a success story that physically is bursting out of the urban core, forming new patterns of growth and pressure around the capital, and causing externalities that Londoners experience through high prices, housing and transport costs, and social polarisation. House prices remain ten times the average London salary, making it difficult to house and accommodate key workers essential to deliver London's services.

London's population doubles during the working day as millions of people commute into the city from an increasingly extensive catchment area. The infrastructure necessary to support this growth is archaic, and delay and frustration have become part of the commuting experience for many. This, in turn, leads many Londoners to seek an improved quality of life by migrating from the city.

London has been a principal gateway for migration into the UK, which is a point of political controversy. London plays host to people of 270 nationalities, speaking 300 different languages. The social and ethnic mix of London today is in marked contrast to the London of the past, with politicians, architects and planners all attempting to coordinate change and accommodate everything we expect from the city.

Christopher Wren's grand plan to rebuild London after the Great Fire of 1666 came to nought, as did some aspects of Patrick Abercrombie's Greater London Plan of 1944. London has consistently turned its back on the grand redesigns that have been a feature of other European cities such as Paris, Berlin and Barcelona. Instead, London is talked of as a city comprising a series of separate and readily identifiable communities that have survived war, migration, epidemics and economic recession. Its architecture is a palimpsest of styles, trends and taste.

Concern with how to accommodate change and meet global, national and local desires in the interests of London is not a new phenomenon. In 1928 the architect and rural campaigner Clough Williams-Ellis wrote *England and the Octopus*, with London threatening to sprawl tentacle-like along arterial roads into the surrounding countryside. It was concerned with questioning the ability of any government to exercise authority over a significant metropolitan territory, the meaning and extent of London itself, and of those various populations and communities that make up the city. These are exactly the same issues that London is facing today: numerous and overlapping contentions for future direction between competing vested interests.

These tensions are associated with divisions between advocates of continual growth for wider regional and national economic benefit, and proponents of restraint for environmental and social protection. They encompass not simply growth vs protection interests, but also national and local priorities, and inner London and outer London contentions. These arguments are persistent, often hostile, and are played out within a turbulent theatre of governance itself undergoing frequent change. Generating a vision, strategy and plan to coordinate change in London is one that politicians and policymakers find incredibly difficult to undertake.

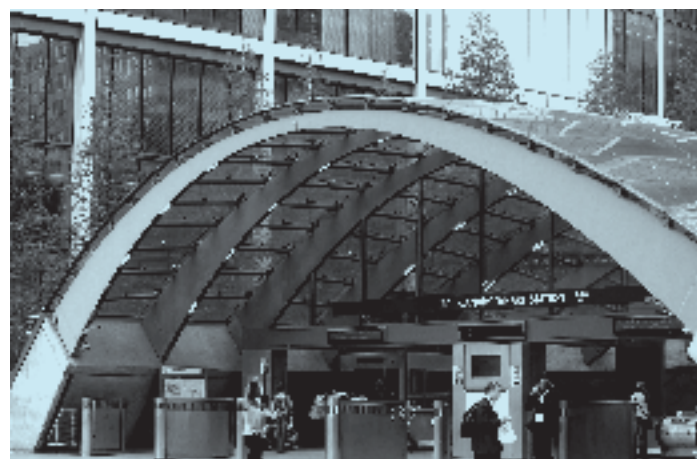


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The discussions across different disciplinary perspectives led to three overarching themes: resilience, wellbeing and sustainability. This pamphlet is a synthesis of knowledge about London and ideas about what might shape its future. It aims to inform and provoke debate and is intended as a starting point for wider engagement with London's communities and decision-makers around the key factors that will shape the city of 2062.



London's resilience

Resilience is the ability to recover from, adapt to and live with changes that are beyond our control. London is a remarkably resilient city. Throughout its history London has recovered from shocking events like the plague, the Great Fire, the Great Stink, the Blitz, deadly smog and terrorist bombings. Shocks to a city can come in many forms – such as economic, biological, physical, environmental and violent. A shock can be a specific event of a relatively short duration, for instance a terrorist attack or the Great Fire, or can build up over decades, such as the Great Stink or the dangerous smog of the 1950s. The capacity of a city to bounce back from major disruption depends on its emergency preparedness and response arrangements, government, citizens, economy and the state of its buildings and infrastructure. Resilience is enhanced where cities have diverse resources and systems to draw upon, and robust networks of people and structures that can recover and adapt to changing conditions.

In the next five decades London will experience shocks and disruptions of varying magnitudes, some that we can anticipate and others that will be surprising. We can foresee dramatic changes in energy and commodity prices, more extreme weather events, economic turmoil and terrorist threats. Detailed forecasting and preparedness for specific conditions is important to prevent potential disruptions and mitigate their impacts, but it is also important to prepare for conditions of inherent uncertainty. This is of particular concern in managing London's essential systems: the resilience of London's infrastructure and economy depends on its ability to adapt to changing demands and requirements from its citizens and industries, while maintaining capacity to deal with shocking events and uncertain conditions that are beyond reasonable measures of control.

The early work of the UCL London 2062 Commission provides us with some insights into the resilience of the city's energy, flood-defence, water, food, waste-management and financial systems. These systems will all need to adapt to changes in underlying demands and constraints, as well as prepare for the unexpected.

Energy systems

London's demand for energy resources comes from three primary activities: heating buildings, transport and electricity. London has always imported most of its energy as coal, gas, oil and electricity. Renewing London's energy infrastructure will be vital for maintaining our position as a 'world city' over the next 50 years as the centres of global economic activity shift eastwards. Climate change presents a complex set of challenges to London's energy systems. London must adapt to the impacts of climate change and contribute to carbon-emission reductions. London must be prepared for possible disruptions in global oil and gas markets which may result from supply:demand imbalances or geopolitical instability.

A significant reduction in carbon emissions from London's energy system would require significant changes in its building fabric, the technologies used for generating, distributing, consuming and measuring energy, and transport modes. Transforming London's energy generation and consumption patterns would be expensive, but could reduce the cost of importing fossil fuels and relieve vulnerability to volatile oil and gas markets. Designs for new buildings and the retrofitting of existing buildings could incorporate energy-efficiency measures without significant change to their appearance, and more radical changes might enable

buildings to act as generators as well as consumers of electricity and heat. The allocation of space and resources to private transport may be constrained by its relative energy inefficiency compared to public transport and by demands for space in an increasingly crowded city. In an energy-efficient 2062 London's streets could be dominated by small battery cars, hydrogen or electric-powered public transport, cyclists and pedestrians.

Flood-defence systems

Managing flooding will be increasingly important in London over the next 50 years. Flood-management strategies will include flood defences to protect the city and critical infrastructure from flood waters, and will also involve designing buildings, infrastructure and public space that can accommodate floods. Upgrading or replacing the Thames Barrier will be of central importance in mitigating the scale of damage from floods. Land-use planning and building design in flood-prone areas will increasingly incorporate measures that enable buildings and activities to recover quickly from inundation. By 2062 the Thames Tideway Scheme is due to be complete, protecting the Thames from the impacts of sewer overflows resulting from more intense rainfall runoff. Increasing intensity of rainfall and the risk of localised surface water flooding may result in a transformation of London's drainage infrastructure as buildings, streets and public spaces are designed to safely retain surface water and increase local infiltration, including techniques such as green roofs, rainwater harvesting, permeable paving and restrictions on paving over green spaces.

Water systems

London is in one of the world's most water-stressed regions. By 2062 it is likely that London will experience warmer, drier summers and cooler, wetter winters. The change in rainfall distribution and the possibility of a growing population will further increase pressure on the water resources in the southeast of England. With no more, and potentially less, water to be abstracted from rivers and aquifers, London's water systems and how Londoners use water could change significantly in the next 50 years. If sustainability is to be achieved Londoners will have to use less water. Supported by changes in building codes, the efficiency of water-using appliances and fittings will improve, but this will need to be accompanied by changes in how people use water in their homes if significant reductions in consumption are to be achieved. Warmer, drier summers could entice people to use more water, particular in watering their gardens and more frequent showering, creating a vicious spiral of increasing demand at a time of reduced water availability. New sources of water will need to be developed. A new reservoir in the Thames Valley may be built to store water to balance supply over dry and wet seasons. Desalination and recycling wastewater may provide new water resources for the central drinking water supply; however, these both require much more energy for treatment than conventional fresh-water resources. Buildings and neighbourhoods could be designed and retrofitted with smaller-scale water systems to provide water to flush toilets, water gardens and wash clothes, thus relieving pressure on the central supply. These systems could be supplied by rainwater that is collected from roofs or by recycling water from showers and washing machines. This could lead to the development of new businesses specialising in the supply of water for non-drinking purposes, while the utility companies continue to be responsible for the drinking-water supply and wastewater treatment which are vital to ensure good public health.

Food systems

London's status as a global city is no more obvious than in its food. From exclusive Michelin-starred restaurants where the global elite dine, to cafes and market stalls selling snacks from London's diverse ethnic communities, and supermarkets stocked with vegetables from farms in Africa and South America, London's food is truly global. The overwhelming majority of London's food is imported, from British and international farms. Access to healthy food is uneven across the city. Some parts of London have been characterised as 'food deserts' with a predominance of fast-food outlets over fresh produce. Allotments and the 'Dig for Victory' campaign during the Second World War are part of a long history of urban food production that has recently been undergoing a revival. While the global sourcing of food for London provides tremendous variety, freed from seasonality, such a food system may be vulnerable in the future to volatile oil prices and the impacts of climate change in other parts of the world. Efforts to significantly reduce London's carbon footprint could also increase pressure to reduce food imports from far away farms and local food production could improve the distribution of fresh produce. The current trend for home-grown food in London could be the basis for improved food resilience as part of a broader expansion of urban agriculture by 2062. Dramatic expansion of urban agriculture would involve considerable redesign of buildings and public spaces. Integrating agriculture within the city fabric could mean more dense residential development with roofs, gardens, balconies, parks and open land providing space for food production. If it were to be sustainable, such an urban agricultural system would need to be integrated with local water resources and recycling of nutrients, for instance through composting of food and green waste.

Waste-management systems

It is estimated that London produces around 17 million tonnes of waste per year, and some 4 million tonnes emanate from household waste. Less than half of the commercial and industrial waste is recycled and the remainder is disposed of in landfill sites where it breaks down to produce CO₂. Londoners will have to manage future waste more effectively by investing in new recycling and reprocessing facilities and by generating new energy from waste materials, while reducing the overall transport trips allocated to moving waste. It has been estimated that London's waste management costs will increase over the period to 2025 by 50% per annum to more than £5 billion. And while increasing recycling and composting can offer real alternatives to deal with London's waste, there will be limits on what is achievable politically and environmentally. An integrated approach to waste management will be required with the possible use of new technological advancements to assist in dealing with the problem.

Financial systems

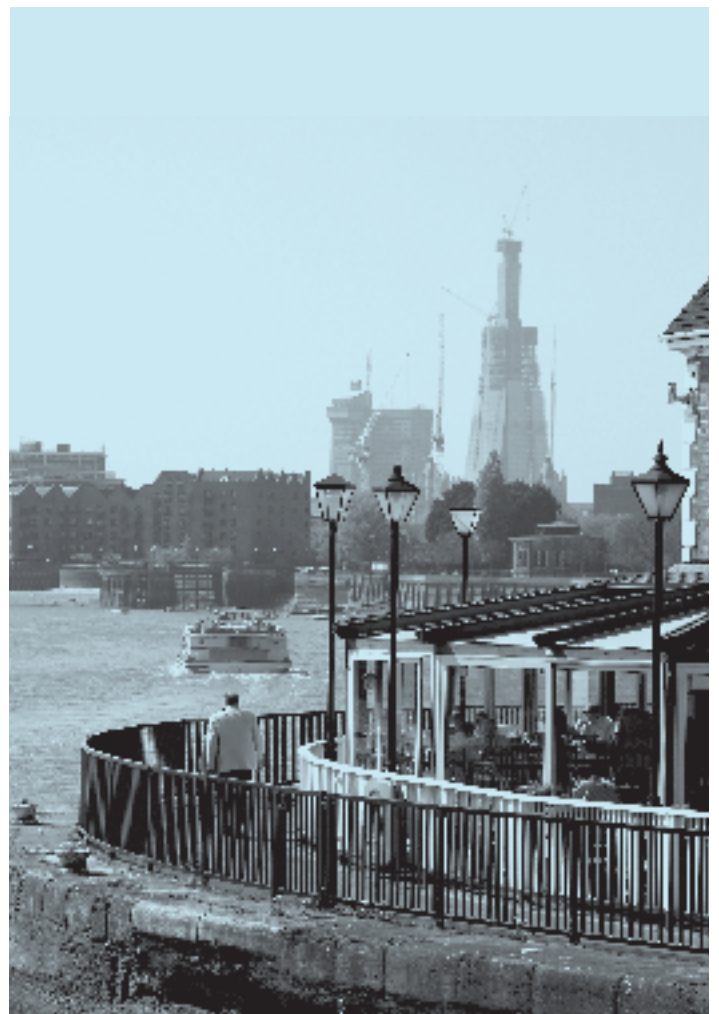
London's position as a centre of global trade and finance is at once a source of resilience and vulnerability. It provides flows of external resources to help recover from internal shocks such as the Great Fire and the Great Stink but it also leaves the city vulnerable to disruptions in the global economy, as recently experienced during the credit crunch and its aftermath. London's economy has shown itself to be diverse enough to absorb major shocks so far, but the future of the financial sector is highly significant to the future of London. The deregulation of the London Stock Exchange in 1986 was the key event which enabled the dramatic expansion of the finance sector in London at the end of the 20th century. This resulted in dramatic changes in London's economy, society and

built environment – most obviously through the transformation of Canary Wharf. Employment in the financial sector peaked in 2001 but in 2010 it still employs 7.5% of London's workforce. The future of London's finance sector depends on the recovery of the global economy and the development of the Asian economies, which may increasingly attract financial as well as manufacturing industries. Stricter immigration rules could limit the innovative capacity of London's financial services in relatively new markets such as Islamic finance, emissions trading, green technology and energy spot markets.

Past investments in infrastructure and human capital provide a strong foundation for maintaining a position of global strength, though by no means secure it. Replenishing the workforce through local skills training, attracting foreign talent to an open and diverse society, and investing in infrastructure renewal could help secure this position over the next 50 years. The sector may not return to the dominant position it experienced at the turn of the century, but could benefit from a return to what Nobel Laureate Paul Krugman has called "boring old finance", in contrast to excessive risk-taking, high remuneration and attention to short-term and shareholder value. London could secure a competitive edge in "boring old finance", which could result in a more equitable distribution of benefits to London's residents. Focusing on financing the 'green economy' could contribute to a transformation of London's infrastructure and built environment as the city becomes a showcase for zero-emission buildings and technologies, just as the glass and steel towers of celebrity architects became symbols of the financial boldness of the end of the 20th century.







London's wellbeing

The UCL Grand Challenge of Human Wellbeing draws much of its inspiration from philosopher and reformer Jeremy Bentham (1748–1832), who was an active supporter of the foundation of our university. Bentham is well known for promoting the achievement of the “greatest happiness for the greatest number” as the proper goal of politics and society. Happiness in this context is understood as the balance of pleasure over pain. Today, Bentham’s idea of ‘happiness’ has been expanded to the broader notion of ‘wellbeing’, encompassing security, physical and mental health, participation in social life, culture, the quality of the built and natural environments, and a multitude of other factors which contribute pleasure and pain in our individual and collective lives. Maximising ‘wellbeing’ can be considered an ideal for society, politics and the city.

The UCL London 2062 Commission has so far considered the future wellbeing of the inhabitants of the city in the key areas of security, health, air quality, culture and heritage. Although wellbeing is an inherently subjective phenomenon it cannot be understood only in terms of individual preferences and experiences. The wellbeing of Londoners will be shaped by their social and economic conditions and the physical environment of the city.

Security

The future security of London can be thought of in terms of freedom from crime and disorder, the lack of a terrorist threat and a general sense of safety. After a general rising trend through much of the 20th century, crime rates have been falling since the early 1990s in most advanced Western democracies, trends that have been reflected in London. While social conditions, the economy and policing have a role to play in determining crime rates, the recent decline can be attributed to improved security of people, places and systems. For instance, a 60% reduction in motor-vehicle theft is a consequence of improved vehicle security. Removing opportunities for crime to take place reduces crime, but new opportunities for crime, such as online commerce and mobile phones, continue to emerge. The particular rates and patterns of crime in London are influenced by: the attractiveness of the city to young people, who commit most crime; the relative transience of the population, leaving people outside normal networks of social constraint; and the wide range of activities that the local police force must deal with, such as protecting royalty, managing major events and investigating organised crime. As a global centre and capital city, London is likely to remain a focus of terrorist attacks.

Approaches to managing crime could have major consequences for London in 2062. Maintaining an effective police force is essential in reducing crime. However, designing goods and services, buildings, public spaces, management systems and legislation which incorporate crime-prevention strategies is likely to be increasingly important. If London effectively fails to address crime prevention and policing then London 2062 could fragment along wealth lines – private police forces and gated communities could become prevalent, and security and policing more oppressive (or, conversely, less present). Possible increases in terrorist threats could provoke policy responses that lead to an erosion of civil and human rights. Alternatively, a successful approach to crime and security would involve analysis of data and evidence to better anticipate changes and implement preventative solutions. Continuing to support education, community development, job creation and parenting, along with new approaches to drug and alcohol abuse, could also reduce social conditions which contribute to crime. Dealing with terrorist threats will continue to consider the balance between risks and proportionate responses, to reduce the risks of attack where possible while maintaining the benefits of living in a free and open society.

Health

The health status of Londoners could change significantly by 2062. The ageing population will bring particular challenges to health systems and services, as well as the design and operation of housing, public spaces and services. Climate change may have both positive and negative impacts on health in London, reducing the severity of cold winters but increasing the intensity of heat waves and other extreme weather events. Changes in transport policy and urban planning to reduce carbon emissions could lead to positive health impacts as people are encouraged to walk and cycle more. Health outcomes in London and other cities are strongly determined by social status, and the levels of social and economic inequality in city will continue to have a strong impact on health over the next 50 years.

Health-risk factors are socioeconomic as well as biological. Life expectancy in London and the UK has increased overall due to improved living conditions, and behaviour change such as lower rates of smoking, but the rates of improvement are much slower in poorer communities. Poorer people are sicker and die younger than wealthier people, despite a universal health service and low levels of absolute poverty. Raising the health outcomes for people from lower socio-economic groups may involve targeting health programmes, improving the conditions of daily life and reducing inequalities. Improving access to education and good-quality housing are could lead to improved health outcomes as well as improving the skills of the workforce required for future economic stability, and reducing domestic energy consumption.

Air quality

London is currently one of the most polluted places in Europe. Air pollution affects health significantly and poor quality air reduces life expectancy by more than eight months on average and by more than two years in the most polluted areas. The Mayor’s draft air quality strategy of 2010 suggested that more than 4,300 deaths are caused by poor air quality in London every year, costing £2 billion per annum. Taking action in the short term is a political priority regarding polluting traffic, investing in cycling and experimenting with road surfaces, but may mean addressing more strategic issues such as reducing flights from London airports and encouraging more vehicular river crossings.

Culture

The cultural industries have made a major contribution to London’s economy and society throughout its history. Cultural products, knowledge and events attract visitors and migrants to London and are exported across the world. London’s cultural sector has changed in recent decades, too, and can be characterised as being hyper-diverse, more democratic, more productive and driving consumption and consumerist behaviour. London’s cultural sector could change significantly in the next 50 years. The global significance of London as a producer of cultural trends, events and artefacts could diminish as the global economy and demographics continue to shift towards Asia. London’s cultural sector could contribute to a shift away from consumerism, particularly through strengthening engagement with the sustainability, climate change and environment agendas. It could be part of stronger public cultures providing opportunities for Londoners to be more actively engaged with the issues and ideas that shape their city. The cultural sector may continue to be hyper-diverse, drawing on the creativity of people from all over the world and different social backgrounds who continue to be attracted to London as a global centre.

London's sustainability

Heritage

London's cultural heritage is central to the identity of the city and its attractiveness to immigrants, tourists and scholars. London's cultural assets, including its museums and heritage buildings, are highly centralised. Many of these sites are in areas that will be of increased risk of flooding over the next 50 years. Flood protection will be very important for particular buildings and sites, but alternative strategies for managing heritage assets could spread their benefits more widely across the city. Creating cultural hubs outside central London and moving heritage assets to these more distributed sites could reduce the risks of damage or destruction while at the same time contributing to the regeneration of suburban London.



The need for coherent sustainability principles within and across London, and between London and the rest of the UK, is arguably more important than ever. London has become increasingly a world city region, possessing inter- and intra-dependencies and a diverse composition that makes coherent government and intervention problematic.

Population

London's population in 2010 was 7.7 million and all projections predict its increase over the next decades to around 9 to 10 million residents by 2062. London's population has only been increasing over the past two decades after a long decline of five decades since the Second World War. International migration has been the main driver of recent growth, although today the largest factor is natural change, the difference between births and deaths, because of its very young population structure. London's total population is actually the net sum of a set of complex flows bringing in vast amounts of young people from the rest of the UK and the world, who typically have children in London, many of whom emigrate outside London either as young families in their late 30s or at retirement. Can this fragile balance of demographic events be sustained in the future? Supporting the underlying socioeconomic factors behind such events will be key to sustain a liveable London in the 21st century, focusing on tackling issues with an aging London and avoiding previous instances of population and economic demise of a 'world city'. Greater London's population has fluctuated year by year due to changing migration flows. Such short term changes make London's planning difficult due to the uncertainty related to the future population number, and the level of services required. The structure of London's population will come under scrutiny, by trends to gender composition, age, fertility and life expectancy, migration flows, ethnicity and survival rates.

Life expectancy is higher than in the rest of the UK and Londoners tend to be younger. But the London of the future will still have an older population. The health needs of this population will possess a distinct spatial variation. Along the Jubilee Line, for example, between Westminster and Canning Town stations, life expectancy drops from 84.2 to 80.6 for female and from 77.1 to 71.6 for males; per stop, that is almost half a year for women and almost one year for men. Similarly, the fertility rate reaches 2.87 children in Newham, but falls to 1.18 in Westminster, and varies from one ethnic group to another. At the present time London is more diverse than the rest of the UK: 40.2% of the population is 'non-white British', and the proportions of each ethnic minority are likely to increase further over time. This has an impact on social and cultural attributes in other sectors: 40% of London pupils speak a first language that is not English, with high concentrations of particular languages clustered in different parts of the city.

The diversity and degree of change within London's population makes long-term forecasting necessary for future public policies and but makes these policies' goals difficult to achieve. A much higher density of population is to be expected, with growing pressure on jobs, housing and transport, but also on care facilities.

Governance

Over the last 50 years, successive governments and politicians have attempted to grapple with the desire for a sustainable governance structure. It seems that London, governmentally and institutionally, is in a continual state of flux, searching for an institutional fix to govern and coordinate intervention, while arguing about the

delineation of power to address effectively the range of ongoing economic, social and environmental problems. Since 2000, London has been governed by an elected Mayor, within a broader governmental framework provided by: central government; regional governing structures; local municipalities; an elected London-wide Assembly; a range of quasi-autonomous central government bodies; and ad hoc partnerships.

Governing these pressures and tensions is likely to be a continuing theme. Different modes of governing, policy tools, instruments of governance and 'faces of power' could be employed in future to meet the different trends. One type of governing process to fit all is likely to become a thing of the past. Governing London's future could be characterised by different forms of government and governance arrangements. A variety of policy tools will be needed, ranging from greater use of financial incentives, information, collaboration, participation and persuasion – as well as regulation and taxes – in order to enact change and manage the pressures in different sectors and different parts of London.

The process of governing according to divergent public attitudes towards sustainability and perceived inequalities between different areas could lead to greater political resistance, inaction and apathy. An appropriate balance will be needed at the right scale, to govern for urban sustainability while also ensuring urban governing for sustainability. This implies distinct levels of action (for example, at the London-wide scale or at the UK level) but multiple scales of public policy and cross linkages which will be needed to find the appropriate level of governance for sustainability. If London retains its position long term as a world financial centre, there will be further implications for London's diverse society and communities locally. If London's economic status is compromised by global competition from cities elsewhere, the form of governance will need to refocus down to the assets and opportunities yet to be realised at the neighbourhood level.

Housing

The future continued growth of London will expose sharper housing differentials in the decades ahead. In 2031, London's population is expected to be 10.1 million inhabitants which implies a need for about 1.6 million new houses and 1.5 million replacement houses. In addition, London will also need to accommodate the needs of short-term labour, international students and, possibly, climate-change refugees from elsewhere in the world. Numbers and space requirements is but one of the issues here; there will also be new demands and pressures caused by accessibility and the liveability of individual places.

Transport

As mobility increases, so externalities are created across the London region by the use of car, rail and airports. It was estimated by the British Chambers of Commerce in 2007 that the UK lost some £17.5 billion per year due to congestion. This not only relates to car transport, but also intensified use of the rail network with high levels of overcrowding in and out of London already reported. Congestion occurs on the radial routes into the city, on the orbital routes around the city, and at key points where long distance and short distance commuting traffic intersect in outer London. Air traffic and the use of London's five airports have increased. In 2003, the Department for Transport reported that air traffic had increased six fold between 1970 and 2002, to some 200 million passengers per annum. By 2020, the figures are projected to double again. This has led to pressure to expand London's airports, an intense

environmental debate about future CO₂ emissions and the possible establishment of a new airport in the Thames Gateway. The increase in numbers of airport passengers has also created a domino effect for urban intensification with a demand for logistic and distribution sites adjacent to port locations and added to the rise in freight journeys around London. Investment in transport infrastructure, the legacy of the 2012 Olympic Games, a shortage of affordable housing and the control of the public sector on market development desires will all create constant flows in the property market, service demands and opportunities between different areas of London, perhaps even between neighbouring areas.

Against this backdrop of changing conditions and demands within London, north to south, east to west, and of an increasingly diverse population with global, national and local concerns, there is a prospect that the historical paradigm to restrain the physical extent of London in the interests of containment may not be feasible long term. Already, the dominance of London can be identified in areas some distance away from the metropolitan region, through migration and commuting patterns, residential and business property prices, and even planned development growth and infrastructure expansion. Further densification of London may therefore be inappropriate. More land at the edge of the metropolitan area may have to be utilised for homes and for essential services. Long-term scenarios could see the development of 'growth corridors of opportunities', based on green services, green businesses and infrastructure. That old area of contention raised by Williams-Ellis in 1928 – the growth of London – may never have really gone away.



The future of London

Expert academics alone are incapable of predicting, proposing or planning a future for London. In partnership with London's diverse institutions, professions and communities we can contribute analysis, data and ideas about the factors that will shape our city over the next 50 years, and highlight and inform decisions to be made and possible circumstances to prepare for. From our discussion of London's resilience, wellbeing and sustainability some key points for further investigation and discussion have emerged:

- **Reconsidering London's global competitiveness** to explore possibilities for collaboration with other regions and cities. The potential for London to experience disastrous decline of competitiveness in relation to emerging global powers is linked to the prominence of the financial sector in London's economy. Reconsidering the concept of competitiveness will require reflecting on London's governance and could lead to a shift from competition to collaboration to secure the appropriate skills, business environment and infrastructure for the future
- **Building resilient communities** that can cope with future shocks. The relationship between diversity, equity and resilience in preparing London for a future shocks requires further reflection. Resilience can be improved by increasing diversity, but this can also lead to conflicts, tensions and setbacks that should not be underestimated. Divergent ways of living in London can bring strengths and vulnerabilities
- **Building partnerships for community engagement** to account for and nurture the resources available within communities is essential in moving away from individualist-oriented behaviour in order to face climate change and its implications (for example, flooding or scarcity of resources). Issues of social inequality cannot be ignored in constructing unified ideas about 'community' in London, and engagement with diverse communities can be a means of generating shared visions of the future and collective change
- **Accounting for the levels and instruments of governance** that would enable policies to target London in particular and engage a large span of stakeholders in the governing process
- **Developing tools such as visualisation** that would help stakeholders to engage in the organising process related to resources management
- **Implementing measures such as metering** that would reflect effectively the economics of resources
- **Adopting a reflexive perspective** in order to understand environmental circumstances, global conditions and subsequent risks
- **Improving our theoretical tools** in order to help identifying pressure points for political intervention, public funding and regulation needed to meet the requirements of tomorrow's services
- **Relying on people's expectations**, and what they imagine for the future, in order to bring a desirable futures. The opportunities lie in capturing real-world data that would reflect the conditions for change rather than forecasting practices that project the future according to past trends.

These key points for further consideration and all the data and ideas presented in this pamphlet provide the foundation for further analysis and debate about the future of London. The UCL London 2062 Commission provides a forum for UCL academics, our partners and communities to deliberate about the factors that will shape London over the next 50 years and our capacity to steer our city in a favourable direction.

UCL London 2062 Commission Workshops – May to June 2010

This pamphlet draws extensively on contributions made by the following speakers, as well as workshop attendees including representatives of Accenture, Arup, the London Development Agency, the Thames Gateway Institute for Sustainability and Thames Water. The authors gratefully acknowledge their participation.

The Sustainable City

Convenors

Professor Paul Ekins (UCL Energy Institute) and Professor Mark Tewdwr-Jones (UCL Bartlett School of Planning)

Speakers

Governance: Professor Yvonne Rydin (UCL Bartlett School of Planning)

Water: Dr Julien Harou (UCL Civil, Environmental & Geomatic Engineering)

Energy: Professor Paul Ekins (UCL Energy Institute)

Architecture & Design: Dr Ben Campkin (UCL Bartlett School of Architecture)

The Healthy City

Convenor

Dr Sarah Bell (UCL Civil, Environmental & Geomatic Engineering)

Speakers

Health: Dr David Batty (UCL Epidemiology & Public Health)

Security: Professor Gloria Laycock (UCL Security & Crime Science)

Food: Dr Robert Biel (UCL Development Planning Unit)

The Thriving City

Convenor

Professor Mark Tewdwr-Jones (UCL Bartlett School of Planning)

Speakers

Strategic Planning: Duncan Bowie, London Metropolitan University, in place of Professor Sir Peter Hall (UCL Bartlett School of Planning)

Transport: Professor Peter Jones (UCL Centre for Transport Studies)

Heritage: Alastair McCapra, the Landscape Institute, in place of Professor May Cassar (UCL Centre for Sustainable Heritage)

Visualisation: Professor Alan Penn (UCL Bartlett School of Graduate Studies)

The World City

Convenors

Dr Sarah Bell (UCL Civil, Environmental & Geomatic Engineering), Professor Mark Tewdwr-Jones (UCL Bartlett School of Planning) and Professor Paul Ekins (UCL Energy Institute)

Speakers

Migration & Demographics: Dr Pablo Mateos (UCL Geography)

Finance: Dr Jurgen Essletzbichler (UCL Geography)

Culture: Dr Alan Latham (UCL Geography)

UCL Grand Challenges

We have set ourselves the ambitious goal of developing wise and timely counsel to address significant intellectual, cultural, scientific, economic, environmental and medical problems. We are also intent on making that counsel compelling to policymakers and practitioners.

The Grand Challenges – of Global Health, Sustainable Cities, Intercultural Interaction and Human Wellbeing – inspire collaboration across our disciplines in order to apply our collective knowledge and expertise to major social problems.

Public-policy engagement is a key component of the Grand Challenges programme; through the new UCL Public Policy initiative we aim to respond to the pressing questions faced by government and policymakers.

Rationale

In universities, specialist knowledge tends to be generated within disciplines, through problem- and curiosity-driven scholarship by individuals and small groups.

Yet solutions to complex global problems evade the grasp of any single discipline. While individual excellence and subject expertise are essential, even more significant outcomes can result when experts from different disciplines act in concert. Greater understanding and novel insights arise when the breadth of specialist knowledge is considered collectively.

Wisdom – here defined as the judicious application of knowledge for the good of humanity – is the key to providing sustainable and equitable solutions. Wise responses to major problems emerge through synthesising and contrasting the knowledge, perspectives and methodologies of different disciplines.



Developing a culture of wisdom

UCL has 4,000 leading researchers making exciting discoveries and generating advances in specialist knowledge. Their collective expertise can be made even greater than the sum of its parts.

UCL Grand Challenges is a new way of organising research activity, bringing together varied disciplines to exploit fully our breadth of expertise. Through UCL Grand Challenges we provide opportunities for researchers to interact across and beyond their conventional disciplinary boundaries: analysing profound and complex problems from multiple perspectives in order to develop wise and timely solutions.

Our commitment to establishing a culture of wisdom therefore requires transformative action:

- respecting specialist knowledge, while dismantling the barriers to its cross-fertilisation
- supporting the synthesis of new knowledge, both within and across fields and disciplines
- engaging with external partners, in order to understand and respond to their needs
- facilitating collaborative research in order to gain fresh perspectives and, ultimately, wisdom
- formulating and advocating policy and practice based upon the wise counsel so developed.

The Grand Challenge of Sustainable Cities

By the end of the 21st century, 80% of humans will live in cities. Rapid growth will further stress the urban environment, posing complex and systemic problems in areas such as food security, energy, water, waste, transport, economics, trade, manufacturing, wealth creation and – ultimately – quality of life.

UCL is concerned with contributing to urban sustainability in spheres including, for example, ecology, aesthetics, health, economics, culture, equity and intellect. Our great strengths are the variety of prisms through which we can examine the sustainability of cities and the range of methodologies with which we can bring about change. We seek to build on existing work, to enhance and integrate it, and to maximise its impact on policy and practice. Through working together, we seek to provide wise solutions to both urgent and long-term problems.

www.ucl.ac.uk/grand-challenges