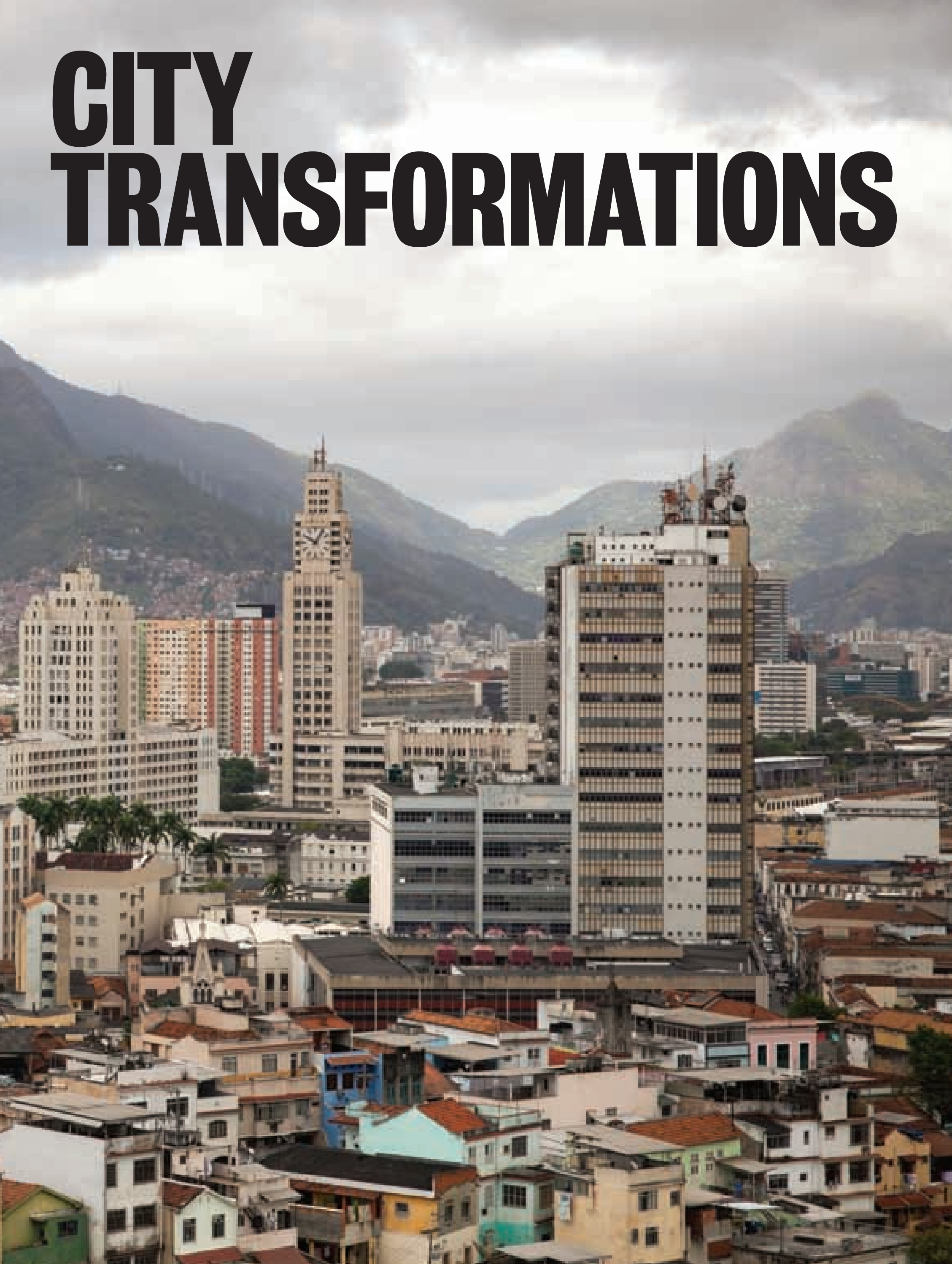
# CITY TRANSFORMATIONS



# CONTENTS



## URBAN AGE
## CITY TRANSFORMATIONS CONFERENCE
## RIO DE JANEIRO
## 24 – 25 OCTOBER 2013

## ORGANISED BY LSE CITIES AT THE LONDON SCHOOL OF ECONOMICS AND DEUTSCHE BANK'S ALFRED HERRHAUSEN SOCIETY


**EDITORS**
**Ricky Burdett,** *Director, LSE Cities*
**Ömer Çavuşoğlu,** *Project Manager, LSE Cities*
**Savvas Verdis,** *Senior Research Fellow, LSE Cities*

**LSE CITIES RESEARCH TEAM**
**Savvas Verdis,** *Senior Research Fellow*
**Duncan Smith,** *Research Officer*
**Adam Towle,** *Researcher*
**Catarina Heeckt,** *Researcher*
**Ömer Çavuşoğlu,** *Project Manager*
**Danielle Hoppe,** *Researcher*

**SPECIAL THANKS**
Barcelona City Council
Bogotá Secretariat of Planning
Geoprocessamento - Port Region Urban Development Company (CDURP), Rio de Janeiro
HafenCity Hamburg GmbH
Institute for Transport and Development Policy, Rio de Janeiro
Instituto Pereira Passos, Rio de Janeiro
MPU Architects, Rio de Janeiro
Rio de Janeiro Municipal Olympic Company
Rio de Janeiro Municipal Transportation Department
State of Rio de Janeiro Public Works Company

**PRODUCTION**
**Tuca Vieira,** *Photography*
**Atelier Works,** *Design*


URBAN AGE

LSE THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

Alfred Herrhausen Society
The International Forum of Deutsche Bank

RIO PREFEITURA

2013-2014 DEUTSCHLAND+BRASILIEN ALEMANHA+BRASIL

# FOREWORD

The twentieth century saw an acceleration in the process of urbanisation, of a speed and pace of change that outstripped the genteel and planned expansion of Paris, Barcelona, Berlin and even London in the previous century. This process has accelerated even further since 2000, completely transforming the physiognomy of some cities in response to profound changes in global economic and social trends.

Rio de Janeiro stands out today as a city that is embracing change and undergoing profound transformation. As such, it provides the ideal setting for an informed debate on the impacts of city transformations across the globe. This is why the Urban Age, an international investigation of cities jointly organised by the London School of Economics and Deutsche Bank's Alfred Herrhausen Society, has chosen to hold its twelfth conference in this unique Brazilian city that is both investing and reflecting on the long-term impacts of such intense urban change.

Over 70 speakers from 40 cities and 20 countries will be joining local urban experts, policymakers, investors, NGOs and academics to discuss these issues, with a view to improving our understanding of how to design, manage and live in more equitable urban environments.

**Ricky Burdett**
Director, the Urban Age
and LSE Cities
London School of Economics

**Thomas Matussek**
Managing Director
Alfred Herrhausen Society,
the international forum of
Deutsche Bank

# ACCELERATING THE PACE OF CITY TRANSFORMATIONS

**Savvas Verdis and Ricky Burdett introduce the core themes of the Urban Age City Transformations conference in Rio de Janeiro and its allied newspaper.**

At the close of the 2012 Urban Age conference in London, the urbanist and social theorist Richard Sennett argued that the tendency to build large-scale new cities and neighbourhoods is depriving us of the social and creative energies of traditional urban form – often referred to as *cityness*. He returns to this theme in this newspaper for the Urban Age conference in Rio de Janeiro by framing the debate on cities as a contrast between *efficiency* and *sociability*. This duality is at the heart of the investigation of the interrelationships between the social and the physical in cities, which since 2005 have shaped the explorations of the Urban Age programme at LSE Cities.

For the Rio Urban Age conference we have focussed on the impact of radical transformations in cities that have reshaped – at times drastically – the spatial, social and economic landscape of urban centres across the globe. We have used the opportunity of Rio's intense pace and scale of change to reflect on the social and creative energies of urban form at different scales and levels, in an attempt to understand how they affect patterns of everyday urban life, in positive and negative ways. We are interested in finding out whether the streets, blocks and infrastructure networks being built today are guiding us to more equitable, efficient and more civic lives, or are working against the grain of that elusive quality of *cityness*, fostering divisiveness and inequality in the rush to build and compete.

This publication is designed to contribute to the debate with texts and research by over twenty leading urban commentators, academics, policymakers and practitioners investigating the recent transformations of cities like Rio, London, Barcelona, Mumbai, Bogotá, Hamburg and Cape Town. It contains new research carried out by LSE Cities, comparing the social, economic and spatial characteristics of Rio de Janeiro with other global cities, and provides detailed analysis of the changing physiognomy of cities and projects in selected urban areas. The objective of the newspaper and the conference it supports is to ask a number of key questions. What are the drivers of these physical transformations and the global political economies that are emerging behind these building programmes? What long-term dependencies are such transformations putting before us and how flexible are these forms to social and economic change? How are citizens demanding different infrastructures and questioning the traditional role of markets and the State in delivering big projects?

These same questions were being asked over 150 years ago when London's Victorian reformers saw fit to improve the health of their citizens by constructing a major sewerage system under their city. What they found was a London subdivided into small territorial interests, unable to take the necessary metropolitan decisions that such a land-thirsty city transformation required. In delivering the project, the Victorians created a new metropolitan authority, the predecessor to London's first government, the London County Council, founded in 1889. Put in simple terms, the project had the ability to concentrate power away from the vestries and later normalise this new-found power into governing Londoners in the name of greater utility.

Critics like David Harvey and Deyan Sudjic have commented on how these large-scale technical interventions barely conceal a social programme – from Haussman's Paris to Robert Moses's New York. More recently, Carlos Vainer and other commentators have identified similarities with some of the developments taking place in Rio. To implement 'big' plans of large ambitions – from the Rio 2016 Olympics, the UPP pacification programme, the restructuring of Porto Maravilha and investment in major Bus Rapid Transit (BRT) lines – the City and State of Rio de Janeiro have developed new institutions to deliver these projects that can be seen to question the 'right to the city'.

London has confronted similar issues as it created its own 'top-down' institutions to deliver the 2012 Olympics, ensure its legacy and bring about lasting regeneration in the deprived zones of East London. The Olympic Delivery Authority, and the recently formed London Legacy Development Company (chaired by the Mayor), as Andy Altman explains, are charged with sweeping planning and decision-making powers, even though they have worked in partnership with boroughs and local groups. Despite some level of criticism of democratic deficit, broadly their operation has been applauded for getting the job done. Hamburg's HafenCity and experimental IBA initiative – both designed to tackle issues of deindustrialisation and the needs of large migrant communities (most notably Muslim Turks) – provide relevant models of intervention and delivery that take into account the need to ensure continuity of the urban fabric and the everyday needs of existing (and not just new) communities. All issues which resonate in the urban reality of Rio today.

**74%**

Percentage of Brazil's total oil production comes from State of Rio de Janeiro
Source: ANP (2011)

Brazil's democratic commitment to the right of the city has been followed by many, including Edgar Pieterse writing in this newspaper, who have long admired the country's 2001 Statute of the City. This national law seeks to prioritise the social use over the commercial use of land and to democratise the decision-making process in cities through compulsory participatory governance models. Yet, the reality on the ground is different. A large proportion of the urban public believe that mega-projects are tampering with strategic priorities through what Julia Michaels calls a favour-exchanging populist system, putting the private interest over the public good – tensions that exist as much in New York, London and Amsterdam, as Susan Fainstein argues, as they do in Rio de Janeiro. Despite the significant generational improvements in Rio's social and economic life – decreasing levels of inequality and absolute poverty, homicides at a historical low, and GDP per capita double from its 2001 levels – the anthropologist Luiz Eduardo Soares defines the fine-grain cracks that are appearing in Brazilian society and account for the recent popular discontent and uprisings in Rio, São Paulo and other cities. How can planners, policymakers and designers deal with such contradictions?

The dilemma emerging from London in the 1850s and Rio in the 2010s is how to balance the large economic benefits that often accrue from large-scale projects to the individual and communal rights of citizens. As David Harvey writes in the classic *The Right to the City*, parts of which are reproduced in this newspaper, we need a 'collective right to reshape the forces of urbanisation'. There is a very practical dimension to this call that has repercussions to the way projects are designed, procured and delivered. Part of the problem lies in the temporal conflicts that exist between democratic and project timelines. All too often, the collective right of decision-making cannot be practised because the time frame of project cycles do not run apace. A city such as Rio that has not seen major transport investments in over twenty years is having to think of who should be connected and how in the space of only seven years – the project cycle of an Olympic Games. Democratic processes and strategic planning take much longer.

A second challenge of accelerated transformations occurs when the physical and social fabric of the city has to catch up with structural adjustments and transformations in the economy. Neighbourhoods and skills sets can become rapidly redundant, leaving local populations economically isolated, resulting in unemployment, alienation and increased income inequalities. This trend informs a second line of investigation addressed by the texts and research in this newspaper. LSE Cities has looked at how public transport infrastructure impacts on deprived and disconnected neighbourhoods, and how investment in new mobility systems – like Rio's BRT, TransMilenio in Bogotá and Crossrail in London – can bring people closer to their places of work. In addition to the effect of transport improvements discussed by Enrique Peñalosa, the publication also explores how spatially targeted policies are able to concentrate investment in lower income neighbourhoods. In this regard, the Mayor of London's attention to the deprived area around Stratford and the Lower Lea Valley in East London, where the 2012 Olympics were located – the poorest districts in the capital – can be compared to Rio's ongoing project to 'urbanise' or upgrade all of the city's *favelas* by 2020. To urbanise *favelas* means to reconnect them (socially, politically and economically) to the city so that the distinction between asphalt (city) and hill (*favela*), which was at the heart of the stigmatisation of residents of the latter for over thirty years, is challenged. This reconnection or opening of the *favelas* to the city is occurring in multiple ways. Sandra Jovchelovitch concentrates on the role that cultural groups play, acting as bridges to the outside world, and reflects on the relative porosity or openness of particular communities in Rio. Sérgio Magalhães and Fabiana Izaga focus on the role of the State in recovering the territory of the *favela* from the para-state of drug traffickers, allowing some measure of normality to resume. Suketu Mehta sees their urbanisation as the replacement of para-state power with the speculative power of real estate. Rather than urbanisation programmes leading to greater equity, Mehta sees them as leading residents to the inequalities of a free economy. By eradicating one form of inequality do city transformations lead to new ones? The role of the city policymaker or planner therefore becomes more paramount, which takes us to the third critical dimension of accelerated transformations.

Rio's current urban renaissance, just as London's resurgence that started over twenty years ago and Barcelona's that goes all the way back to the 1980s, share a common starting point. They are driven by a period of mass investment associated to a growing city economy. London's recent transformation was underpinned by the globalisation of the financial services industry and Rio's to the income from oil and gas and its indirect services economy. The role of the urban policymaker is to steer this investment into sustainable paths. The question is less about economic growth or population growth, but about how this growth rebalances the city. This rebalancing is both spatial as in London's East-to-West asymmetry and Rio's North-to-South, but also temporal. How are we to rebalance the interests of future against those of current generations?

In this context, the need for strong planning systems that are both visionary and democratic offer a new life for 'big-picture planning', as Deyan Sudjic intimates. As the Urban Age considers the spatial and temporal dynamics of big planning during periods of accelerated change, it is time to reconsider the best models that deliver, as Richard Sennett argues, both *efficiency* and *sociability*.

**Savvas Verdis is Senior Research Fellow at the London School of Economics and Political Science (LSE) and consultant at Siemens. Ricky Burdett is Professor of Urban Studies and Director of LSE Cities and the Urban Age Programme at the LSE.**

**THE NEW FRONTIER**
As Rio de Janeiro expands westwards, a new urban landscape is emerging reflecting the radical restructuring of the city's social and economic profile.

# UNFINISHED CITIES

**Deyan Sudjic explores the resurgence of big-picture planning and defines its historical context as backdrop to the Urban Age discussions.**

Pessimism about the transformative possibilities of urbanism has reappeared since the triumphant reconstruction of Barcelona before and after the 1992 Olympics rekindled the pursuit of what might be called big-picture planning.

Sometime in the second half of the 1960s it had become clear that the public in most of the developed world had lost its faith in planning. And a lot of the planning professionals agreed. It is not hard to see why. The utopias of post-World War II planning had conspicuously failed to live up to the promises made for them. Dynamiting the Pruitt-Igoe housing estate in St. Louis was a huge and visible signal of all that could go wrong. But perhaps of greater significance to the low regard in which planning was held was Sir Peter Hall's book *Great Planning Disasters*, published in 1981. Hall, one of the most influential urbanists of the second half of the twentieth century, took a scalpel to five fiascos, all of them intended to have been exercises in transformative planning. He looked at the absurdly expensive and inconclusive story of London's strategy for a third airport, a story that more than 40 years later is still no nearer resolution. He was no more sympathetic to the Bay Area Rapid Transit system, which San Francisco did build, at least in part, and to the Opera House in Sydney.

Opinion on the effectiveness of at least one of these projects has changed in the interim, but the book summed up a view of the dangers implicit in adopting big ideas about planning. They are expensive, they take too long, and often they don't work.

If even some professionals saw things this way, it was no wonder that in the wider world of activists, intellectuals and politicians, as well as the everyday victims of slum clearances, and motorway construction, there was revulsion against any further evisceration of Europe's and North America's great cities, from London to Brussels, and Paris to Manhattan. Even in Japan, a country that has shown no reluctance to embrace break-neck modernisation, a generation of radical students spent a decade fighting riot police to stop the building of Narita Airport. The claims of rice farmers working on ancestral land were far more important for them than giving Japan a modern gateway to the world.

From her vantage point in Greenwich Village, Jane Jacobs stopped Robert Moses's road building plans, and published her devastating attack on those who attempted drastic surgery on the fabric of the city. Small, she believed, was the future. Cities should be nurtured, not transformed. Not everyone believed her. Lewis Mumford reviewed *The Life and Death of Great American Cities* for *the New Yorker*, under the headline: 'Home Remedies for Urban Cancer'.

But when Robert Caro wrote his onslaught on Robert Moses, *The Powerbroker*, he made the very idea of urban transformation suspect. Robert Lee, Mayor of New Haven in the 1960s, a Robert Moses for the Kennedy era, appeared on the front pages to boast that he had rid his city of what he called the shame of the 10,000 rats evicted from just one run-down block in his campaign of scorched-earth planning. But after New Haven burnt in race riots, Lee's approach looked a lot less plausible and planning took a much lower profile. It merely became a statistical analysis, or, at least, it was now shaped by many small steps, rather than in a single *coup de théâtre*.

Barcelona changed all that. This was a city in which architects, planners and politicians had suffered in the same prison cells during the Franco years, and were close enough to each other to be able to embark on the renewal of their city once the dictator had gone. It is true that there were protests about the gentrification of the red light district, and the destruction of the El Poblenou community on the waterfront. But the massive investment in infrastructure after the punishment of the city in the Franco years really did transform Barcelona in a universally popular way. Barcelona went from darkened, crumbling neglect to an architectural showcase that brought jobs, tourists and creative energy. It became a world city. And as a result it became a model for other attempts to transform cities around the world. From John Prescott, Tony Blair's hapless planning minister, to the Mayor of Shanghai, everybody came to learn the lessons of Barcelona.

It was at least a more worthwhile lesson than the idea that a single building, in the Bilbao style, can transform a city. But a Spain in the grip of economic trauma no longer looks such a promising model for the world to learn from. Valencia in particular is a city that wasted a fortune on the vain glory of Santiago Calatrava. Barcelona did a lot of very sensible things to transform itself. But from the shuttered and empty Forum designed by Herzog & de Meuron, and built in a bout of hubris, to the Design Hub, designed by Martorell, Bohigas, and Mackay, and built under the shadow of Jean Nouvel's Torre Agbar, without a real brief, it has shown itself better at starting things than it is at sustaining them.

Nowhere has this pessimism about the transformative potential of planning become clearer than in the idea of big event planning encapsulated by the idea of staging an Olympic games in the name of urbanism. For Barcelona it worked. For London it probably will too. The eastern fringes of the UK's capital city had been the subject of long-term plans for decades. The Olympics finally put the infrastructure in place, and Stratford really has had the kick-start it needed to reverse London's endless prejudice for looking West rather than East. But for Montreal, the Olympics, and the Expo that preceded them, were almost as much of a financial catastrophe as they were for Athens. It is curious how in all the forensic analysis of the Greek economic meltdown associated with its membership of the Eurozone, little attention is paid to its borrowing spree to finance the Games and build all those pointless landmarks, now empty, in accounting for how things went so wrong. All these disasters make it easy to flinch away from any attempt to address the large and real problems that cities face, and to believe that they can be dealt with in small, comfortable, almost invisible steps.

Sometimes it seems as if all the complex arguments about how we should understand the future of cities might boil down to the resolution of just two questions that represent polar opposites. Are we best served by high- or by low-density models of urbanism? Is the market a better guide for shaping development than the State? They are models that keep appearing and reappearing around the world.

But perhaps, there is another, even more fundamental, question to face up to. What can we really do in order to address what might be described as the urban bigger picture, in order to transform it to achieve positive effects? Are urban transformations actually possible? Or should we avoid the fall-out from taking risks, and confine ourselves instead to small, incremental steps, and attempt to deal with one pothole, and one traffic jam at a time? If for nothing else, because we want to avoid the law of unexpected consequences? Critics of big-picture planning characterise it as being concerned more with the image of development, than with its substance. It is presented as the product of egotistical politicians and their officials, sometimes incompetent, or corrupt, and always tending towards hubris. And instead they argue for a bottom-up approach.

Putting the argument that image building has always been a vitally important contributory factor in creating successful cities to one side, the greatest example suggesting that big-picture planning could work used to be the Paris of Haussmann and Napoleon III. For those who understand city planning on such a scale as primarily political in its motivations, it is true that the glory of the city of light did not keep Napoleon in power, or dissuade Prussia from invading France during the year of the Paris Commune. So on these terms it might be said to be a failure. But Paris is still a model for those who see the city as a work of art; a city that is capable of being completed, and as a result ready to accept a steady state. This is not an entirely positive model. The Paris that is defined by the limits of the Périphérique is incapable of the kind of change that brought the city into being in the first place. Paris, if present trends continue, is fated to become a large-scale version of Venice, while the banlieues would be happy if they were able to turn into Mestre. Paris's success was also the source of its failure. The Grand Projets of President Mitterrand in the 1980s could only change the architectural language, not the basic structure of the French capital.

Haussmann did not just build boulevards, and visually highly regimented streets. He installed the sewers that allowed Paris to escape from the medieval scourge of cholera. The dispossessed of Paris had to pay a price. For those who are looking to find a negative impact from the transformation of Morro da Providência in Rio into the Porto Maravilha, the city's promised glittering new waterfront, or the pacification of the Complexo do Alemão, or, for that matter, the rebuilding of the centre of Mumbai and of Shanghai, Haussmann's Paris provided a clue about what was to come. Paris was a century and a half ahead of Rio, Shanghai and Mumbai in seeing the eviction of existing communities from the homes they had occupied for a generation or two, to barrack life on the outer edges of the city, while wealthy speculators have profited from their forced departure. The same pattern was repeated in each city.

It is an example that for 20 years provided an extraordinarily seductive model for cities looking to use big events as catalysts for large-scale urban transformation. Barcelona's recent history in the past 25 years has a lot to do with the continuing willingness of cities to bid for the chance to pour billions of dollars, pounds, roubles or reais into bouts of stadium building and mass transit construction. And it is behind the fetish that the Olympic commission has made of the concept of legacy since the Beijing games, or earlier. Legacy and sustainability are an inevitable part of the rhetoric of the modern games now. Even Athens was able to persuade itself for a moment that it was bankrupting Greece for the sake of the Games in order to secure its future. The danger is that in regarding the big picture with suspicion, we end up with the worst of all worlds when we cannot avoid the challenge.

Rio is far from alone in facing the difficult questions about big-picture planning. The history of social housing in Britain, where in some areas there have been three cycles of demolition and rebuilding to different models in a single lifetime, would suggest the difficulty of expecting a big-idea approach to cities to work. Whatever we do, no matter how much we invest, gains are only temporary; one generation's modernist utopia inexorably seems to turn into the slums of the next. The argument in London, about how to deal with Heathrow airport that is choking with passengers to the point that it is undermining the economic future of London, and so of Britain as a whole, reflects the reluctance, both of governments and the political class, to face up to large questions. But it is worth pointing out that Heathrow, Europe's busiest airport, was not the product of a grand plan, but a series of accidents, and unintended consequences. London's first international airport in the 1920s and 1930s was in Croydon, far to the South of the city. Heathrow was an accident. Its first runway was built at the end of World War II as a jumping-off point for British bombers to attack Germany. In the postwar period, it became a civilian airport by default, with a tent for a departure hall. And it has gone on growing ever since.

Britain is divided between those who see Isambard Kingdom Brunel – the great nineteenth-century engineer – as a hero, and those who regard him as a heroic failure. Of course, Brunel's idea of a broad-gauge railway was technically superior to the standard gauge that almost the whole world adopted. If all the existing railways had been torn up and relayed to Brunel's broad gauge, it would have produced a better railway. But it was already too late: the world was full of expensive locomotives that could only run on the existing tracks. There was no point in wasting time on what might be better. Broad gauge was better than standard, but it was not the best possible railway. A more effective engineer would have focused on making the best of the possible.

The fundamental questions for any city in search of a transformative future are; does it have the ability to articulate a vision shared by its citizens, and does it have the ability to make the vision possible? Rio saw the consequences of big-picture planning half a century ago, when Brazil's president Juscelino Kubitchek decided to follow the promises of the country's constitution, and move the national capital to the entirely new city of Brasília. The problem for those who question how appropriate big-picture planning can be is that the issues facing cities have only grown larger and more complex. No matter how much we might wish to address them differently, big problems require a response on an appropriate scale.

Ignoring the issues of mobility, of poverty, of security and development, can only make matters more difficult. Leaving those who can afford the cost to create private enclaves with their own police, energy, and services, is clearly an approach that only creates more problems in the future. There are big things happening to the world cities, whether we want them to, or not. Years ago, I compared urbanism to meteorology. If you look carefully enough, you can tell when it is going to rain, but you can't make it rain. Technologically, that is probably no longer true. Beijing certainly did its best to modify the weather during the Olympics.

But if weather is no longer an appropriate analogy for understanding cities, then perhaps it is also important to understand that art is neither. When Jane Jacobs wrote *The Life and Death of Great American Cities* (1961), she also suggested that a city cannot be a work of art. But that does not mean we should abandon the idea of facing up to the large and troubling problems that cities must address if they are to flourish. The point is that there is no one single plan. Just as the city is never finished, there is never just one plan either: there is always the need to formulate the next one, and to explore the idea of another transformation.

**Deyan Sudjic is Director of the Design Museum, London and co-editor of Living in the Endless City.**

# THE RIGHT TO THE CITY

**In an extract from his classic essay, David Harvey offers a critical insight on the social, political and economic forces behind urban change.**

We live in an era when ideals of human rights have moved centre stage both politically and ethically. A great deal of energy is expended in promoting their significance for the construction of a better world. But for the most part the concepts circulating do not fundamentally challenge hegemonic liberal and neo-liberal market logics, or the dominant modes of legality and state action. We live, after all, in a world in which the rights of private property and the profit rate trump all other notions of rights. I here want to explore another type of human right, that of the right to the city.

Has the astonishing pace and scale of urbanisation over the last hundred years contributed to human well-being? The city, in the words of urban sociologist Robert Park, is:

> man's most successful attempt to remake the world he lives in more after his heart's desire. But, if the city is the world which man created, it is the world in which he is henceforth condemned to live. Thus, indirectly, and without any clear sense of the nature of his task, in making the city man has remade himself.[1]

The question of what kind of city we want cannot be divorced from that of what kind of social ties, relationship to nature, lifestyles, technologies and aesthetic values we desire. The right to the city is far more than the individual liberty to access urban resources: it is a right to change ourselves by changing the city. It is, moreover, a common rather than an individual right since this transformation inevitably depends upon the exercise of a collective power to reshape the processes of urbanisation. The freedom to make and remake our cities and ourselves is, I want to argue, one of the most precious yet most neglected of our human rights.

From their inception, cities have arisen through geographical and social concentrations of a surplus product. Urbanisation has always been, therefore, a class phenomenon, since surpluses are extracted from somewhere and from somebody, while the control over their disbursement typically lies in a few hands. This general situation persists under capitalism, of course; but since urbanisation depends on the mobilisation of a surplus product, an intimate connection emerges between the development of capitalism and urbanisation. Capitalists have to produce a surplus product in order to produce surplus value; this in turn must be reinvested in order to generate more surplus value. The result of continued reinvestment is the expansion of surplus production at a compound rate – hence the logistic curves (money, output and population) attached to the history of capital accumulation, paralleled by the growth path of urbanisation under capitalism.

The perpetual need to find profitable terrains for capital-surplus production and absorption shapes the politics of capitalism. It also presents the capitalist with a number of barriers to continuous and trouble-free expansion. If labour is scarce and wages are high, either existing labour has to be disciplined – technologically induced unemployment or an assault on organised working-class power are two prime methods – or fresh labour forces must be found by immigration, export of capital or proletarianisation of hitherto independent elements of the population. Capitalists must also discover new means of production in general and natural resources in particular, which puts increasing pressure on the natural environment to yield up necessary raw materials and absorb the inevitable waste. They need to open up terrains for raw-material extraction – often the objective of imperialist and neo-colonial endeavours.

The coercive laws of competition also force the continuous implementation of new technologies and organisational forms, since these enable capitalists to out-compete those using inferior methods. Innovations define new wants and needs, reduce the turnover time of capital and lessen the friction of distance, which limits the geographical range within which the capitalist can search for expanded labour supplies, raw materials, and so on. If there is not enough purchasing power in the market, then new markets must be found by expanding foreign trade, promoting novel products and lifestyles, creating new credit instruments, and debt-financing state and private expenditures. If, finally, the profit rate is too low, then state regulation of 'ruinous competition', monopolisation (mergers and acquisitions) and capital exports provide ways out.

If any of the above barriers cannot be circumvented, capitalists are unable profitably to reinvest their surplus product. Capital accumulation is blocked, leaving them facing a crisis, in which their capital can be devalued and in some instances even physically wiped out. Surplus commodities can lose value or be destroyed, while productive capacity and assets can be written down and left unused; money itself can be devalued through inflation, and labour through massive unemployment. How, then, has the need to circumvent these barriers and to expand the terrain of profitable activity driven capitalist urbanisation? I argue here that urbanisation has played a particularly active role, alongside such phenomena as military expenditures, in absorbing the surplus product that capitalists perpetually produce in their search for profits.

[....]

## Property and pacification

As in all the preceding phases, this most recent radical expansion of the urban process has brought with it incredible transformations of lifestyle. Quality of urban life has become a commodity, as has the city itself, in a world where consumerism, tourism, cultural and knowledge-based industries have become major aspects of the urban political economy. The postmodernist penchant for encouraging the formation of market niches – in both consumer habits and cultural forms – surrounds the contemporary urban experience with an aura of freedom of choice, provided you have the money. Shopping malls, multiplexes and box stores proliferate, as do fast-food and artisanal market-places. We now have, as urban sociologist Sharon Zukin puts it, 'pacification by cappuccino'. Even the incoherent, bland and monotonous suburban tract development that continues to dominate in many areas now gets its antidote in a 'new urbanism' movement that touts the sale of community and boutique lifestyles to fulfil urban dreams. This is a world in which the neo-liberal ethic of intense possessive individualism, and its cognate of political withdrawal from collective forms of action, becomes the template for human socialisation.[2] The defence of property values becomes of such paramount political interest that, as Mike Davis points out, the homeowner associations in the state of California become bastions of political reaction, if not of fragmented neighbourhood fascisms.[3]

We increasingly live in divided and conflict-prone urban areas. In the past three decades, the neo-liberal turn has restored class power to rich elites. Fourteen billionaires have emerged in Mexico since then, and in 2006 that country boasted the richest man on earth, Carlos Slim, at the same time as the incomes of the poor had either stagnated or diminished. The results are indelibly etched on the spatial forms of our cities, which increasingly consist of fortified fragments, gated communities and privatised public spaces kept under constant surveillance. In the developing world in particular, the city is splitting into different separated parts, with the apparent formation of many 'micro-states'. Wealthy neighbourhoods provided with all kinds of services, such as exclusive schools, golf courses, tennis courts and private police patrolling the area around the clock intertwine with illegal settlements where water is available only at public fountains, no sanitation system exists, electricity is pirated by a privileged few, the roads become mud streams whenever it rains, and where house-sharing is the norm. Each fragment appears to live and function autonomously, sticking firmly to what it has been able to grab in the daily fight for survival.[4]

Under these conditions, ideals of urban identity, citizenship and belonging – already threatened by the spreading malaise of a neo-liberal ethic – become much harder to sustain. Privatised redistribution through criminal activity threatens individual security at every turn, prompting popular demands for police suppression. Even the idea that the city might function as a collective body politic, a site within and from which progressive social movements might emanate, appears implausible. There are, however, urban social movements seeking to overcome isolation and reshape the city in a different image from that put forward by the developers, who are backed by finance, corporate capital and an increasingly entrepreneurially minded local state apparatus.

## Dispossessions

Surplus absorption through urban transformation has an even darker aspect. It has entailed repeated bouts of urban restructuring through 'creative destruction', which nearly always has a class dimension since it is the poor, the underprivileged and those marginalised from political power that suffer first and foremost from this process. Violence is required to build the new urban world on the wreckage of the old. Haussmann tore through the old Parisian slums, using powers of expropriation in the name of civic improvement and renovation. He deliberately engineered the removal of much of the working class and other unruly elements from the city centre, where they constituted a threat to public order and political power. He created an urban form where it was believed – incorrectly, as it turned out in 1871 – that sufficient levels of surveillance and military control could be attained to ensure that revolutionary movements would easily be brought to heel. Nevertheless, as Engels pointed out in 1872:

> In reality, the bourgeoisie has only one method of solving the housing question after its fashion – that is to say, of solving it

**OPENING UP THE HILLS**
A new cable car connects the ‘hills’ to the ‘asphalt’ in the Complexo do Alemão, one of Rio’s most visible, sprawling favelas.

> in such a way that the solution continually reproduces the question anew. This method is called 'Haussmann'… No matter how different the reasons may be, the result is always the same; the scandalous alleys and lanes disappear to the accompaniment of lavish self-praise from the bourgeoisie on account of this tremendous success, but they appear again immediately somewhere else… The same economic necessity which produced them in the first place, produces them in the next place.[5]

It took more than a hundred years to complete the embourgeoisement of central Paris, with the consequences seen in recent years of uprisings and mayhem in those isolated suburbs that trap marginalised immigrants, unemployed workers and youth. The sad point here, of course, is that what Engels described recurs throughout history. Robert Moses 'took a meat axe to the Bronx', in his infamous words, bringing forth long and loud laments from neighbourhood groups and movements. In the cases of Paris and New York, once the power of state expropriations had been successfully resisted and contained, a more insidious and cancerous progression took hold through municipal fiscal discipline, property speculation and the sorting of land-use according to the rate of return for its 'highest and best use'. Engels understood this sequence all too well:

> The growth of the big modern cities gives the land in certain areas, particularly in those areas which are centrally situated, an artificially and colossally increasing value; the buildings erected on these areas depress this value instead of increasing it, because they no longer belong to the changed circumstances. They are pulled down and replaced by others. This takes place above all with workers' houses which are situated centrally and whose rents, even with the greatest overcrowding, can never, or only very slowly, increase above a certain maximum. They are pulled down and in their stead shops, warehouses and public buildings are erected.[6]

Though this description was written in 1872, it applies directly to contemporary urban development in much of Asia – Delhi, Seoul, Mumbai – as well as gentrification in New York. A process of displacement and what I call 'accumulation by dispossession' lie at the core of urbanisation under capitalism.[7] It is the mirror image of capital absorption through urban redevelopment, and is giving rise to numerous conflicts over the capture of valuable land from low-income populations that may have lived there for many years.

Consider the case of Seoul in the 1990s: construction companies and developers hired goon squads of sumo-wrestler types to invade neighbourhoods on the city's hillsides. They sledgehammered down not only housing but also all the possessions of those who had built their own homes in the 1950s on what had become premium land. High-rise towers, which show no trace of the brutality that permitted their construction, now cover most of those hillsides. In Mumbai, meanwhile, 6 million people officially considered as slum dwellers are settled on land without legal title; all maps of the city leave these places blank. With the attempt to turn Mumbai into a global financial centre to rival Shanghai, the property-development boom has gathered pace, and the land that squatters occupy appears increasingly valuable. Dharavi, one of the most prominent slums in Mumbai, is estimated to be worth US$2 billion. The pressure to clear it – for environmental and social reasons that mask the land grab – is mounting daily. Financial powers backed by the state push for forcible slum clearance, in some cases violently taking possession of terrain occupied for a whole generation. Capital accumulation through real-estate activity booms, since the land is acquired at almost no cost.

Will the people who are displaced get compensation? The lucky ones get a bit. But while the Indian Constitution specifies that the state has an obligation to protect the lives and well-being of the whole population, irrespective of caste or class, and to guarantee rights to housing and shelter, the Supreme Court has issued judgements that rewrite this constitutional requirement. Since slum dwellers are illegal occupants and many cannot definitively prove their long-term residence, they have no right to compensation. To concede that right, says the Supreme Court, would be tantamount to rewarding pickpockets for their actions. So the squatters either resist and fight, or move with their few belongings to camp out on the sides of motorways or wherever they can find a tiny space.[8] Examples of dispossession can also be found in the US, though these tend to be less brutal and more legalistic: the government's right of eminent domain has been abused in order to displace established residents in reasonable housing in favour of higher-order land uses, such as condominiums and box stores. When this was challenged in the US Supreme Court, the justices ruled that it was constitutional for local jurisdictions to behave in this way in order to increase their property-tax base.[9]

In China millions are being dispossessed of the spaces they have long occupied – three million in Beijing alone. Since they lack private-property rights, the state can simply remove them by fiat, offering a minor cash payment to help them on their way before turning the land over to developers at a large profit. In some instances, people move willingly, but there are also reports of widespread resistance, the usual response to which is brutal repression by the Communist party. In the PRC it is often populations on the rural margins who are displaced, illustrating the significance of Henri Lefebvre's argument, presciently laid out in the 1960s, that the clear distinction that once existed between the urban and the rural is gradually fading into a set of porous spaces of uneven geographical development, under the hegemonic command of capital and the State. This is also the case in India, where the central and state governments now favour the establishment of Special Economic Zones – ostensibly for industrial development, though most of the land is designated for urbanisation. This policy has led to pitched battles against agricultural producers, the grossest of which was the massacre at Nandigram in West Bengal in March 2007, orchestrated by the state's Marxist government. Intent on opening up terrain for the Salim Group, an Indonesian conglomerate, the ruling CPI(M) sent armed police to disperse protesting villagers; at least 14 were shot dead and dozens wounded. Private property rights in this case provided no protection.

What of the seemingly progressive proposal to award private-property rights to squatter populations, providing them with assets that will permit them to leave poverty behind?[10] Such a scheme is now being mooted for Rio's *favelas*, for example. The problem is that the poor, beset with income insecurity and frequent financial difficulties, can easily be persuaded to trade in that asset for a relatively low cash payment. The rich typically refuse to give up their valued assets at any price, which is why Moses could take a meat axe to the low-income Bronx but not to affluent Park Avenue. The lasting effect of Margaret Thatcher's privatisation of social housing in Britain has been to create a rent and price structure throughout metropolitan London that precludes lower-income and even middle-class people from access to accommodation anywhere near the urban centre. I wager that within fifteen years, if present trends continue, all those hillsides in Rio now occupied by *favelas* will be covered by high-rise condominiums with fabulous views over the idyllic bay, while the erstwhile *favela* dwellers will have been filtered off into some remote periphery.

[….]

We have yet, however, to see a coherent opposition to these developments in the twenty-first century. ... At this point in history, this has to be a global struggle, predominantly with finance capital, for that is the scale at which urbanisation processes now work. To be sure, the political task of organising such a confrontation is difficult, if not daunting. However, the opportunities are multiple because, as this brief history shows, crises repeatedly erupt around urbanisation both locally and globally, and because the metropolis is now the point of massive collision – dare we call it class struggle? – over the accumulation by dispossession visited upon the least well-off and the developmental drive that seeks to colonise space for the affluent.

One step towards unifying these struggles is to adopt the right to the city as both working slogan and political ideal, precisely because it focuses on the question of who commands the necessary connection between urbanisation and surplus production and use. The democratisation of that right, and the construction of a broad social movement to enforce its will is imperative if the dispossessed are to take back the control which they have for so long been denied, and if they are to institute new modes of urbanisation. Lefebvre was right to insist that the revolution has to be urban, in the broadest sense of that term, or nothing at all.

This is an abridged version of a text that was originally published in the *New Left Review*, September–October 2008. For the full version see: http://newleftreview.org/II/53/david-harvey-the-right-to-the-city.

1 Robert Park, *On Social Control and Collective Behavior*, Chicago, 1967, p. 3.
2 Hilde Nafstad et al., 'Ideology and Power: The Influence of Current Neoliberalism in Society', *Journal of Community and Applied Social Psychology*, Vol. 17, No. 4, July 2007, pp. 313–27.
3 Mike Davis, *City of Quartz: Excavating the Future in Los Angeles*, London and New York, 1990.
4 Marcello Balbo, 'Urban Planning and the Fragmented City of Developing Countries', *Third World Planning Review*, Vol. 15, No. 1, 1993, pp. 23–35.
5 Friedrich Engels, *The Housing Question*, New York, 1935, pp. 74–77.
6 Engels, op. cit., p. 23.
7 David Harvey, *The New Imperialism*, Oxford, 2003, chapter 4.
8 Usha Ramanathan, 'Illegality and the Urban Poor', *Economic and Political Weekly*, 22 July 2006; Rakesh Shukla, 'Rights of the Poor: An Overview of Supreme Court', Economic and Political Weekly, 2 September 2006.
9 Kelo v. New London, ct, decided on 23 June 2005 in case 545 US 469 (2005).
10 Much of this thinking follows the work of Hernando de Soto, *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*, New York, 2000; see the critical examination by Timothy Mitchell, 'The Work of Economics: How a Discipline Makes its World', *Archives Européennes de Sociologie*, Vol. 46, No. 2, August 2005, pp. 297–320.

**David Harvey is Distinguished Professor at the PhD Program in Anthropology at City University New York Graduate Center.**

# MEGA-PROJECTS IN NEW YORK, LONDON AND AMSTERDAM

**Susan S. Fainstein compares three large scale development initiatives in New York, London, and Amsterdam.**

During the most recent decade we have witnessed the mounting of very large development projects (mega-projects) in European and American cities. After a hiatus during the 1990s, brought on by the real estate bust early in the decade, major cities have responded to the pressures of the global economy by using very big, mixed-use developments as attractors of multinational business and sites for new housing. There is a striking physical similarity among the schemes, irrespective of the city in which they are located. At the same time they differ in social outcomes and planning processes, reflecting the level of commitment that the host city has towards social equity. The three to be discussed in this article are Atlantic Yards in Brooklyn, New York City; Stratford City and the larger Thames Gateway of which it forms a part, in London; and Amsterdam South (Zuidas).

By the start of the new century all three cities had converted their economic base from heavy reliance on seaport and manufacturing activities to finance, business services, tourism, and creative industries. This transformation of function had forced a restructuring of spatial relations, resulting in the growth of

office, entertainment, and luxury housing districts, as disused industrial and riverside structures were recycled, and glamorous new spaces, often designed by world-famous architects, became the hallmarks of economic success. In London and New York they form part of a more comprehensive planning process than in the recent past. In Amsterdam, where comprehensive planning has always reigned, there has been a rethinking of spatial strategies away from the compact city towards a polycentric model. All three cities must deal with escalating housing prices and have incorporated housing into the new projects, claiming the residential component as an equity measure. They differ, however, in the extent to which they intend to provide affordable units and to which physical and social goals are tied together.

### Atlantic Yards, New York

The Atlantic Yards project forms part of a grand vision for New York presented by the Mayor's Office as PlaNYC2030. This document represents the first effort at a masterplan for the city since the John Lindsay mayoralty of the 1970s. To its credit, the plan emphasises development in all five boroughs of the city, promotes the creation of affordable housing, and calls for environmentally sensitive measures. But, while parts of it reflect sensitivity to neighbourhood concerns, its major projects utilise huge sums of public money and tax forgiveness for endeavours that radically transform their locations, stir up neighbourhood opposition, and threaten to sharpen the contrast between the haves and have-nots. The concerns of the plan are restricted to land use and development; it does not link these initiatives to education, job training and placement, or social services.

The plan for Atlantic Yards did not originate within the city government, but instead was brought to it by a development firm, Forest City Ratner Companies (FCRC). FCRC had already built three large projects in downtown Brooklyn and was the principal developer working in that borough. Atlantic Yards, like the other mega-projects discussed in this essay, was the outcome of a public-private partnership. Unlike the others, it was going up in an area that already was densely inhabited, although the bulk of the project was being built over railway goods yards. Also different from the others, the project did not originate in a publicly sponsored plan, but instead was the consequence of a developer's initiative. The project, as it currently stands, reflects the form of developer-led planning that has characterised New York's construction projects since the 1970s, and the reluctance of the city and state to start projects unless a developer is already committed.

### Thames Gateway, London

Unlike the mayors of New York and Amsterdam, the Mayor of London has little authority over the day-to-day management of the city. Thus, his principal focus is on strategic planning and transportation. In terms of the former, he must rely on the borough authorities and a bewildering array of development partnerships to implement his guidance. Both because of the pressures upon him to produce development and his desire to leave a mark on the city despite his limited powers, Ken Livingstone, the first Mayor of London after the creation of the Greater London Authority, put considerable energy into regeneration schemes. The anti-growth sentiments within the suburban areas that surround London in all directions but the East mean that the major thrust of new programmes is eastward. This is justified on the grounds that East London represents the most deprived part of the city, thereby standing to benefit most, and that it contains numerous underutilised sites.

The eastward development of London has been labelled the Thames Gateway and billed as the largest development project in Europe. It extends 40 miles (64 kilometres) from Canary Wharf in the East End of London into the counties of Essex and Kent, covering 16 local authority districts. Goals set forth by the central government included 160,000 housing units, with 35 per cent classified as affordable; the creation of 180,000 new jobs; improvement in the skills levels of residents; access to high-quality health care, and 53,000 hectares (131,000 acres) of green space protected and enhanced.[1] The scheme involved both redevelopment of existing occupied or obsolete areas and growth on greenfield sites. In its London section it covered some extremely poor districts, while further out in the suburban counties it covered quite affluent settlements. The time frame involved was considerable – although the goals were ostensibly to be met by 2016, 40 years was a more realistic estimate for the entire Gateway. Construction, however, would be rapid within the western area where the Olympic Park and associated facilities were going up for the 2012 Games.[2] The overall objective was the development of 'sustainable communities' and a decentralisation of business activity from the present core in Westminster and the City of London.

### Zuidas, Amsterdam South

In Amsterdam, as in London, planning and housing development nest within the context of planning guidelines and financial flows emanating from the national government. Considerable power, however, rests at the city level, where, because no single party dominates, consensus is the rule. There is less reliance on private for-profit developers for housing construction than in London and New York, and, as in London, the construction of social housing relies on the activities of non-profit housing associations. Amsterdam, however, resembles both London and New York in depending on private investment for office development and in requiring office developers to contribute public benefits in return for the right to build.

Amsterdam Zuidas involved the largest amount of office space of the developments discussed in this text. A number of the office blocks were already mostly built, not according to a plan, but opportunistically as a result of firms seeking convenient space outside the crowded city core. They went up with little relation of one to another. Many were bold architectural statements, but the area as a whole was incoherent, cold, and unfriendly to pedestrians. The ambitions of the planners were to retrofit an existing single-use area so as to create an urbane, multifunctional space. The challenge was particularly daunting because this district was divided by a multi-lane motorway and railroad tracks that, like the rail yards in Brooklyn, precluded pedestrian traffic and prevented design coherence. The proposed solution was extremely expensive – a 1.2-kilometre-long tunnel to accommodate both the road and railroad tracks. Amsterdam Zuidas was already the largest office development in the Netherlands with 248,600 $m^2$ (2.7 million square feet) built, or under construction. The national government envisioned it becoming an area that would allow Amsterdam to compete with Paris, Frankfurt, and Milan for global city functions. The municipality responded with a plan for the area due South of the centre that included housing, retail, educational and cultural facilities. However, only the office structures were built. Now the municipal government, with financial participation by the central government, was seeking to realise the vision of a multifunctional scheme. The project incorporated a larger role for the private sector in providing infrastructure than had previously characterised Dutch projects. The plan was to use the vehicle of a public-private partnership, with the very expensive covering of the rail and highway right-of-ways to be financed by the private sector. Sixty per cent of the costs would be borne by the private participants, who in return would receive development rights for one million $m^2$ (10.76 million square feet) in the newly created space. The public portion involved the city, provincial and national governments.

### Conclusion

The mega-projects described here reflect the evolution of urban redevelopment programmes since their post-World War II beginnings. They also represent a convergence between American and European approaches to government intervention in the built environment as embodied in private-sector involvement and market orientation.

At the same time, the European schemes, while incorporating a neo-liberal concern with competitiveness, manifest greater governmental direction and commitment to egalitarian goals.

The contemporary mega-projects discussed here indicate that public-private partnerships can be a vehicle for the provision of public benefits, including job commitments, cultural facilities and affordable housing. They also show, however, that such projects are risky for both public and private participants, must primarily be oriented towards profitability, and typically produce a landscape dominated by bulky buildings that do not encourage urbanity, despite the claims of the projects' developers.

In London and Amsterdam, where to some extent a social-democratic ethos still prevails, more is being asked from developers than is the case in New York. Also, the direct governmental contribution to housing is larger, because the national governments play a much larger role in financing affordable housing development. Even in these cities, however, everything depends on profitability of the market-driven parts of the project. There are only three forms of construction that can generate big profits: luxury residences and hotels, large-footprint office towers and shopping malls. Thus, what we can expect to see in both European and American cities are projects with similar design characteristics and product mixes, usually outside the old urban core and lacking the layering of old and new, small and big, that gives central cities their ambiance and opportunities. The requirements in all three projects for affordable housing and jobs represent a minimal commitment to socially just policies, but the primary orientation is to profitability and competitiveness. The extent to which the gains from increased competitiveness are spread throughout society depends on the size of the direct governmental commitment to public benefits. This is greatest in the Netherlands, where the welfare state, albeit shrunken, lives on. It is least in the United States, where the small size of national expenditures on housing and social welfare means that low-income people must depend almost wholly on trickle-down effects to gain from new development.

This text was published previously in issue 783 of the International Journal of Urban and Regional Research, 2009.

1 UK Department of Communities and Local Government, 2006.
2 Editors' note: this essay was written before the completion of the Olympic Park in 2012.

**Susan S. Fainstein is Senior Research Fellow at the Harvard Graduate School of Design.**

# LEARNING TO FALL IN LOVE

**Edgar Pieterse highlights why Brazil's urban policy has set an important precedent for others to follow.**

I'll come clean. I'm profoundly envious at the capacity of Brazilians to do just about everything with flair and panache. Rewind to the dramatic waves of colour that filled Brazilian streets when citizens (with diverse and divergent agendas) decided to give FIFA the proverbial finger in protest against the absurdity of the World Cup investment requirements in terms of cost, extravagance and loss of sovereignty. As our social media and television screens illuminated with surreal admixtures of carnival, political theatre, street battles and militant uprisings, South Africans despaired at their incapacity to pull off the same levels of mass resistance and imaginative protest when the FIFA regime passed through our neck of the woods.

This powerful display of popular revolt was striking, because for years I have been admiring the variety of innovative urban policy and management instruments under construction across Brazil as city governments, citizens and civil society laboured to give effect to the provisions in the Statute of the City. In other words, not only did Brazilians fare much better than most at democratising their cities, but now they also seem to be singular in changing

the rules of engagement when it comes to hosting beauty-pageant-like mega-events. Democratic envy was definitely in order.

Brazil's urban policy innovations include a willingness to tackle the thorny issue of landownership by introducing new legal criteria that stipulate that the social value of property trumps private rights. A provision that is exclusively in the realm of dreams and fantasy for South Africans labouring under the effects of colonial-Apartheid practices of land dispossession and the concomitant concentration of wealth in the hands of the white minority.

Another dimension of the Brazilian approach has been the profoundly important legal acknowledgement that irregular and informal ways of building cities are a fact of contemporary life and need to be understood and supported – i.e. regularised – if cities are going to come to terms with their own essence. It has taken democratic South Africa more than a decade to come to this conclusion as reflected in the Breaking New Ground policy adopted in 2004. But until now the government remains tentative and fearful to give full expression to this commitment. The dominant urban policy approach in South Africa since 1994 has been to see informal settlements as an aberration that needs excising through the provision of freestanding public housing; a model that could only be realised on the peripheries of cities in mono-functional settlements devoid of public life, social infrastructure, and economic activity. It was, and remains, a profoundly top-down model in which the government bestows its munificence on a 'grateful' citizenry. This legacy stands in sharp contrast to the implicit Brazilian confidence in the capacity and power of ordinary citizens to take control of the consolidation and incremental formalisation of their neighbourhoods, connected with intelligent design.

In this regard it is instructive to cite the impressive campaign of the São Paulo municipality to run a national competition – Renova SP – to secure the proposals and services of interdisciplinary teams, led by architects, to address the unique conditions of *favelas* in the city. Significantly, the purpose of the competition was to promote innovative design proposals on the explicit assertion that auto-constructed communities reflect a form of tenacious urbanism that should be acknowledged and respected, with an eye to incorporating its logics into proposals for consolidation, informed by the opinions and desires of the residents themselves.[1] Despite the fact that South Africa has processed well over 3.2 million public housing opportunities since 1994, it is inconceivable that architects or other urban designers are ever enrolled in these processes. Instead, South Africa remains wedded to a Fordist roll-out model of poorly designed, poorly constructed, and anti-contextual public housing, making an already difficult context a lot worse.

This example underscores a profound cultural and epistemic difference between the Latin and African contexts. Brazil, and most other Latin American countries, comes from a tradition in which urbanism is fused in the cauldron of architecture, design, philosophy and social theory. In the African context, design-based disciplines are generally invisible but also disconnected from thought about the social and political life of cities. As a result, Latin urbanists see the city as a coy lover; a sensual challenge that can only be engaged through a subtle mixture of paying careful attention, seduction, experimentation, and a deep commitment to understanding and supporting it to realise its full potential. In contrast, African urbanists perceive the city as a stubborn, naughty and irredeemable stepchild in need of stern discipline and paternalistic/authoritarian guidance.

It is for this reason that it is absolutely consistent for many Brazilian city governments to recognise the importance of slum upgrading, public culture and social infrastructure in activating the energies of neighbourhoods and the city at large. According to Teresa Caldeira, the penetration of democracy can be seen in the degree to which living conditions of people in the peripheries have improved: 'In spite of continuing poverty, in the past decades urban infrastructure and the material quality of space in São Paulo have improved considerably, thus bettering the conditions of the life of the poor in the improved peripheries.'[2] This in turn, she points out, has given rise to a number of rogue and unpredictable cultural practices, especially among the youth in Brazilian cities.

Of course I am not as naïve as to believe that Brazilian cities have got it all figured out, or that any of the suite of urban reform measures instituted by the Statute of Cities work perfectly. I accept the conclusions drawn by Edesio Fernandes on the remaining challenges surrounding participatory budgeting, masterplanning processes to concretise social zoning, slum upgrading and so forth.[3] Yet, the vibrant Brazilian experiment in democratic and inclusive city building remains profoundly important for debates in South Africa and other members of the BRICS axis. A brief update on contemporary developments in South Africa in the urban domain will clarify this assertion.

In 2012, the National Planning Commission unveiled a twenty-year plan for South Africa. The plan asserts:

Reshaping South Africa's cities, towns and rural settlements is a complex, long-term project requiring major reforms and political will. It is, however, a necessary project given the enormous social, environmental and financial costs imposed by existing spatial divides. […] Transforming human settlements is a large and complex agenda requiring far-reaching policy changes and shifts in household, business and government practices. Planning for transformation happens within an uncertain context and requires foresight, resilience and versatility, as well as updated information and continually revised knowledge.'[4] This statement reflects a coming of age in the urban policy debates in South Africa. In its wake, the national government commissioned the preparation of the Integrated Urban Development Framework. This policy is likely to make a strong case for a number of the elements of the Brazilian model to be indigenised in the South African context, alongside a strong push for reorienting urban policy to foster resilient and inclusive cities as a central strand in the national efforts to foster a green economy.

It is envisaged that city-wide, long-term planning and management instruments such as growth management strategies will have to be produced for all major cities and towns. These will have to articulate spatial frameworks, infrastructure plans, land assembly strategies, and resource efficiency targets connected to innovative financing tools. It is self-evident that the Brazilian experience with masterplanning and social zoning will prove instructive for South Africa.

These macro frameworks at the city-wide or regional scale will need to be reinforced by neighbourhood-level planning and community management systems. Since citizens will be central to the formulation of these, public investments will be required to engender citizen skills in spatial literacy, budget interpretation and community project management. Again, the now deeply entrenched methodologies of community-driven planning and management in many Brazilian *favelas* can offer crucial insights. Moreover, South Africa will have to draw heavily on the rich tradition of participatory design that has become the hallmark of radical incrementalism across many Brazilian and Latin American cities such as Medellín and Rio de Janeiro. My hunch and hope is that such exposure could make the difference in changing the mindsets of South African policy makers and citizens so that they too can fall in love with their imperfect cities.

1 For details on the competition and its outcomes, see São Paulo Municipality, (2011) *Renova SP. Concurso De Projetos De Arquitetura E Urbanismo*, Series: Novos Bairros de São Paulo, São Paulo Municipality, 2011.

2 Teresa Caldeira, 'Imprinting and Moving Around: New Visibilities and Configurations of Public Space in São Paulo', *Public Culture*, Vol. 24, No. 2, 2012, pp. 385–419.

3 Fernandes (p. 298) argues that participatory budgeting '… have not called into question the exclusionary nature of the overall land and urban development model, especially as they have not significantly supported the strengthening of a more inclusive framework for land governance.' At a more superficial level, they could also be argued to have become overly bureaucratised and performative. See: E. Fernandes, 'Participatory Budgeting Processes in Brazil – Fifteen Years Later', in: Kihato, C. et al (eds.) *Urban Diversity. Space, Culture and Inclusive Pluralism in Cities Worldwide*. Washington DC & Baltimore, Woodrow Wilson Centre Press & John Hopkins University Press, 2010.

4 National Planning Commission, *Our Future – Make it work. National Development Plan 2030*. Pretoria, National Planning Commission, The Presidency, 2012, p. 47, p. 289.

**Edgar Pieterse is Professor at and Director of the African Centre for Cities at the University of Cape Town and presently a Fellow at Stellenbosch Institute for Advanced Studies.**

Bolsa Família helped increase the share of the middle class population from 38% in 2003, to 55% in 2011. Between 1993 and 2011 GINI levels both in Rio and Brazil have also fallen.

# EFFICIENT OR SOCIABLE CITIES?

**As cities become more complex, Richard Sennett explores the social and cultural dynamics of change in the contemporary city.**

This is an age of cities, a time when the mass of people in the world live in cities of a size never seen before in human history. The new city of 15 million or more people, like Shanghai, São Paulo, Mumbai, or Mexico City, has transformed the politics, economics, infrastructure and culture of everyday existence. Yet, as in the past, urbanites now have two basic desires: they want cities that are efficient, and they want cities full of life.

The need for efficiency comes into conflict constantly with the desire for sociability. The quest for efficiency aims at balance and harmony. Sociability in cities involves complex mixtures of people with diverging interests; they have to negotiate their relationships day by day, and the results are messy.

The distinction between efficient and sociable is particularly acute for a huge class of people to whom urbanists seem indifferent. This is the class that is neither poor nor bourgeois, the *classes moyens*, as French sociologists call them, or the lower-middle-class in English terms: small shopkeepers and salesmen, clerks and other low-level bureaucrats, skilled manual labourers. These are the people for whom efficiency means a safer, healthier environment than that of the dramatically poor. But they are just on the edge of experiencing a better-quality life; the spectre of poverty, which is just below them, which they may have just left, is haunting. This is the life evoked by Louis-Ferdinand Céline in the novel *Voyage au Bout de la Nuit* [Journey to the End of the Night], or by Truffaut's film *Les Quatre Cents Coups* [The 400 Blows]. The experience of an efficient and workable everyday life feels fragile. Class consciousness puts those two words, efficient and fragile, together.

The sociability bred of this fragility is often hostile to those both above and below, and inward-turning. Sociologists label this kind of outlook *ressentiment*, a combination of resentment and withdrawal, and it possesses a right-wing political sting; numerous studies show that *ressentiment* animates racial prejudices, hostility to immigrants. *Ressentiment* is not urbane. And literally so, groups motivated by this passion have, as Michel de Certeau has documented, practised an intensely local form of excluding those below. But I'm convinced that it is not inevitable for people newly emerged from poverty, or living a cut above it. The physical conditions in which the *classes moyennes* live can orient people in a different, more positive, more integrated way.

As a visitor to Rio de Janeiro, I have been struck by how much of the city belongs

**THE OTHER SIDE**
Lagoa is an affluent neighbourhood in Rio's south zone which displays the city's dense urban typology framed and contained by its natural contours.

to the *classes moyennes*. Particularly due to the growth of this class in recent years, poor people have moved just one or two steps up if they exit poverty – just as was the case in New York a century ago in boroughs like Queens and the Bronx, or today in the expansion of North-West Shanghai. Given the peculiar fabric of Rio, an archipelago of different socio-economic communities, the issue of integration is particularly difficult in terms of city planning. I am no expert on Rio, but I'd like to offer some ideas about how a more integrated approach could join efficiency to sociability.

### The Edge Condition

Integration happens at the edges between communities. Urbanists have in general been very bad at creating edges of the 'open' sort; instead, the great urban growth spurt of recent decades has strengthened segregation. This is true not only of gated residential communities, but of places to work or consume – the office campus, the shopping mall – which are mono-functional in character. Segregation of function has become the planner's yardstick of efficiency.

Edges come in two forms: the boundary and the border. Rigid controls over movement from country to country are meant to enforce the boundary condition, while the Schengen arrangements in Europe, for example, are meant to create more open borders between its member states. At the urban level, motorways create boundaries between communities, while spine-streets create more open borders. A more provocative distinction is the difference between a cell wall and a cell membrane. A cell wall serves mainly to conserve vital ingredients within the cell, while a membrane functions to exchange ingredients between a cell's in- and outside. But the membrane is not, as it were, an open door; this edge is both porous and resistant, that is, it both admits new matter and also resists loss of its own substance.

Porosity and resistance combined tell something about the concept of integration, a concept all-important in urban planning. Too often, well-meaning planners confuse integration with erasure, a clearing flat of urban space, destroying traces of the past, leaving no physical markers of difference in the present. This is the story of much urban renewal in twentieth-century North American cities, and twenty-first century cities in China. Erasure does not stimulate integration, on the contrary; the result, in Shanghai as much as Chicago, has left people, particularly in the *classes moyennes*, feeling exposed and vulnerable.

An alternative way to create a living edge is embodied in the work that urbanists did on the reconstruction of Beirut after its long civil war ended in the 1990s. The 'green line' in the city was a zone where warring Christians and Muslims had fought each other for 14 years; by the war's end, it had reverted to trees and weeds. The planners made use of this natural resurgence to carve out a shaded market extending along the line of former combat; the buildings on either side were left to local or family development. The market structures were themselves temporary constructions, quickly put up or taken down. People out shopping could mix with their former enemies, but as easily recoil and withdraw. Such an uneasy truce exemplifies the urban membrane, which was both porous and resistant. Admittedly this was an extreme case, but the membrane logic is a good one, and urbanists should apply it to more ordinary urban scenes. Could it apply in Rio, for instance, to the relations between the *favelas* and surrounding neighbourhoods?

### Complex Public Space

Our received notions of public space are one reason membrane creation has failed. The design of good urban space is an endless subject, which has preoccupied me my entire professional life. I want to focus just on one aspect, one which relates to mono-functional and multiple-function spaces. In principle, an overlay of functions creates public space: the thicker the collage of functions, the more public a space becomes. To understand why this is so, we might contrast the agora of ancient Athens to modern Times Square in New York.

The agora, a six-hectare (nearly 15 acres) open space, contained all the elements of Athenian civic life in plain sight. The ancient Athenian visiting his banker at a table set out in the agora could see and hear the proceedings of a court of justice occurring in the same space, separated only by a low wall; if so minded he could shout out his own comment on the accused while counting his money. Several small shrines and a temple lining the agora permitted him to pray if the spirit moved him; he could dine and flirt in several private rooms whose doors gave directly onto the agora. Not only was this public space multi-functional, it was ambiguously defined, the edges between activities more borders rather than boundaries; the Athenian was constantly obliged to interpret what was happening in the agora.

Modern Times Square in New York on the other hand does not require that effort of interpreting. It has become pure tourist space, which is to say, its recent 'renewal' development has made the centre of New York's central public space mono-functional, devoted to tourists serviced by cheap hotels and restaurants, and, of course, popular theatres. There are other sorts of commercial and civic activities near Times Square, but they are out of sight, occurring within heavily-guarded buildings. Few native New Yorkers frequent Times Square: it has become a void at the heart of the city.

The recipe for a live public realm in cities is more complicated than might first appear. Multiple functions generate ambiguity. Ambiguity requires interpretation. Interpretations are unstable in time. This recipe requires much unpacking. I simply want to stress that a live public space is not efficient, if we think of efficiency as a steady-state condition.

### Quality of Life

I have touched on a number of principles of urban integration, in edges and public space. They stimulate exchange at the borders between territories, and they engage people in experiencing and interpreting complexity. These principles have a particular application to the fabric of ordinary life – that is, to people who are neither wealthy nor impoverished. They secure the quality of life by supplying, as it were, rules of engagement. They provide positive, sociable orientations to the city for people who may feel that class-bound kind of fragility that results in *ressentiment*.

---

**Richard Sennett is Professor of Sociology at the London School of Economics and Political Science and University Professor of the Humanities, New York University. He is Chair of the Advisory Board of LSE Cities and a member of its Governing Board.**

# THE STATIC AND THE KINETIC

**Rahul Mehrotra argues that only kinetic cities and processes will be able to respond to challenges of future of Indian cities.**

Cities in South Asia are characterised by physical and visual contradictions that coalesce in a landscape of incredible pluralism. Historically, particularly during the period of British colonisation, the distinct worlds active within these cities – which could be economic, social or cultural – occupied different spaces and operated under different rules. The aim of their separation was to maximise control and minimise conflict between these, often opposing, worlds.[1] However, today these worlds share the same space, but they understand and use it differently.[2] Massive waves of distressed rural migration during the latter half of the 1900s triggered their convergence into a singular, but multifaceted entity. Combined with the inadequate supply of urban land and the lack of the creation of new urban centres, this resulted in extremely high densities in existing cities. With the emergence of a post-industrial, service-based economy, the intertwining of these worlds within the same space is now even greater.[3]

In this post-industrial scenario, cities in India have become critical sites for negotiations between elite and subaltern cultures. The new relationships between social classes in a post-industrial economy are quite different from those that existed in state-controlled economies.[4] The fragmentation of the economy in service and production sectors has spatially resulted in a new, bazaar-like urbanism, which has woven its presence throughout the entire urban landscape.[5] This is an urbanism created by those outside the elite domains of the formal modernity of the state. It is a 'pirate' modernity that has to slip under the laws of the city simply in order to survive, without any conscious attempt at constructing a counterculture.[6] With the retreat of the state in the course of the 1980s and 1990s (in different measures across South Asia), the space of the 'everyday' is where economic and cultural struggles are articulated. These common spaces have been largely excluded from the cultural discourses on globalisation, which focus on elite domains of production in the city.[7]

Today, Indian cities are comprised of two components occupying the same physical space. The first is the Static City. Built of more permanent material such as concrete, steel and brick, it forms a two-dimensional entity on conventional city maps and is monumental in its presence. The second is the Kinetic City. Incomprehensible as a two-dimensional entity, this is a city in motion – a three-dimensional construct of incremental development. The Kinetic City is temporary in nature and often built with recycled material: plastic sheets, scrap metal, canvas and waste wood. It constantly modifies and reinvents itself. The Kinetic City's building blocks are not pieces of architecture, but spaces that hold associative values and that support their residents' lives and livelihoods. Patterns of occupation determine its form and perception. It is an indigenous urbanism that has its particular 'local' logic. It is not necessarily the city of the poor, as most images might suggest; rather it is a temporal articulation and occupation of space, which not only creates a richer sensibility of spatial occupation, but also suggests how spatial limits are expanded to include formally unimagined uses in dense urban conditions.[8]

The Kinetic City presents a compelling vision that potentially allows us to better understand the blurred lines of contemporary urbanism and the changing roles of people and spaces in urban society. The increasing concentrations of global flows – of money and goods – have exacerbated the inequalities and spatial divisions of social classes. In this context, an architecture or urbanism of equality in an increasingly unequal economic world requires looking deeper to find a wide range of places to mark and commemorate the cultures of those excluded from the spaces of wealth and economic boom. These don't necessarily lie in the formal production of architecture, but often challenge it. Here the idea of a city is an elastic urban condition, not a grand vision, but a 'grand adjustment'.

The Kinetic City can be seen as the symbolic image of the emerging urban South Asian condition. The processions, weddings, festivals, hawkers, street vendors and slum dwellers or *Katchi Abadis*, all create an ever-transforming streetscape – a city in constant motion where the very physical fabric is characterised by continuous change. The Static City, on the other hand, dependent on architecture for its representation, is no longer the single image by which the city is read. Thus architecture is not the 'spectacle' of the city, nor does it even comprise the single dominant image. In contrast, festivals such as Diwali, Dussera, Navrathri, Muhharam, Durga Puja, Ganesh Chathurthi and many more, have emerged as the spectacles of the Kinetic City. Their presence in the everyday landscape is pervasive and dominates the popular visual culture of Indian cities. Festivals create a forum through which the fantasies of the subalterns are articulated and even organised into political action.

[…]

What then is our cultural reading for the Kinetic City, which now forms a greater part of our urban reality? If the production or preservation of architecture or urban form has to be informed by our reading of cultural significance in this dynamic context, it will necessarily have to include the notion of 'constructing significance' both in the architectural as well as conservation debates.[9] In fact, an understanding that 'cultural significance' evolves, will truly clarify the role of the architect as an advocate of change (versus a preservationist who opposes change) –

one who can engage with both the Kinetic and Static City on equal terms. Under such conditions, a draining of the symbolic import of the architectural landscape leads to a deepening of ties between architecture and contemporary realities and experiences. This understanding allows architecture and urban typologies to be transformed through intervention and placed in the service of contemporary life, realities, and emerging aspirations. Here, the Static City embraces the Kinetic City and is informed and remade by its logic.

The phenomenon of bazaars in the Victorian arcades in the old Fort Area, Mumbai's Historic District, is emblematic of this potential negotiation between the Static and Kinetic City. The original use of the arcades was two-fold. First, they provided spatial mediation between building and street. Second, the arcades were a perfect response to Bombay's climate. They served as a zone protecting pedestrians from both the harsh sun and lashing rains. Today, with the informal bazaar occupying the arcade, its original intent is challenged. This emergent relationship of the arcade and bazaar not only forces a confrontation of uses and interest groups, but also demands new preservation approaches. For the average Mumbai resident, the hawker provides a wide range of goods at prices considerably lower than those found in local shops. Thus, the bazaars in the arcades characterise the Fort Area area's thriving businesses. For the elite and for conservationists, the Victorian core represents the old city centre, complete with monumental icons. In fact, as the city sprawls, dissipating the clarity of its form, these images, places, and icons acquire even greater meaning for preservationists as critical symbols of the city's historic image. Consequently, hawking is deemed illegal by city authorities that are constantly attempting to relocate the bazaars.

The challenge in Mumbai is to cope with the city's transformation, not by inducing or polarising its dualism, but by attempting to reconcile these opposite conditions as being simultaneously valid. The existence of two worlds in the same space implies that we must accommodate and overlap varying uses, perceptions, and physical forms. The arcades in the Fort Area possess a rare capacity for reinterpretation. As an architectural solution, they display an incredible resilience; they can accommodate new uses while keeping the illusion of their architecture intact.

One design solution might be to re-adapt the functioning of the arcades. They could be restructured to allow for easy pedestrian movement and accommodate hawkers at the same time. They could contain the amorphous bazaar encased in the illusion of the disciplined Victorian arcade. With this sort of approach, the key components of the city would have a greater ability to survive, because they could be more adaptable to changing economic and social conditions. There are no total solutions in an urban landscape characterised by both permanence and rapid transformation. At best, the city could constantly evolve and invent solutions for the present through safeguarding the crucial components of our historically important 'urban hardware'. Could 'Bazaars in Victorian Arcades' become an authentic symbol of an emergent reality of temporary adjustment? Clearly the Static and Kinetic Cities go beyond their obvious differences to establish a much richer relationship, both spatially and metaphorically, than their physical manifestations would suggest. Here affinity and rejection are simultaneously played out – in a state of equilibrium maintained by a seemingly irresolvable tension.

The informal economy of the city vividly illustrates the collapsed and intertwined existence of the Static and Kinetic Cities. The *dabbawalas* (literally translated as 'tiffin men') are an example of this relationship between the formal and informal, the static and kinetic. The tiffin delivery service, which relies on the train system for transportation, costs approx Rs.200 (US$4) per month. A *dabbawala* picks up a lunch tiffin from a house anywhere in the city. Then he delivers the tiffin to one's place of work by lunchtime and returns it to the house later in the day. The *dabbawalas* deliver hundreds of thousands of lunch boxes every day. The efficiency of Mumbai's train system, the spine of the linear city, enables this complex informal system to work. The *dabbawalas* have innovatively set up a network that facilitates an informal system to take advantage of a formal infrastructure. The network involves the *dabba*, or tiffin, being exchanged up to four or five times between its pickup and return to the house in the evening. The average box travels about 30 km (18 miles) each way. It is estimated that around 200,000 boxes are delivered around the city per day, involving approximately 4,500 *dabbawalas*. In economic terms, the annual turnover amounts to roughly 50 million Rupees or about a US$1 million.[10]

Entrepreneurship in the Kinetic City is an autonomous and oral process that demonstrates the ability to fold the formal and informal into a symbiotic relationship. The *dabbawalas,* like several other informal services that range from banking, money transfer, courier, and electronic goods bazaars, leverage community relationships and networks and deftly use the Static City and its infrastructure beyond its intended margins. These networks create a synergy that depends on mutual integration without the obsession of formalised structures. The Kinetic City is where the intersection of need (often reduced to survival) and unexploited potentials of existing infrastructure give rise to new innovative services. The trains in Mumbai are emblematic of a kinetic space, supporting and blurring the formal and the informal, slicing through these worlds while momentarily collapsing them into a singular entity. Here the self-consciousness about modernity and the regulations imposed by the Static City are suspended and redundant. The Kinetic City carries local wisdom into the contemporary world without fear of the modern, while the Static City aspires to erase the local and re-codify it in a written 'macro-moral' order.[11]

The urbanism of Mumbai represents a fascinating intersection where the Kinetic City – a landscape of dystopia, and yet a symbol of optimism – challenges the Static City – encoded in architecture – to reposition and remake the city as a whole.[12] The Kinetic City forces the Static City to re-engage itself in present conditions by dissolving its utopian project to fabricate multiple dialogues with its context. Could this become the basis for a rational discussion about coexistence? Or is Mumbai's emergent urbanism inherently paradoxical, and are the coexistence of the Static and Kinetic Cities and their particular states of utopia and dystopia inevitable? Can the spatial configuration for how this simultaneity occurs actually be formally imagined? The Kinetic City obviously cannot be seen as a design tool, but rather as a demand that conceptions of urbanism create and facilitate environments that are versatile and flexible, robust and ambiguous enough to allow this kinetic quality of the city to flourish. Perhaps the Kinetic City might be the tactical approach to take when dealing with the urbanism of the temporary, of high densities and intensities? In spite of these many potential disjunctures, what this reading of the city does celebrate is the dynamic and pluralist processes that make the urban Indian landscape. Within this urbanism, the Static and Kinetic cities necessarily coexist and blur into an integral entity, even if momentarily, to create the margins for adjustment that their simultaneous existences demand.

This article is based on an essay entitled 'Negotiating the Static and Kinetic Cities' published in A. Huyssen, ed., *Urban Imaginaries*, Durham, NC, 2007.

1 See A. King, *Colonial Urban Development: Culture, Social Power and Environment*, London, 1976.
2 This unprecedented shift in demography has not only transformed the social make-up of Indian cities, but has perpetuated an incomprehensible landscape charged with intense dualities, which are cultural, social and economic. This new demography consist mainly of rural migrants, who form the urban poor and bring with them new skills, social values and cultural attitudes that not only determine their ability to survive in an urban environment, but are in the process also altering the very structure of the city. The presence of the urban poor makes another crucial divide explicit – between those that have access to the formal city and the infrastructure that goes with it, and those that don't and therefore lack the basic amenities.
3 See also P. Shetty, *Stories of Entrepreneurship*, New Delhi, 2005.
4 See P. Chaterjee, 'Are Indians becoming bourgeois at last?', in *Body. City. Siting contemporary culture in India*, Berlin, 2003.
5 The idea that distinct manufacturing zones and spatial segregation have now shifted to services and manufacturing occurring in fragmented areas in the city networked through the efficient transportation system the city offers.
6 See R. Sundaram, 'Recycling Modernity: Pirate electronic cultures in Inida', in *Sarai Reader: The Cities of Everyday Life*, New Delhi, 2001.
7 Chaterjee, op. cit.
8 Weddings are an example of how the rich too are engaged in the making of the Kinetic City. The lack of formal spaces for weddings as the cultural outlet for ostentation have resulted in public open space being colonized temporarily as spaces for the spectacle of elaborate weddings. Often very complex wedding sets are constructed and removed within twelve hours. Again the margins of the urban system are momentarily expanded.
9 For examples of works / projects that have attempted to translate these ideas, see R. Mehrotra, 'Planning for Conservation – Looking at Bombay's Historic Fort Area, Future Anterior', *Journal of Historic Preservation, History, theory and Criticism*, Vol.1, No. 2, 2004.
11 See V. Venkatraman and S. Mirto, 'Network/Design', in *Domus*, No. 887, 2005.
12 See R. Khosla, *The Loneliness of a Long Distant Future – Dilemmas of Contemporary Architecture*, New Delhi, 2002.

**Rahul Mehrotra is Professor of Urban Design and Planning and Chair of the Department of Urban Planning and Design, Harvard Graduate School of Design.**

# BUSES: NOT SEXY BUT THE ONLY SOLUTION

**As Rio marks a massive investment in Bus Rapid Transit systems, Enrique Peñalosa explains how mobility and equity are closely connected.**

Urban mobility is perceived by developing country cities' leaders as their most pressing and difficult challenge. Citizens spend hours in traffic. Seeking to overcome it, powerful and wealthy citizens create odious symbols of inequality, such as the exclusive road lanes for high-level bureaucrats in Moscow, or the private helicopters over São Paulo. Inequality is indeed the main obstacle to effective mobility solutions, as I will propose here.

Mobility is peculiar: different from other challenges such as education or housing, it tends to get worse as societies become richer. It is particular as well, in that solutions are largely counter-intuitive: as it seems to us the Sun circles around the Earth, it seems that more road infrastructure will solve traffic jams. And, of course, both perceptions are equally flawed.

Population growth, and all that comes with a higher income per capita, such as smaller households, larger living spaces per person, and an increase in the percentage of non-residential buildings, will make Latin American cities double or treble their built-up area over the next 50 years. It will make most Asian cities grow more than 1,000 per cent and African ones more than that, albeit over a longer period. How will mobility be solved in these giant cities?

### BRT: not just a cheaper alternative

Clearly it will not be car based; public transport is the only option. But, which public transport? In the age of maglev high-speed trains, rail appears to be the obvious, modern solution. Rail manufacturers' enormous marketing and public relations budgets – and sometimes that is a euphemism – often counting on their embassies' support – reinforce this view. However, the only possible means to provide mass public transport to all inhabitants of a developing country city are bus-based systems. While São Paulo recent underground lines have cost US$250 (R$560) million per kilometre, Rio is constructing Bus Rapid Transport (BRT) lines for less than US$10 (R$22) million per kilometre. Operational costs are also lower for BRTs than for rail systems.

The advantages of bus over rail are not just a matter of cost. While underground systems have some advantages over BRT, the opposite is true as well. In terms of capacity BRT is very similar to an underground system: Bogotá's TransMilenio moves up to 47,000

**THE NATURAL AND THE ARTIFICIAL**
Topography defines the conditions of everyday life in Rio de Janeiro where built form adheres and invades the natural landscape

passengers/hour/direction (PHD), which is more than all of the world's underground lines, except for a handful. And there are many known ways to optimise and increase TransMilenio's speed and capacity, which have not yet been implemented. Guangzhou's BRT moves up to 37,000 PHD, more than all Chinese underground lines, except for Beijing's line number 2.

Speed-wise express BRT lines are similar to an underground on roads without traffic lights; and it does not cost much to construct underpasses for BRT at intersections. It is usually easy to add a passing lane at stations, in order to have express routes with buses stopping only every several stations. Undergrounds cannot have express routes unless a second parallel line is built. More importantly, BRT journey times can be shorter for several reasons. When changing lines, underground passengers have to alight, walk hundreds of metres and wait for another train; BRT buses can change lines without wasting time getting off and walking to the other line. In order to carry any given amount of passengers, many more buses than trains are required. Therefore, BRT frequency is much higher, particularly at off-peak hours. This means, unpleasant waiting time at the station is shorter.

Underground stations need to be at least one kilometre apart from each other for efficiency's sake; BRT stations can be efficiently located 500 metres apart. This means walking time from the origin of the trip to the station and from station to destination is shorter. Some BRT systems, such as Guangzhou's, operate buses in ordinary mixed-traffic streets and the BRT trunk-way in the same route; which means buses can collect passengers close to their trips' origin and leave them close to their destinations.

Public transport users are exemplary citizens who contribute to reduce congestion. They should be rewarded with low-cost, high-quality travel. Why send them underground? It is much more pleasant to travel on the surface, enjoying natural sunlight and views of the city. It is also preferable not to spend time in long underground corridors and stairways, which, even when they are mechanical, often break down.

### If buses are so wonderful, why weren't they preferred in London?

If buses are so wonderful, why weren't they preferred in London, Paris or New York? Why aren't they preferred in developing country cities? Before getting into that, let's be clear that my position is that all public transport is good and undergrounds are formidable, wonderful systems. The issue is what to do when the mobility challenge is vast and the resources to tackle it are scarce. At any rate, what should be done first?

When the first undergrounds were built, in the late 1880s, buses did not exist. As Dinesh Mohan points out, into the first decades of the twentieth century streets were still cobblestoned, like they were during Roman times.[1] A ride on solid rubber wheels would have been rough. And the technology for pneumatic tires, which could support heavy vehicles, only appeared in the 1930s. Therefore, buses only fully entered the scene around 1940. Then they were the new thing, sexier than trams, which they replaced all over the world in a couple of decades. But of course, by then, what was truly sexy was the private car. Another reason for underground systems was that historic centres of cities, such as Paris or London, had narrow, winding streets. The only way to move fast across them was by underground.

Developing country cities are different. They usually have large arterial roads. And they do not have a unique, well-defined centre. They have many centralities, the importance of which is ever-changing, often waning. They are well suited for BRT. But they have middle-class and high-income citizens whose political priority is to obtain more and more road space for their cars. They do not want to give up an inch of road space, existing or newly built, to buses. At the top of their demands to government are more road infrastructure and undergrounds. In very unequal developing country societies, higher-income citizens rarely have the intention of using the undergrounds they demand. They only see them as a means to reduce traffic by putting others underground, namely, bus riders.

In more advanced developing countries, high car-ownership levels hide the fact that many households own a car, but cannot drive to work: relatively few in an office building have access to parking. The fact is that a large majority of those who drive to work in developing country cities have a higher income than most public transport users. Giving in to the pressures of the powerful society members who drive to work is what governments tend to do. It is politically easy to spend billions on undergrounds and other rail systems, which do not take space away from cars. However, it is neither the best technical, nor the most democratic option.

If there are alternatives, it is not technically correct to prioritise a system that will only solve mobility for a small minority of a city's population, leaving the majority stranded. Not even the largest underground and suburban rail networks in developing country cities reach 15 per cent of their populations; in fact most undergrounds in those cities move less than 5 per cent of their population. Such is the case with Rio's two underground lines whose share in the city's daily trips is only 1.78 per cent. Building one underground line is expensive, and the cost per passenger increases with each additional line, as they are prioritised by demand: each additional line costs the same per kilometre, but moves progressively less passengers per kilometre.

### Suburban rail?

Most developing country cities have relatively unused, often abandoned, rail lines that are said to offer a great opportunity for the operation of urban and suburban passenger rail service. Suburban rail differs from undergrounds in that it has lower acceleration and longer distances between stations, and train carriages are designed for mostly seated passengers. While suburban rail investment costs can be low, operational costs per passenger are high. When an overground urban rail line is in service, it has to be fenced off, creating an inconvenient barrier through urban areas, which also tend to deteriorate and lower the values of surrounding areas, and sometimes even foster crime. Negotiating road intersections can be complex and expensive for overground urban rail. In fact, when such urban rail corridors exist, BRT works better than rail. High-capacity BRT systems have a much higher PHD than any suburban rail line; buses can come in and out of the rail/BRT trunk-way. And it is much simpler to solve the issue of intersections with the road network with bus underpasses, or even traffic lights.

As for light rail or tram systems: they are pretty and usually more stable than buses, but they costs more, have lower capacities and are operationally less flexible.

Before investing in rail, it seems logical to first use the existing road infrastructure to accommodate public transport. It does not take an MIT PhD; a committee of 12-year-olds would also conclude within half an hour that the best way to use scarce road space is with exclusive lanes for buses. An exclusive BRT lane may move up to 70 times more passengers than a lane used by cars. To clarify the issue, let´s imagine that a catastrophe leaves us with enough fuel for only 5 per cent of vehicles in a city: to whom would we allocate it? For survival, we would necessarily allocate it to trucks and buses. Now, if what is scarce is not fuel, but rather road space? Shouldn´t we do likewise?

History shows how societies accustomed to flagrant injustices do not perceive anything wrong with them. That was the case with everything the French Revolution changed, before it happened. In the United States women could not vote for President less than 100 years ago, and African Americans had to give up their seats to white citizens in a bus until the middle of the twentieth century, and good, ordinary people and great thinkers saw nothing wrong with it. Now, a bus slowed down by traffic is as flagrantly undemocratic as women not being able to vote. If all citizens are equal before the Law, as all Constitutions state in their first article, a bus with 100 passengers has a 100 times more right to road space than a car with one.

Road space, the space between buildings, is probably the most valuable physical asset of a city. How should we distribute it between pedestrians, cyclists, public transport and cars? Regardless of what is done, it should be clear it is neither a technical issue, nor a legal one: it is a political issue.

### A different solution, a different way of thinking

Implementing solutions to this political issue requires first a different way of thinking; a democratic way of thinking that truly assumes all citizens are equal and have the same right to public assets such as road space.

New technologies such as maglev should make rail systems faster and less costly. Bus systems will benefit from new technologies too. Driverless cars are anticipated in a few years; but driverless buses, operating on established routes, exclusive lanes in the case of BRTs, are simpler to implement and should arrive sooner. Advances in battery technologies should also make electrical buses more efficient and less costly.

New urban design can accommodate buses in creative ways: hundreds of thousands of hectares of new cities to be built in the developing world over the next few decades could incorporate thousands of kilometres of bus-only roads along greenways, which would constitute formidable, low-cost, high-quality, public transport systems.

Let's imagine a city in which clean, well-lit, safe buses, operating on exclusive lanes anywhere where there is traffic, with underpasses to avoid traffic lights, are found everywhere at all times. Above all, public transport trip times in such a bus system would be much shorter than those by private car, which would be discouraged not just by longer travel times, but also by a gamut of parking restrictions. Such a public transport system would achieve that most difficult challenge in a developing country city: get higher income citizens to use it alongside their fellow citizens. Most importantly, such a system is economically possible for any city. As a symbol, the sight of a bus moving swiftly along a bus-only lane as expensive cars stand still in traffic is a picture of democracy in action.

1 Dinesh Mohan, *Mythologies, Metros & Future Urban Transport*, Indian Institute of Technology, TRIPP Report Series, 2008.

**Enrique Peñalosa is President, Institute for Transportation & Development Policy and was Mayor of Bogotá from 1998 to 2001 where he introduced the TransMilenio bus system.**

# CITIES AS AN ACT OF WILL

**Andy Altman offers a detailed account on how legacy-first and design-led planning was implemented in London for and after the 2012 Games.**

Cities are an 'act of will' wrote Edmund Bacon, the acclaimed city planner from Philadelphia, in *Design of Cities* (1976). But whether the building of cities is an act of great imagination or brutal disregard depends on a complex interplay of forces – political, ideological, social, economic, environmental.

As an act of twenty-first-century city building, the 2012 Olympic Games in London created one of the largest urban regeneration projects in Europe, and – to my mind – one of the most imaginative. It offers a unique lens to take stock of the craft of city building. Many may be inclined to dismiss the London Olympics as being an exceptional event that holds few lessons for cities other than those wealthy enough to bid for hosting the Olympics. This would be a mistake. While mega-events are massively capitalised, singular events, it is precisely these unique circumstances of urban transformation on a grand scale and at hyper speed that allow us to observe the dynamic of city-building that would otherwise take decades to realise. How London used the Olympics to further its

ambition for urban growth, and organised public and private resources and roles, institutional structures, masterplanning and design processes to align vision and action has applicability to a broad range of urban intervention as these are the ingredients, in one form or another, of urban transformation.

In the current epoch of cities, during which hundreds of new, large-scale city-building enterprises will be required to absorb exploding rural-urban migration and population growth, our understanding of the city-building craft is an urgent matter. How we build cities not only has an immediate impact on the lives of millions of people who are and will become city dwellers, but the morphological legacy and settlement patterns that will be imprinted in the coming decades will have a profound effect on the ability of future generations to meet the challenge of global sustainability and resilience. The space between where ideas for city building are generated and their implementation through political, planning, financial, regulatory and institutional structures is often where there is a disjuncture between theory and practice, between urban visions and political realities, between what is planned versus what is actually built. It in this context that the London 2012 Games become instructive.

## London 2012: an aspiration for city building

Despite some vociferous critics, the London 2012 Olympics have been acclaimed as a successful four-week celebration of sport, a spectacular show and a shining moment of British pride. But the more profound, lasting impact will be their role in shifting the trajectory of London's growth. The regeneration of a 600-acre (243-hectare) brownfield site will join the history of London's totemic moments of city-building where its pattern of growth was irrevocably transformed. The Olympics have been focused in East London, one of the historically most deprived areas of the city where surveys of urban distress from the late-nineteenth century – the famous Booth Poverty Maps of 1898–99 – are largely unchanged a century later; an area of the city that has suffered the familiar saga of urban deterioration resulting from de-industrialisation, concentrated poverty, and the destruction of the urban fabric through the de-urbanising forces of urban renewal.

Against this backdrop, the 2012 Olympics were merely an actor – albeit a transformative one – in a larger urban narrative the origins of which lie in the last four decades of vision, policy, and tenacity to reverse this declining condition. Through the vicissitudes of markets, politics and changing ideas of urban planning and 'good urban form' there has been a determination that for London to successfully grow it must 'move East'. With vast areas of lower-value land sitting only minutes from central London, its potential cried out to be unlocked through the building of infrastructure and the assembly of land.

The term 'legacy', often posited as a post-hoc rationalisation to justify massive investment in sports facilities and infrastructure, was just the opposite in London's case. Here, the Olympics were the tangible manifestation of a clear vision for urban transformation in search of a means to be realised. Vision, politics, urban ideas, economic realities and the land constraints of a global city colluded to produce the Olympic Park in East London.

While not a scientific accounting, a cartoon version tracing key moments in the lineage of the Olympic Park might go something like this:

- The 1947 Town and Country Act and the Abercrombie Plan established a Green Belt that circumscribed London's expansion, forcing inward regeneration when London grows;
- The development of the Docklands and Canary Wharf throughout the 1980s and 1990s, re-positioned obsolete East London waterfront lands as a new financial centre to secure London's competitive economic position in Europe and globally;
- The Urban Task Force, a government study chaired by Lord Richard Rogers in the late 1990s, which advocated for compact urban form, building on brownfield land near good public transport hubs and the value of urban regeneration, especially along the river Thames;
- The election of Ken Livingstone in 2000 as the first elected Mayor of London represented the beginning of a devolution of power to London that has been strengthened during the mayoralty of current Mayor Boris Johnson. Both supported the regeneration of East London as their highest priority for urban reinvestment, representing a critical continuity of vision and commitment.
- The development and consent for the Stratford Master Plan, spearheaded by visionary developers Stuart Lipton and Nigel Hugill in 2004, before the bid was even won, signalled the potential of this part of East London for major investment from the private and public sector, an area ripe for regeneration.

The salient point is that the decision to build London's Olympic Park in the East London community of Stratford was taken in the larger context of London's plan for growth and was a deliberate strategy to rebuild the fabric of a city that had been ruptured. Building a new, compact piece of urbanism on a brownfield site connected to a dense network of upgraded transport infrastructure, with the ambition to integrate it physically, economically and socially with the adjacent communities may seem obvious, but that is not the case in too many new cities that are being built and rebuilt in the rapidly urbanising world.

## How was it achieved?

When London was awarded the Olympics in 2015, among the first priorities was to acquire the 600-acre (243-hectare) future site of the Olympic Park. At the time it was largely blighted industrial and derelict land, some of which had in fact been used as the dumping ground for debris from the devastation East London suffered from bombings in World War II. Sitting on top of a dense transport network, the regeneration potential of the area was stymied by the hundreds of disparate freehold interests that needed to be assembled to unlock the latent opportunity. The Olympics provided the political will and capital to undertake the task that had previously been seen as too difficult.

Concomitant with organising the land was the need to establish the institutional architecture to deliver the Olympic Park, both for Games and for their legacy. This seemingly mundane matter would be the unsung hero of the success of the Olympics. The alignment of national, metropolitan (mayoral) and local political interests, and the creation of well-designed, focused delivery structures, was critical to get right from the outset of the project. And there was no time to waste with an immovable deadline looming large for the opening ceremony of the Olympics. Multiple central government ministries, national sports bodies, the Mayor of London, the four local 'host boroughs' that owned land or were adjacent to the Olympic Park, and the diverse communities of East London all had to be engaged and, most dauntingly, aligned.

While a vast network of governance and consultation structures were established to coordinate the Olympics enterprise – from the highest level Cabinet Committee chaired by the Prime Minister to local community organisations throughout East London – three principal delivery vehicles were created to deliver the Games:

- The Olympic Delivery Authority (ODA): the infrastructure company focused on the building of the Park and off-site venues. A time-limited organisation with a board of private and public representatives which received the bulk of public funding from central government and the mayor to deliver the facilities for the Games;
- The London Organising Committee of the Olympic and Paralympic Games (LOCOG): the organisation charged with staging the Olympic events, securing sponsors and liaising with the International Olympic Committee (IOC) and other national and international sports bodies;
- The Olympic Park Legacy Company (OPLC), later renamed the London Legacy Development Corporation (LLDC): master developer and landowner of the Olympic Park, focused on the post-Games transformation from event mode to regeneration and attracting investment in the land and venues.

The creation of the OPLC in 2009 (of which the author was its first Chief Executive, eds.) fully three years before the Games, was novel for an Olympic host city and testament to the core regeneration purpose of the Olympics investment. A company jointly owned by the Mayor of London and the national government, and including the representation on its board of the two principal boroughs owning land in the Park – the London boroughs of Hackney and Newham – this unique creation was designed to reflect the delicate balancing of interests and power that needed to be aligned to deliver successful regeneration.

This division of labour among the three entities did not of course recuse the other delivery entities from incorporating legacy considerations into the core of their programme, as this mission was embodied in the ethos of the Olympics enterprise in London. However, the OPLC, with a singular focus on the post-Games agenda of city building was critical to setting and overseeing that vision and ensuring that actions were taken to deliver physical, social and economic regeneration of the Olympic Park, spreading its benefits to surrounding communities. In this way, there could be as seamless as possible integration between the Games and post-Games use of infrastructure, land, buildings and venues.

Crucial to the city-building task was the development of the masterplan that would establish the framework for the GB£6 billion government infrastructure investment to be expended on the site. And key to this were three integrated but distinct phases: the Games Plan, the Transformation Plan (for the transition from Games upon completion) and the Legacy Communities Plan (the long-term plan for the build-out of the site). The strength of London's approach was to conceive these three plans in exact opposite chronology; that is, planning for the site started from the long view of a vision for the future city and then worked back to the requirements of the Games. The starting point was the vision for the future. And this basic premise has profound ramifications for all that was to be planned and built, the main features of which included:

- The creation of a central park of over 200 acres (81 hectares) along the River Lea (following the removal of electricity pylons) that formed the central spine of the site and created the armature around which five future neighbourhoods would be built, very much in keeping with London precedents for the integration of urban parks and built-up areas, such as Victoria Park and Regents Park;
- The building of only those venues that were needed on a permanent basis and would have future uses and constituencies, all other venues would be interim facilities that would be removed to create the sites for the future mixed-use area with homes, schools, shops and places of work;
- Dispersing the venues throughout the site in strategic locations rather than clustering all the facilities in the usual 'sports zone'. In this way the sports venues could become anchors of activity and physical icons integrated with the new neighbourhoods;
- The Olympic Athletes Village, which during Games would host 17,000 athletes, staff and residents, was built to be transformed into the first complete post-Games complex of 3,000 units of housing;
- GB£1 billion invested in upgrading existing rail and bus lines serving the site, including the building of a new international transport centre to accommodate future connections to Europe and immediate connections to London's major transport hub of Kings Cross, which makes central London only a five-minute ride and one-stop away;
- A central energy centre was built with sufficient capacity to service the entire site in legacy as well as having the potential to export energy to surrounding communities;
- An underground network of new sewers, utilities, and telecommunications ducts was built to accommodate future capacity needs.

These basic and interrelated building blocks of the masterplan, and the investment it guided, resulted in about 75 per cent of the total Olympics budget being spent to create a platform for the future city. While distinctive buildings were certainly constructed, such as Zaha Hadid's Aquatics Centre and Hopkins Architects' Velodrome, the main focus of investment was putting in place the prerequisites of a new piece of London.

And this intensity of focus on legacy did not end with the Games: institutions, funding, commercial transactions and community partnerships were established to ensure a smooth transition from an Olympic Park for Games to its post-Games urban life. Importantly, both commercially and symbolically, all of the permanent sports venues have secured future uses, thus removing the fear of 'white elephants'

that had plagued so many mega-event cities and stymied their future development by standing vacant. The unfolding transition also included:

- A masterplan and design guidelines that establish the framework (adopted and approved by the planning authority) for the future development of 8,000 new homes and creating certainty required for private sector investment and community confidence;
- An additional GB£500 million of funding from central government was dedicated to the post-Games transformation of the Park to retrofit venues, prepare sites and build open spaces and amenities;
- The Athletes Village's 3,000 units were sold for a mixed-income community, half for affordable housing and half to a private developer for what is now being marketed as London's newest 'cool' residential neighbourhood, East Village;
- The International Broadcast Centre (IBC) and Media Centre, two buildings that together comprise over 100,000 square metres of space and the length of 7 jumbo jets, are being transformed into a new technology hub – iCity – to house British Telecommunications sports studios, a research and teaching centre for Loughborough University, a data centre and an accelerator space for start-ups.

To oversee and manage this complex interweaving of city-building activities, and the choreography of public and private investment and actions that need to be carefully staged, the OPLC was re-engineered and given powers to ensure that the integration of planning and implementation, that proved so essential in the success of the delivery of the Games, was carried through in legacy.

Through national legislation enabling the mayor to create local development corporations, very much a modern version of the government development corporation in the 1970s that spearheaded the first generation of East London's transformation in the Docklands, OPLC was reconstituted as the London Legacy Development Corporation (LLDC) under the Mayor of London's control. It was given not only ownership of the Olympic Park land, but also the planning authority for the Olympic Park and surrounding neighbourhoods under the jurisdiction of local boroughs. This exceptional consolidation of land ownership and planning power, unthinkable in most Western cities too timid to assert such power since the mass urban renewal of the post-World War II era, was agreed to by all levels of national and local government with a common purpose to maintain the regeneration momentum fuelled by the Games. What will be surprising to observers of urban development is that there was virtually no community opposition to the creation of the LLDC and its extraordinary powers.

## The *Convergence* Agenda

London is spatially and socio-economically unequal: it has an affluent West and a more deprived East. Life expectancy drops from 80 years to 73 years as you move eastwards across the city. This dramatic statistic captures the disparity in many social and economic indicators between East London and the rest of the city. The Olympic 'host' boroughs have historically been among the worse off in England. To counteract this grim reality and leverage investment for the Games, local mayors developed the concept of *convergence* as they key driver for change amongst their communities. *Convergence* establishes an aspiration that East Londoners' life chances and opportunities should, at a minimum, be on a par with the average of all of London. Far from being modest, this simple aspiration established bold and comprehensive goals in improving employment, health, education, housing conditions and all the indices of life chances and circumstances that would help ensure that the conditions documented by Booth's Survey a century ago were ameliorated beyond the artificial confines of the Park. And, importantly, it recognised that for genuine regeneration to occur beyond the traditional 'bricks and mortar' of the Park, there had to be a more comprehensive programme of investment and change.

Translating the Convergence Policy to the Olympic Park was as much of a mindset as it was a legislative matter. Every piece of the building of a new piece of city needed to be understood as an asset through which mixture and diversity are promoted. Too often this perspective is compartmentalised as a separate 'programme', as opposed to being a core part of everything that is delivered. To address this, the OPLC adopted an inter-related set of policies to promote convergence, such as:

- Requiring affordable housing (35 per cent of all new housing built on the Park);
- Proactively creating local employment and small business opportunities generated by the venues, such as the Aquatics Centre, so that they are operated by small business enterprises;
- Setting affordable rates for the sports venues for local residents so that the poorest of residents could swim in world-class facilities or attend a football game in the Olympic Stadium;
- Using the International Press, Media Broadcast Centre facilities as a resource to diversify the economy of East London by actively creating a technology hub and connecting this to local community colleges and training for opportunities in the new economy;
- Creating community programming for future activities in the Olympic Park so that the Park would be first and foremost a park enjoyed by local communities, and not solely for tourists;
- Working with Westfield, the largest urban shopping centre operator in Europe, to support of a 'retail academy' to train local residents for service jobs, which has resulted in the majority of positions being filled locally;
- Constructing bridges to connect the Park over canals, roads and railways that divide the site from adjacent communities.

*Ultimately,* the London Legacy Corporation has significantly been able to extend its remit beyond the Olympic Park itself, to ensure the integration of the Park with surrounding communities. On reflection, the role of the agency has been to bridge between vision and action, ideas and institutions, and the integration of the physical, social and economic aspects of diversity and mixture essential to realise successful urbanism. In this case, without the Convergence Agenda the Park could easily become an elite island unto itself, rather than part of an integrated whole: a new piece of London.

What does this mean for Rio 2016? Imaginative city building, and the marshalling of forces necessary to achieve it, is a complex task that too often occurs in silos. The London Olympics story may sound too perfect in attempting to rectify that divide and create the platform to connect imagination with the fine grain of urban form. Time will be the ultimate judge as to whether the foundation will work. Affordable housing and employment policies to ensure diversity could be eroded; design guidelines intended to ensure diversity in the built environment could be discarded at the behest of capital; land could be sold too quickly, in too large swathes for revenue which would obstruct a more diverse city created by many hands over time; the institutions created to steward this precious asset could be prevented from taking the longer view. And, of course, we will look back at today's statistics of the fortunes of East London to measure whether they have genuinely 'converged' or deprivation has simply been pushed further out of sight.

For Rio de Janeiro, as it is mobilises to deliver its legacy of the 2016 Games, the questions of how the investments will lead to greater integration or further segregation of the city are paramount. Will Porto Maravilha evolve to reflect the dynamism of Rio's urbanism, its lively streets, mix of uses and pedestrian-oriented street culture, and not simply become a platform for capital? Will the new, important investments in transport help to heal the North-South divide or serve to further greater sprawl? Will the recent investment in the *favelas* lead not only to improved conditions but greater economic and social integration with the dynamics of Rio's growth?

Hopefully, London's recent experience offers insights for debate.

---

**Andy Altman is Visiting Senior Fellow at LSE Cities, London School of Economics and Political Science. He was Chief Executive of the London Legacy Development Corporation, 2009-2012.**

# DATA

The information on the following pages summarises research undertaken by LSE Cities over the past year. It places Rio de Janeiro in a comparative context with other Urban Age cities, including New York, London, Hong Kong, Mumbai, Johannesburg, Mexico City and São Paulo. The section illustrates the unequal distribution of global urban growth and tracks the speed at which selected world cities are changing and growing. It provides a unique comparative database of twelve cities including urban size and growth rates, inequality and murder rates, water consumption and $CO_2$ emissions. Finally, it identifies the sharp contrasts between residential and employment densities and the varying patterns of mobility and distribution of public transport infrastructure, which are key determinants of social, economic and environmental sustainability.

**RESEARCH TEAM**
Savvas Verdis
Duncan Smith
Adam Towle
Catarina Heeckt
Ömer Çavuşoğlu
Danielle Hoppe

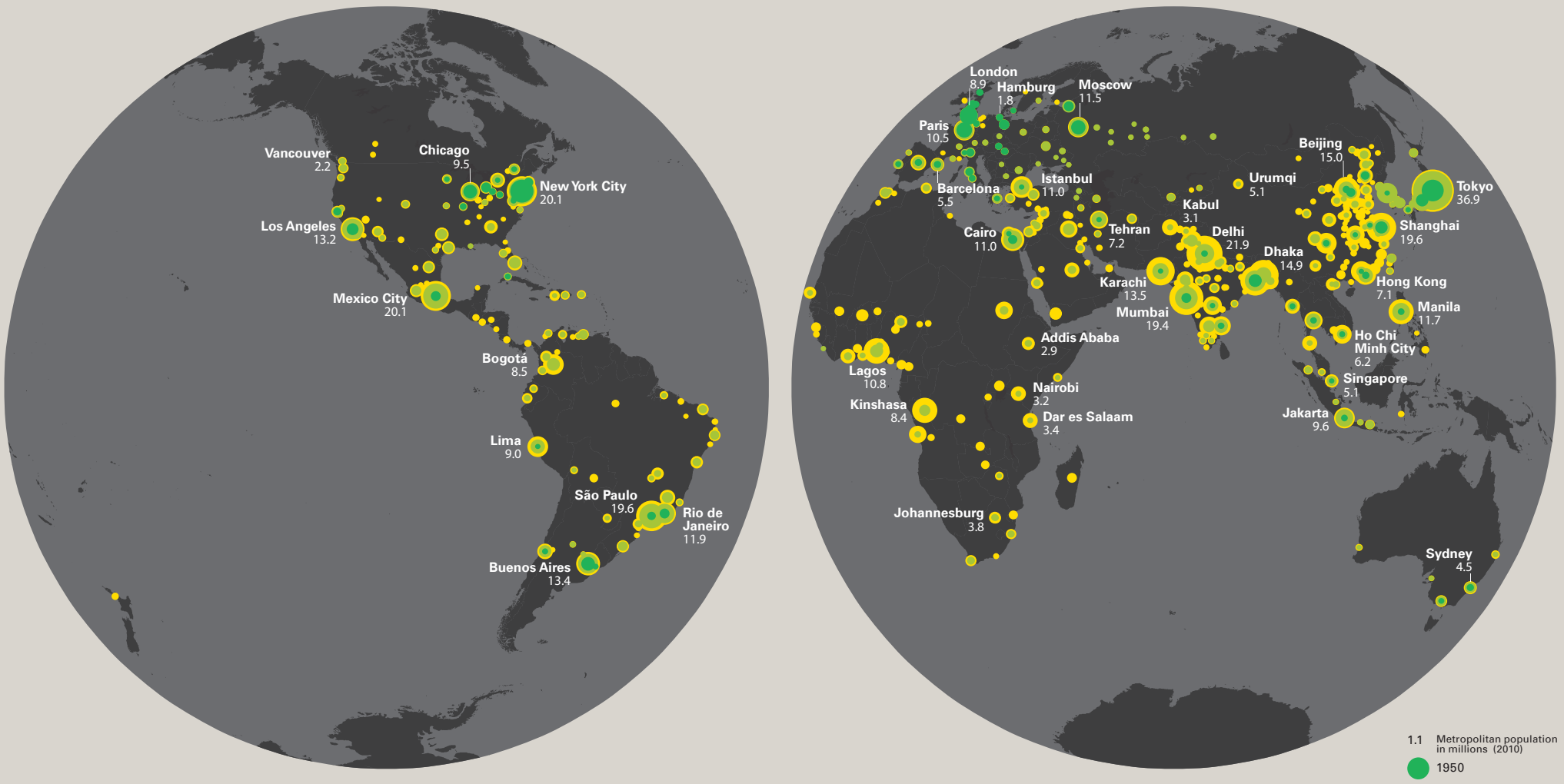
We would like to especially thank the following organisations for their help in accessing key data that are displayed in the following pages.

Barcelona City Council
Bogotá Secretariat of Planning
Geoprocessamento - Port Region Urban Development Company (CDURP), *Rio de Janeiro*
HafenCity Hamburg GmbH
Institute for Transport and Development Policy, *Rio de Janeiro*
Instituto Pereira Passos, *Rio de Janeiro*
MPU Architects, *Rio de Janeiro*
Rio de Janeiro Municipal Olympic Company
Rio de Janeiro Municipal Transportation Department
State of Rio de Janeiro Public Works Company

For full references to data sources, please see: http://rio2013.lsecities.net/newspaper/

# DYNAMICS OF URBANISATION

## WHERE CITIES ARE GROWING




Source: United Nations, Department of Economic and Social Affairs, Population Division (2012). World Urbanization Prospects : The 2011 Revision.

## HOW CITIES ARE GROWING

| City | Country | Projected annual population growth 2010-2025 (%) | (Total) | Annual population growth 1995-2010 (%) | (Total) | Metro population 2010 | Projected average annual real GPD growth 2008-2025* | National median age 2010 | Projected national median age 2025 |
|---|---|---|---|---|---|---|---|---|---|
| Nairobi | Kenya | 6.0% | 193,752 | 5.6% | 98,744 | 3,236,589 | 6.4% | 18.5 | 20.5 |
| Lagos | Nigeria | 5.0% | 537,890 | 5.4% | 320,375 | 10,788,300 | 6.4% | 17.9 | 18.1 |
| Kinshasha | Congo, DRC | 4.8% | 408,002 | 5.8% | 261,502 | 8,415,198 | 6.3% | 17.1 | 18.7 |
| Kabul | Afghanistan | 4.5% | 138,261 | 5.9% | 95,756 | 3,052,000 | 6.5% | 15.6 | 20.8 |
| Addis Ababa | Ethiopia | 4.1% | 119,103 | 2.4% | 51,626 | 2,918,669 | 6.8% | 17.5 | 21.4 |
| Ho Chi Minh City | Vietnam | 3.8% | 233,940 | 4.6% | 168,773 | 6,189,423 | 7.0% | 28.5 | 35.7 |
| Dhaka | Bangladesh | 3.6% | 531,780 | 5.3% | 439,812 | 14,929,647 | 6.2% | 24.0 | 29.7 |
| Beijing | China | 3.4% | 508,880 | 5.4% | 446,293 | 14,999,554 | 6.7% | 34.6 | 39.6 |
| Delhi | India | 3.3% | 733,325 | 5.1% | 635,185 | 21,935,142 | 6.4% | 25.5 | 29.9 |
| Karachi | Pakistan | 3.3% | 446,040 | 4.0% | 335,484 | 13,499,702 | 5.5% | 21.6 | 26.4 |
| Shanghai | China | 3.0% | 589,989 | 5.8% | 606,968 | 19,554,059 | 6.6% | 34.6 | 39.6 |
| Manila | Philippines | 2.6% | 308,262 | 1.6% | 150,170 | 11,653,810 | 4.7% | 22.3 | 25.7 |
| Mumbai | India | 2.4% | 475,659 | 2.4% | 340,809 | 19,421,983 | 6.3% | 25.5 | 29.9 |
| Istanbul | Turkey | 2.4% | 262,923 | 2.9% | 219,170 | 10,952,950 | 4.2% | 28.3 | 33.9 |
| Bogotá | Colombia | 2.2% | 191,113 | 3.7% | 200,570 | 8,502,405 | 3.9% | 26.8 | 31.7 |
| Cairo | Egypt | 2.2% | 247,253 | 0.9% | 88,325 | 11,031,494 | 5.0% | 24.4 | 28.0 |
| Jakarta | Indonesia | 2.2% | 212,796 | 1.0% | 87,205 | 9,629,953 | 5.5% | 26.9 | 31.0 |
| Johannesburg | South Africa | 1.7% | 64,625 | 4.4% | 99,865 | 3,763,095 | 3.5% | 25.2 | 28.4 |
| Mexico City | Mexico | 1.5% | 295,907 | 1.3% | 222,107 | 20,142,334 | 3.9% | 25.9 | 31.5 |
| Chicago | USA | 1.3% | 125,943 | 1.5% | 113,732 | 9,544,691 | 2.2% | 37.1 | 38.9 |
| Barcelona | Spain | 1.2% | 68,181 | 1.7% | 73,033 | 5,487,878 | 2.0% | 40.2 | 46.7 |
| Los Angeles | USA | 1.2% | 164,263 | 1.1% | 125,609 | 13,223,023 | 1.6% | 37.1 | 38.9 |
| São Paulo | Brazil | 1.2% | 235,025 | 1.5% | 246,761 | 19,649,366 | 4.2% | 29.0 | 35.3 |
| New York | USA | 1.1% | 231,188 | 1.2% | 210,773 | 20,104,369 | 1.8% | 37.1 | 38.9 |
| Hong Kong | China | 1.0% | 73,817 | 1.0% | 60,592 | 7,053,189 | 2.7% | 41.1 | 47.2 |
| London | United Kingdom | 1.0% | 88,817 | 0.9% | 67,673 | 8,923,000 | 2.2% | 39.8 | 41.6 |
| Rio de Janeiro | Brazil | 1.0% | 116,937 | 1.1% | 112,849 | 11,867,236 | 4.2% | 29.0 | 35.3 |
| Hamburg | Germany | 0.6% | 10,268 | 0.3% | 5,306 | 1,786,468 | 1.3% | 44.3 | 48.4 |
| Berlin | Germany | 0.4% | 14,576 | 0.0% | -1,421 | 3,450,076 | 1.3% | 44.3 | 48.4 |
| Tokyo | Japan | 0.3% | 115,241 | 0.7% | 223,080 | 36,932,780 | 1.7% | 44.9 | 50.2 |

* Pricewaterhouse Coopers projection using UN urban agglomeration definitions and population estimates.
Data published in 2009 and may not fully reflect the impact of the global economic recession on GDP growth trends.

There are dramatic regional differences in the pace and scale of urban transformations at the global level. The map above charts the size and growth of a selection of world cities with more than a million people from 1950 to 2025. Some of the cities predicted to be among the largest in the world in 2025 were no more than villages and small towns in 1950, while others are barely growing anymore. The acceleration of growth in African and Asian cities and the relative slow-down of urbanisation in Latin America becomes even more evident in the table to the left, which compares a range of past and future growth patterns for a selection of thirty cities.

# HOW CITIES PERFORM

Behind the statistics of global city growth lie very different patterns of urbanisation, with diverse spatial, social and economic characteristics that dramatically affect the urban experience. In addition to standard measures of population growth and the economy, LSE Cities has assembled spatial, social, transport and environmental data from a range of official sources, providing an overview of how twelve selected cities compare to each other on a set of key performance indicators.

The graphic overview of these results highlights some striking differences, especially when it comes to these cities' speed of growth. While Mexico City, Istanbul, São Paulo and New York are growing by more than 200,000 people a year, it is Mumbai that is changing the fastest of the twelve, adding 54 additional residents every hour. In comparison, Hamburg will only gain 1 person per hour, Hong Kong 8, London 10 and Rio de Janeiro 13. Patterns of habitation also differ significantly. While London and New York have similar population sizes, New York has twice as many people per km$^2$, a density level that is dwarfed by Mumbai, where peak densities reach well over 120,000 people per km$^2$. Mumbai also leads on economic growth, having experienced an average annual increase in GVA of 6.7 per cent between 1993 and 2010, even though it is now slowing down. Over the same period, the economies of Johannesburg and Bogotá grew at about half that speed – nevertheless impressive compared to the relatively slow growth for the European cities in this table. Looking at GVA per capita, New York (US$51,337/R$114,728) and London (US$47,313/R$105,735) top the list, followed by Hamburg (US$42,270/R$94,465) and Hong Kong (US$31,340R$70,038). People living in these four cities are many times wealthier, on average, than in other world cities such as Rio de Janeiro and Istanbul (around US$10,000/R$22,348), which in turn are significantly wealthier than the average resident of Mumbai (US$1,550/R$3,464). Despite its low per capita GVA, Mumbai's level of income inequality indicated by the Gini coefficient – a measure of income distribution with a higher number representing greater inequality – is nearly half that of Johannesburg, which is the most unequal of the twelve cities, followed closely by Mexico City, Bogotá, and Rio de Janeiro, with Barcelona and Hamburg being the most equitable. With a murder rate of more than 20 per 100,000 people Johannesburg, Bogotá and Rio are proving to be the most dangerous places to live in. Although this figure has been dropping rapidly in all of these cities, it remains in stark contrast to the situation in Hong Kong, Mumbai, Barcelona, Hamburg, Istanbul and London, which all record less than 2 murders per 100,000 people a year.

Variations in life expectancy have slowly narrowed and residents of nearly all of the Urban Age cities can now expect to live at least to the age of 70, with people in Hong Kong, Barcelona, London, New York and Hamburg enjoying a life expectancy of 80 years or above. A *Carioca* can expect to live to an average age of 75.7 years. The exception is

Measurement years and methodologies used to calculate indicator values may differ between cities and data are not always comparable. For full references to data sources, please see: http://rio2013.lsecities.net/newspaper/.

| | Current population in the city (millions) | Current population in metropolitan region (millions) | City built-up area (%) | Peak Density (people per km$^2$) | Projected growth 2010-2025 (people per hour) | Percentage of the country's population residing in each metropolitan region | GVA per capita (US$) | Percentage of national GVA produced by each metropolitan region | Average annual growth of GVA 1993-2010 |
|---|---|---|---|---|---|---|---|---|---|
| | | | GIS-BASED | GIS-BASED | 2011 | 2011 | 2010 | 2010 | 2010 |
| RIO DE JANEIRO | 6.4 (2010) | 11.8 (2010) | 43.3 | 42,300 | 13 | 6.1 | 10,207 | 10.8 | 2.9 |
| NEW YORK | 8.2 (2010) | 19.0 (2011) | 79.3 | 59,150 | 26 | 6.3 | 51,337 | 8.5 | 2.8 |
| LONDON | 8.2 (2011) | 14.6 (2011) | 59.3 | 27,100 | 10 | 23.9 | 47,313 | 32.8 | 2.9 |
| MEXICO CITY | 8.9 (2010) | 20.1 (2010) | 36.0 | 49,100 | 33 | 17.1 | 7,158 | 19.3 | 2.9 |
| JOHANNESBURG | 4.4 (2011) | 7.2 (2007) | 18.0 | 42,400 | 7 | 14.8 | 7,981 | 24.9 | 3.7 |
| MUMBAI | 12.5 (2011) | 21.0 (2011) | 46.6 | 121,300 | 54 | 1.8 | 1,550 | 3.8 | 6.7 |
| SÃO PAULO | 11.3 (2010) | 19.9 (2010) | 56.0 | 29,700 | 27 | 10.5 | 18,116 | 33.6 | 3.2 |
| ISTANBUL | 13.9 (2012) | 13.9 (2012) | 20.0 | 77,300 | 30 | 18.2 | 9,368 | 27.2 | 3.1 |
| HONG KONG | 7.1 (2010) | 7.1 (2010) | 30.2 | 111,100 | 8 | – | 31,340 | – | 3.6 |
| BARCELONA | 1.6 (2012) | 4.8 (2012) | 32.0 | 56,800 | 7 | 11.8 | 22,369 | 13.8 | 2.4 |
| BOGOTÁ | 6.8 (2011) | 7.9 (2011) | 20.3 | 55,800 | 22 | 15.9 | 5,430 | 26.2 | 3.6 |
| HAMBURG | 1.8 (2012) | 5.1 (2012) | 65.1 | 13,500 | 1 | 3.8 | 42,270 | 5.1 | 1.4 |

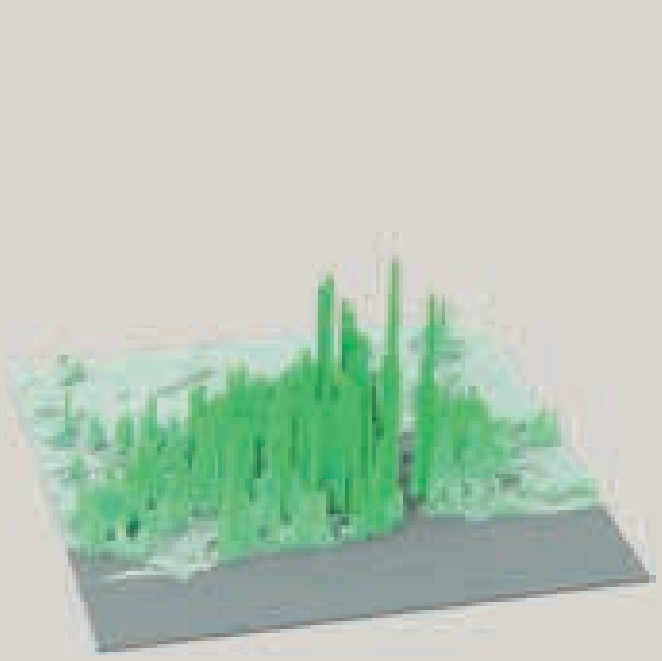
Johannesburg at just 51 years, reflecting the HIV-related drop in life expectancy experienced across the country. Demographic differences are more pronounced when it comes to patterns of age distribution. While more than a third of the residents of Mexico City, Johannesburg, Mumbai, and Bogotá are under the age of 20 – with Rio close behind at 26.5 per cent - this drops to a fifth or less for Hong Kong, Barcelona and Hamburg, which will have to adjust to the socio-economic and cultural consequences of this increasing generational imbalance.

Environmental performance indicators highlight divergent consumption patterns and lifestyles, although it is important to note that these figures mask significant variations in consumption within individual cities. On the whole, Bogotá has the smallest consumption footprint, using just 114 litres of water per person per day, compared to 572 litres in New York, 349 in Johannesburg and 302 in Rio de Janeiro, and generating less waste than all other cities except for Mumbai. London and São Paulo generate the most, at 558 and 550 kg per person per year respectively. Six of the twelve cities emit more than 5 tonnes of $CO_2$ per person, ten times as much as a resident of Mumbai and twice as much as someone in Rio de Janeiro, São Paulo, Barcelona or Bogotá. Variation in car ownership is equally drastic. At 465 cars per 1,000 inhabitants São Paulo has the second highest motorisation rate of all cities (over 50 per cent more than Rio at 310), although improvements in public transport over the past few years are slowing the trend. Hamburg has more than twice as many cars per 1,000 inhabitants as New York, Johannesburg, Bogotá or Istanbul and ten times more than Hong Kong or Mumbai. Mumbai, however, is catching up fast, with an increase of 35 per cent in vehicles on the city's roads in the past 5 years alone. The rapid motorisation rate is contributing to the already severe air pollution the city experiences: at 132 µg/m3, Mumbai recorded the highest annual PM10 levels, compared to just 21 in New York, 23 in Hamburg and 38 in São Paulo. Yet the majority of Mumbaikars still get around the city on foot or by bicycle, making it the city with the highest non-motorised modal share of the twelve (56 per cent). In contrast, only 11 per cent of all trips in New York are made by walking and cycling, with most people relying on the city's nearly 600-km-long rail network, buses and taxis. Looking at rail network systems for other cities provides an indication of the development of their public transport infrastructure, although it should be noted that many cities in this table have substantial BRT networks, which are not accounted for here. London and Barcelona have by far the most extensive rail network (1,393 km and 1,121 km respectively), with the average rail network length for all cities just above 500 km.

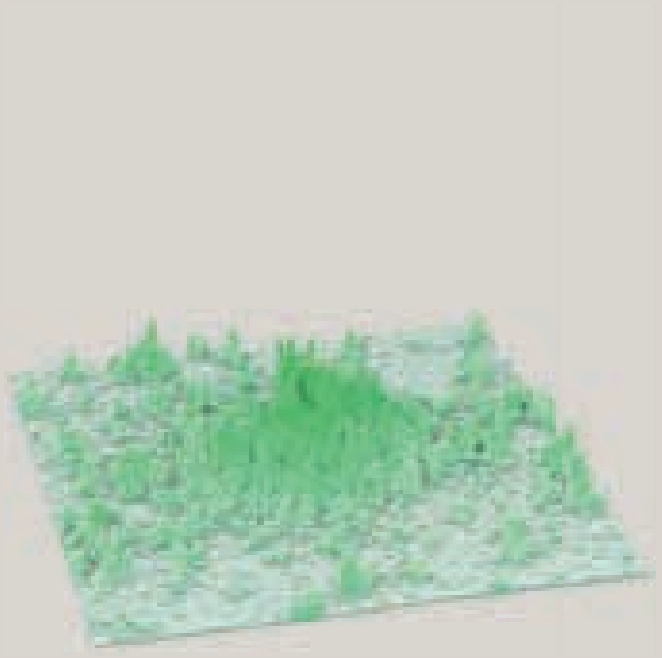
| Income inequality (measured by the Gini index) | Life expectancy (years) | Percentage of the population under 20 | Murder rate (homicides per 100,000 inhabitants) | Percentage of daily trips made by walking and cycling | Rail network system length (km) | Car ownership rate (per 1,000 inhabitants) | Daily water consumption (litres per capita) | Annual waste production (kg per capita) | Annual $CO_2$ emissions (kg per capita) | Annual mean PM10 Levels (µg/m3) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | GIS-BASED | | | | | 2008/2009 |
| 0.54 2011 | 75.7 2010 | 26.5 2008 | 23.1 2011 | 37.1 2003 | 356 | 310 2011 | 301 2009 | 525 2009 | 1.9 2005, $CO_2$e | 64 |
| 0.53 2001 | 80.9 2010 | 25.7 2008 | 5.6 2009 | 11.2 2008 | 579 | 209 2008 | 572 2009 | 529 2009 | 6.5 2010, $CO_2$e | 21 |
| 0.36 2010 | 80.6 2010 | 23.8 2009 | 1.6 2009 | 26.0 2011 | 1,393 | 331 2009 | 167 2010 | 558 2009 | 4.9 2011 | 29 |
| 0.56 2005 | 76.3 2010 | 34.6 2010 | 8.4 2009 | – | 353 | 294 2011 | 178 2010 | 489 2009 | 5.9 2000 | 52 |
| 0.63 2009 | 51.0 2005 | 32.9 2007 | 26.6 2011 - GAUTENG PROVINCE | 31.1 2007 | 581 | 206 2000 - GAUTENG PROVINCE | 349 2008 | 401 2009 | 5.0 2007 | 66 |
| 0.35 2004 | 68.1 2001 | 36.3 2001 | 1.4 2009 | 56.3 2007 | 477 | 36 2006 | 208 2009 | 209 2009 | 0.4 2008, $CO_2$e MAHARASHTRA STATE | 132 |
| 0.51 2011 | 76.3 2010 | 31.0 2010 | 11.9 2011 | 33.8 2007 | 275 | 465 2011 | 220 2009 | 550 2009 | 1.4 2005 | 38 |
| 0.43 2003 | 72.4 2000 | 31.0 2012 | 1.7 2011 | 45.0 2008 | 163 | 145 2012 | 195 2010 | 432 2009 | 3.2 2006 | 59 |
| 0.53 2007 | 82.5 2010 | 20.1 2010 | 0.7 2009 | 44.7 2002 | 247 | 56 2009 | 220 2011 | 529 2009 | 5.5 2011 | 50 |
| 0.34 2011 - SPAIN | 82.3 2010 | 16.7 2012 | 1.1 2011 | 48.0 2006 | 1,121 | 366 2011 | 163,2 2012 | 474 2009 | 2.3 2011, $CO_2$e | 32 |
| 0.54 2011 | 75.5 2010 | 35.1 2005 | 23.7 2010 | 17.0 2008 | 0 | 173 2011 | 114 2009 | 290 2009 | 2.2 2011, $CO_2$e | 77 |
| 0.32 2008 | 79.8 2011 | 17.1 2012 | 1.0 2012 | 40.0 2008 | 842 | 474 2010 | 145 2010 | 453 2009 | 6.6 2010 | 23 |

# RESIDENTIAL DENSITY

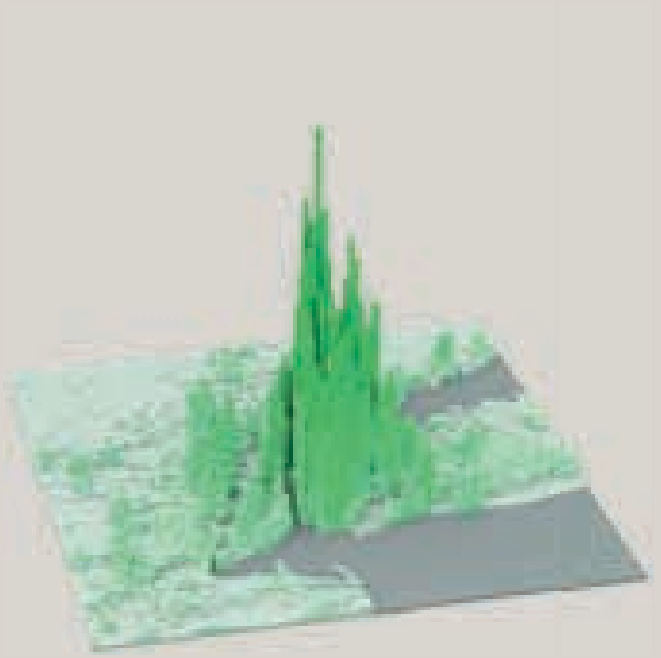
## RIO DE JANEIRO
peak 42,300 pp/km²



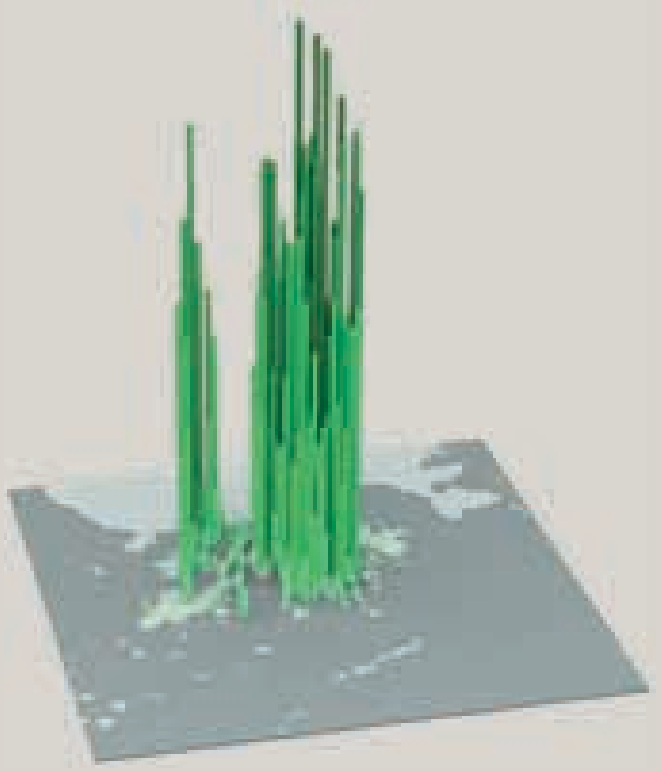
## LONDON
peak 27,100 pp/km²



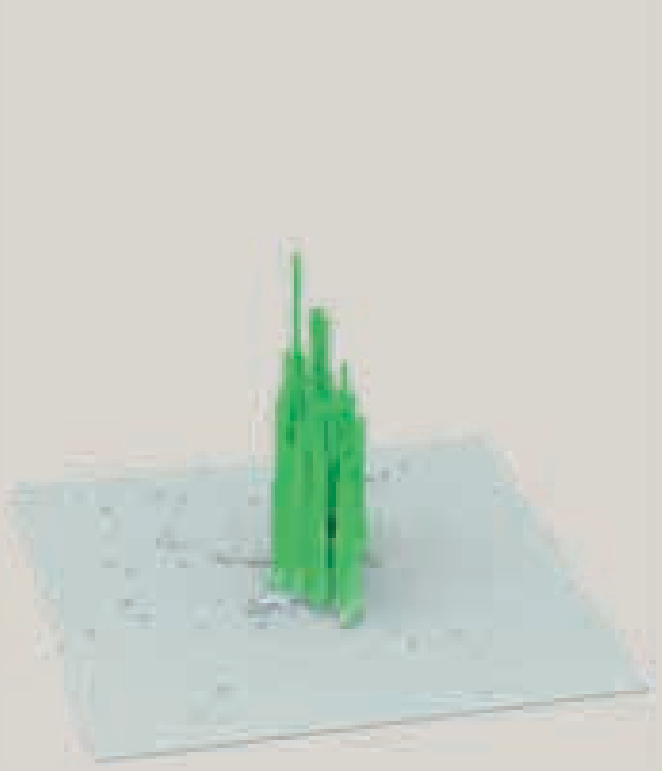
## NEW YORK
peak 59,150 pp/km²



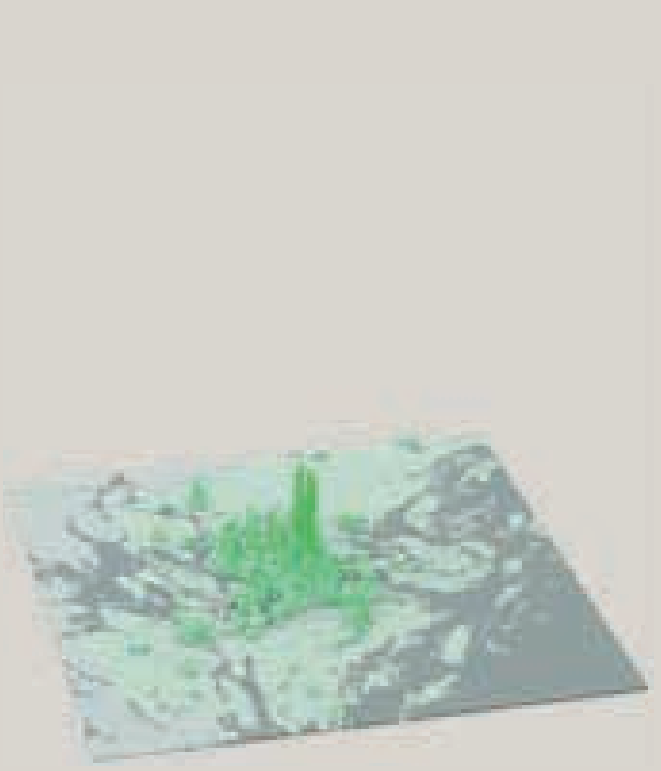
## HONG KONG
peak 111,100 pp/km²



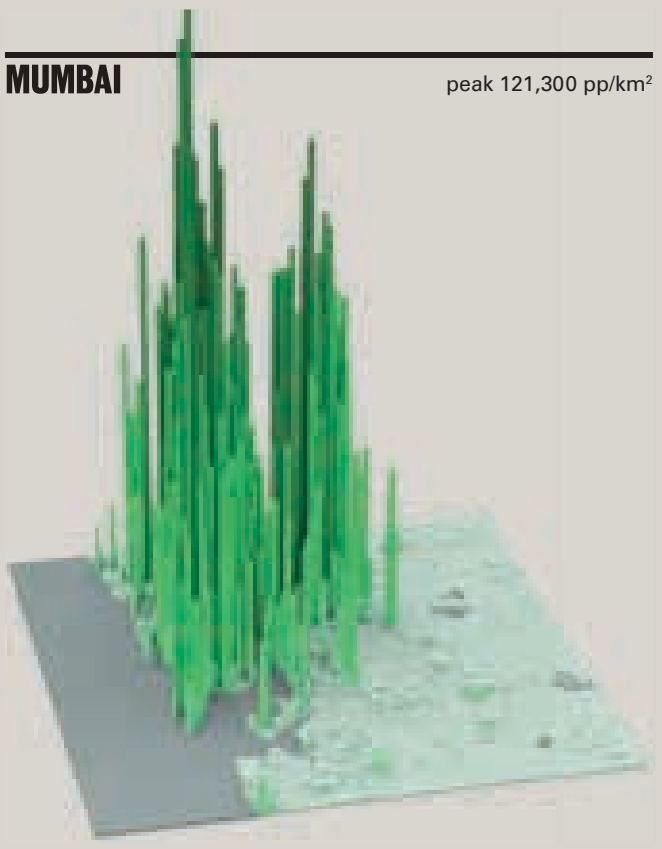
## BOGOTÁ
peak 55,800 pp/km²



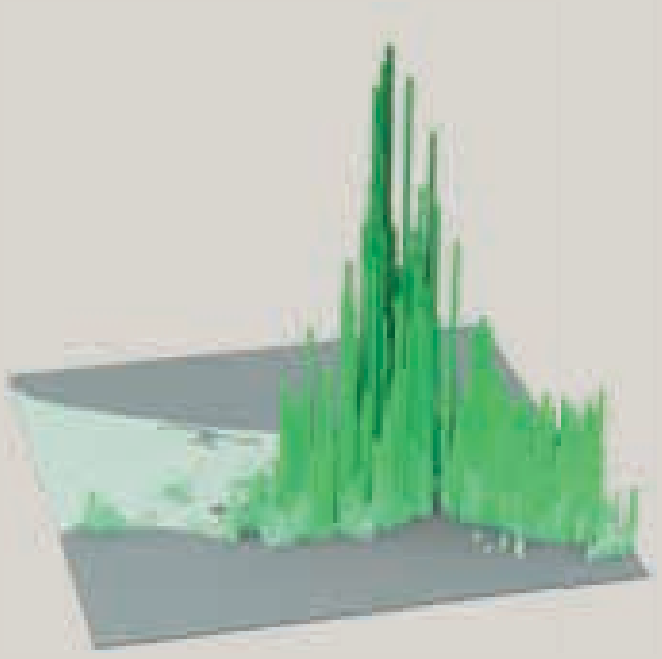
## STOCKHOLM
peak 24,900 pp/km²



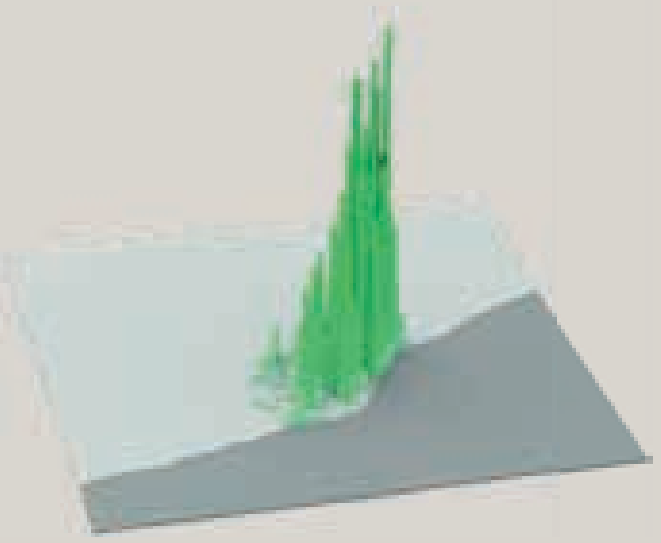
## MUMBAI
peak 121,300 pp/km²



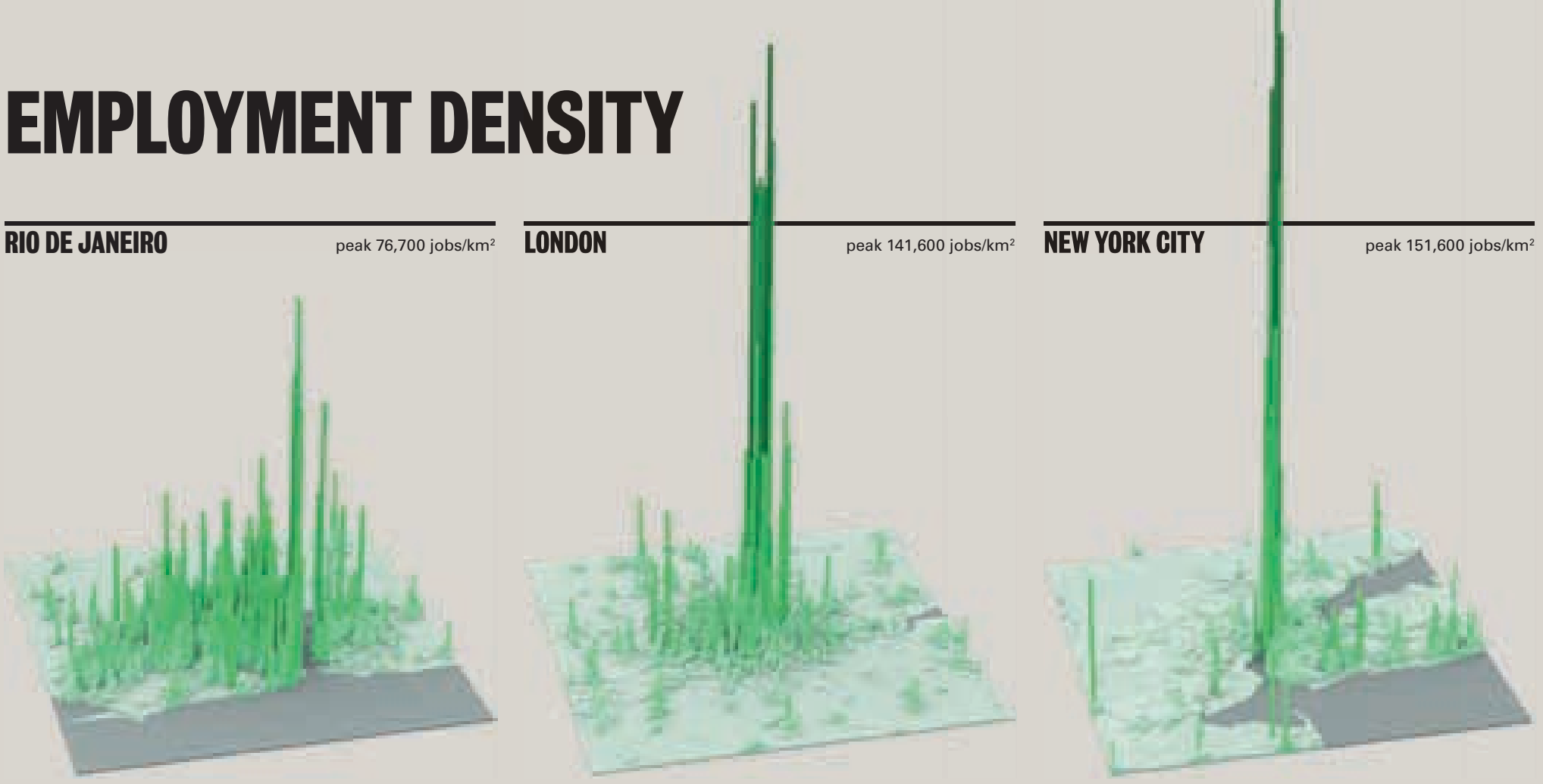
## ISTANBUL
peak 77,300 pp/km²



## BARCELONA
peak 56,800 pp/km²



# EMPLOYMENT DENSITY




Overall urban density is driven by topographical constraints, the provision of infrastructure and by inherited traditions of urban development. The highest density cities typically have grown around a harbour with limited land availability, as is the case in New York, Istanbul and Mumbai. Bogotá is constrained by a mountainous hinterland, while Rio and Hong Kong are bounded by both water and steep terrain.

Density is a fundamental measure of urban structure that can be used to quantify the immense diversity in urban form across the globe. Higher urban densities can improve service delivery efficiency, promote urban vitality and facilitate more sustainable public transport, walking and cycling. These advantages depend, however, on effective city management and urban design that minimises the negative costs of overcrowding and pollution. Here we map residential densities – where people live – for nine case-study cities (opposite) and employment densities – where people work – for six of these cities (above). Each diagram measures density at the square kilometre scale, using a standard region of 100 by 100 kilometres.

Rio de Janeiro has a peak residential density of 42,300 people per km$^2$ – higher than London (27,100 people per km$^2$) and Stockholm (24,900 people per km$^2$), but lower than Hong Kong (111,100 people per km$^2$), New York (59,150 people per km$^2$) and Bogotá (55,800 people per km$^2$). Despite having areas of low but closely packed buildings and some high-rise developments, Rio is relatively unique in showing consistent density levels across a very large metropolitan region, compared to cities like New York and Istanbul where high densities are strongly focused in the urban core. Hong Kong stands out for its high-density development across the city, and extremely high peaks achieved by Mumbai reflect the large families living in overcrowded conditions in many of the city's neighbourhoods.

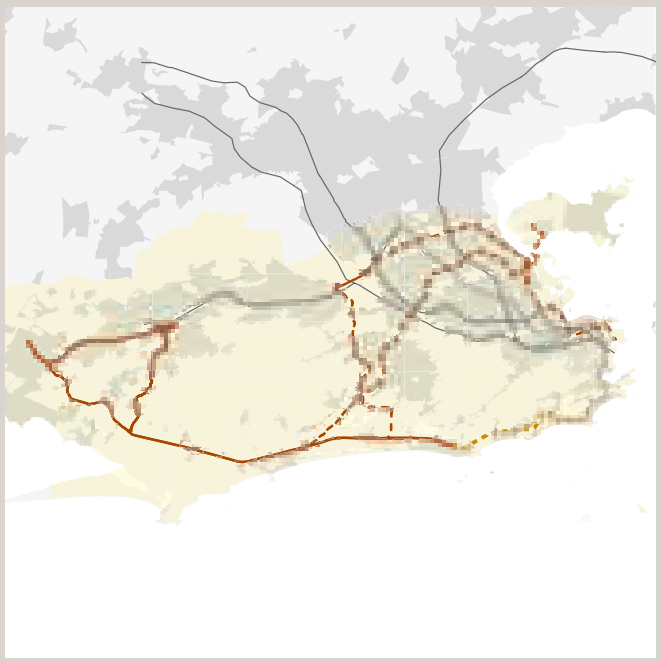
The mapping of employment densities provides a very different perspective on urban form, and offers insights into current trends in city economies. Some of the world cities documented here specialise in knowledge-economy sectors, such as finance and creative industries, where competitiveness is maximised by high-density environments. In these cities there is high demand for office space, and consequently high employment densities in the inner core areas of New York, Hong Kong and London. New York has the highest peak employment density at 151,600 jobs per km$^2$, while Hong Kong (120,200 jobs per km$^2$, much closer to the residential density peak) and London (141,600 jobs per km$^2$) are not far behind. This level of density requires an extensive public transport network to enable millions of employees to flow efficiently in and out of central business districts on a daily basis. Rio de Janeiro and Bogotá also show high peak employment densities of 76,700 jobs per km$^2$ and 61,500 jobs per km$^2$ respectively, reflecting expanding service sectors, but given their significant industrial base both cities have more dispersed spatial patterns of employment, which, in Rio's case, is spread across the wider metropolitan region.

# INFRASTRUCTURE OF MOBILITY

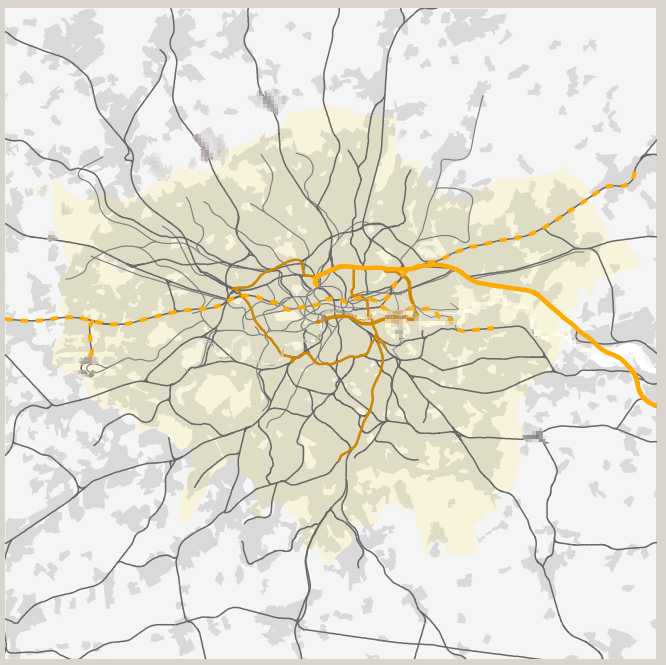
A significant factor in city transformations of the last decades has been renewed investment in public transport and a new focus on improving urban sustainability and quality of life through facilitating walking and cycling. The maps below illustrate public transport networks in 9 Urban Age cities, highlighting recently developed infrastructure from the last 15 years (shown in orange).

Some mature cities have made improvements to existing public transport networks and other rapidly growing cities have invested in almost completely new networks. London, Barcelona and Hamburg – which expanded dramatically more than a century ago - have a rich heritage of public transport infrastructure. Recent investment here has focussed on high speed international rail networks, extending existing lines and connecting to new areas of urban expansion or densification of previously industrial areas – such as London Docklands and Hamburg HafenCity. While Rio de Janeiro and Mumbai also have historic rail infrastructure, this is highly inadequate for their current needs given the pace and scale of urban growth. Rio is developing an extensive Bus Rapid Transit system and a new metro line to integrate the wider urban region to the West. Mumbai is constructing several new metro lines, providing missing East-West connections.

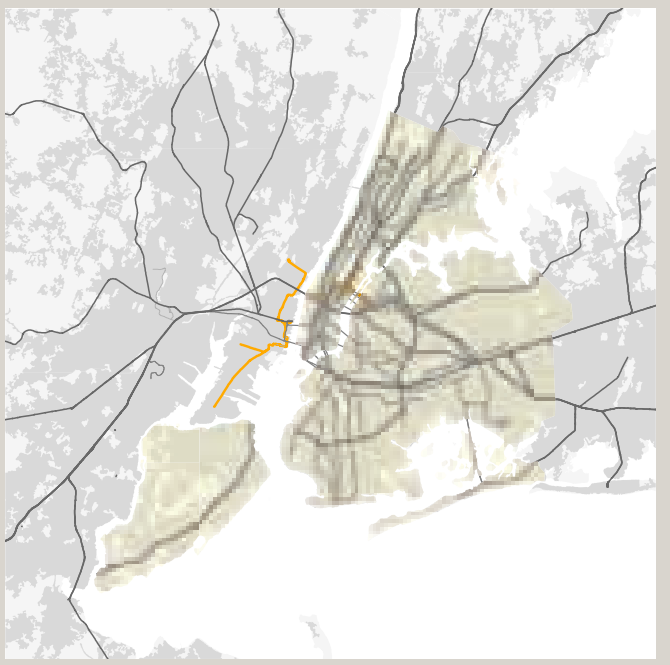
## RIO DE JANEIRO



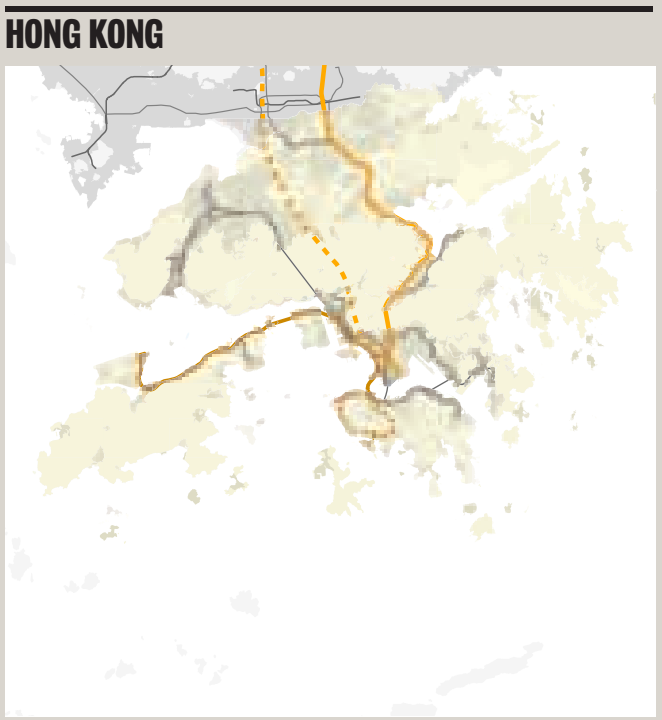
## LONDON



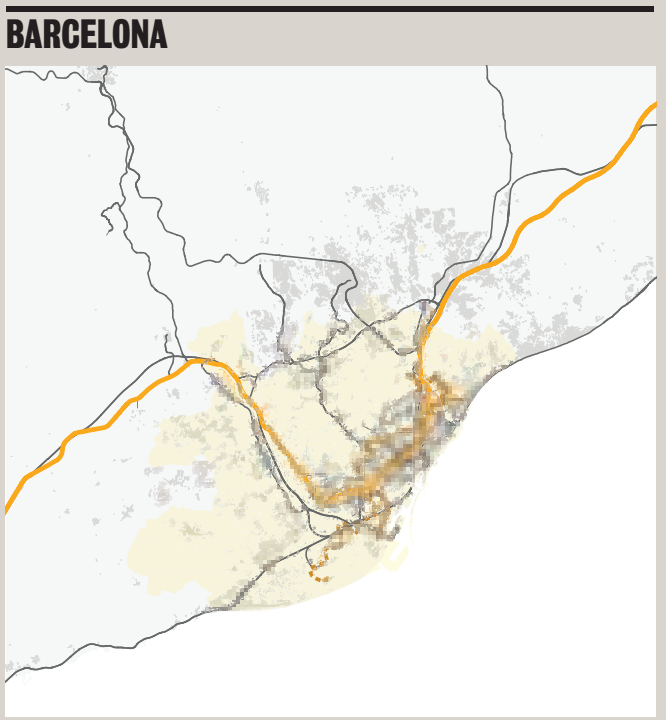
## NEW YORK CITY



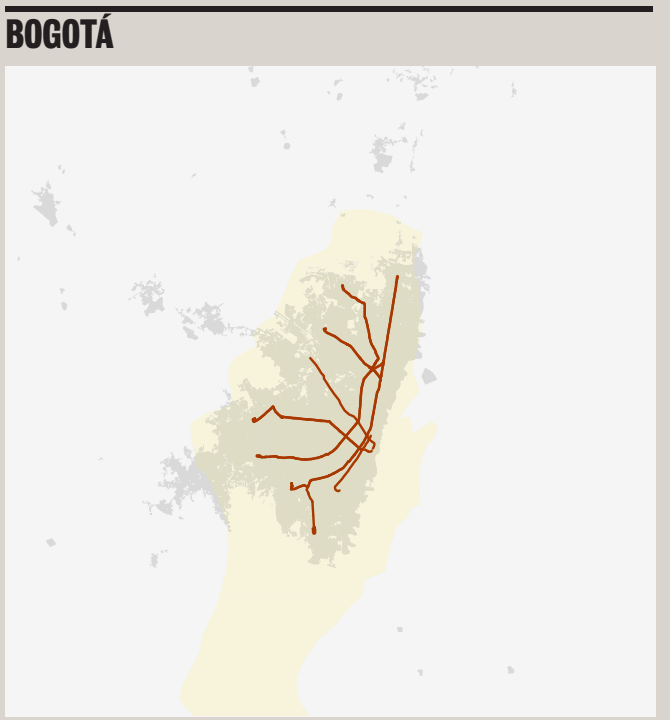
## HONG KONG



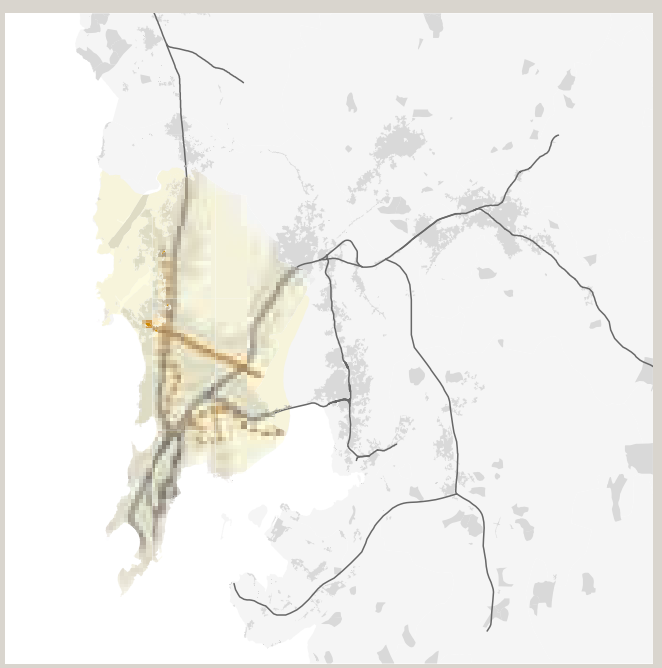
## BARCELONA



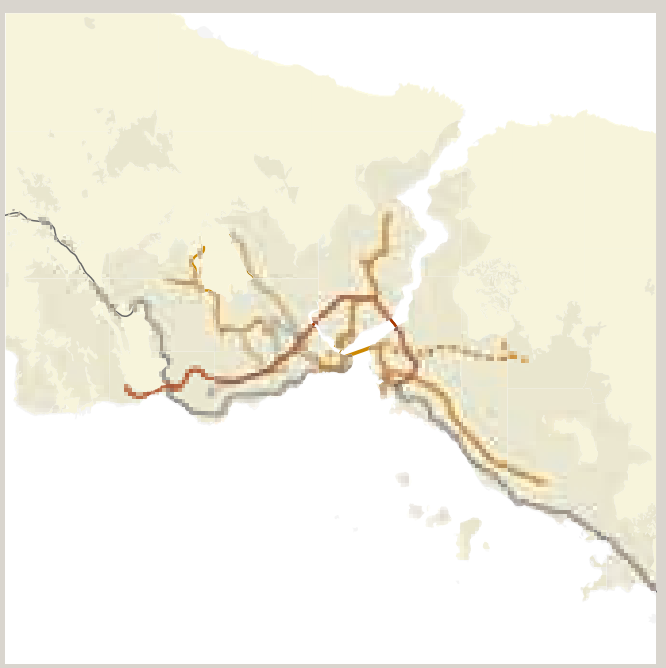
## BOGOTÁ



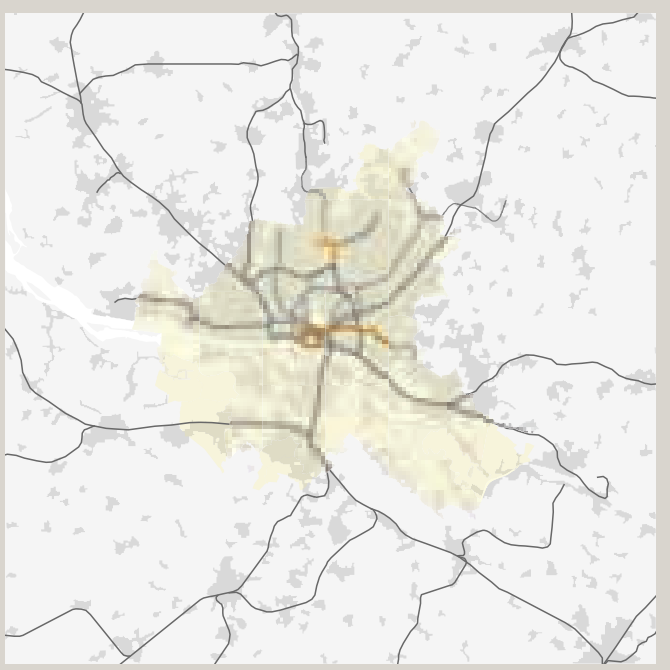
## MUMBAI



## ISTANBUL



## HAMBURG



Urban area
Administrative city

Public transport development (last 15 years)
Intercity & regional rail
Metro
Bus Rapid Transit
Light Rail
Infrastructure under construction

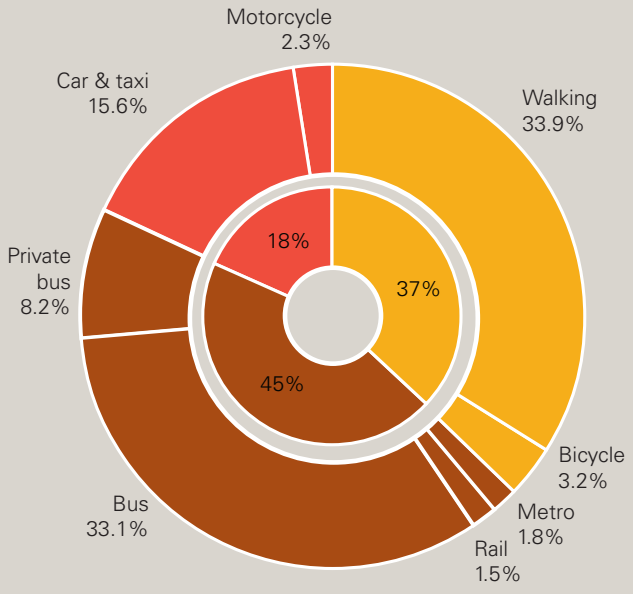
Public transport networks
Intercity & regional rail
Metro
Light Rail

# HOW PEOPLE TRAVEL

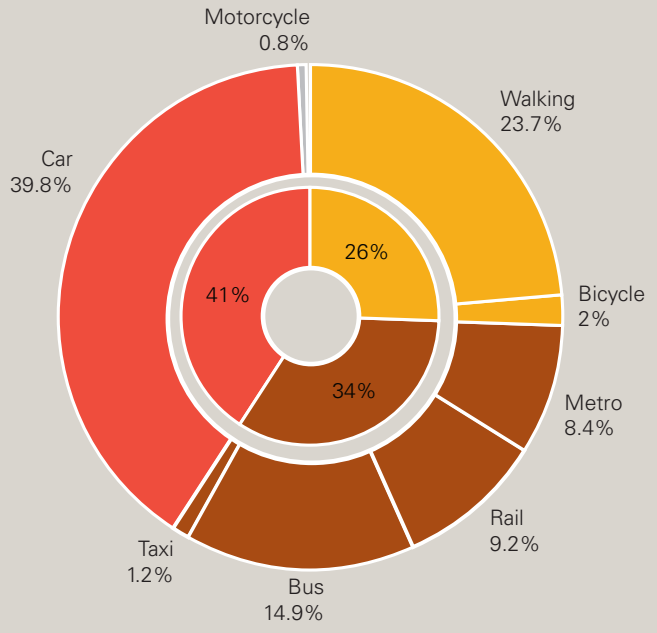
This section explores the proportion of trips made by different transport modes in 9 Urban Age cities, enabling an understanding of how transport infrastructure and policies translate into real world behaviour. The extensive transport networks found in all 9 cities ensure that public transport use is substantial. There is wide variation in which public transport modes are the most prominent. In Rio, the bus dominates, with the currently limited metro and rail networks making up only 3.3% of trips. The bus is also most prominent in Bogotá at 42% of trips. Other cities show a more balanced picture split between rail, metro and bus modes.

There is also widespread variation between cities in terms of car travel. Despite the affluence of a city like Hong Kong, only 7% use their cars for typical journeys as a result of the exceptional efficiency of the public transport network. New York and London display similar but less marked patterns, with some central office areas (the City of London and downtown New York) experiencing over 90% of public transport usage on daily basis. Despite the experience of seemingly endless traffic congestion, only 18%, 13% and 5% of residents of Rio, Istanbul and Mumbai use cars, with public transport and walking taking the bigger share.

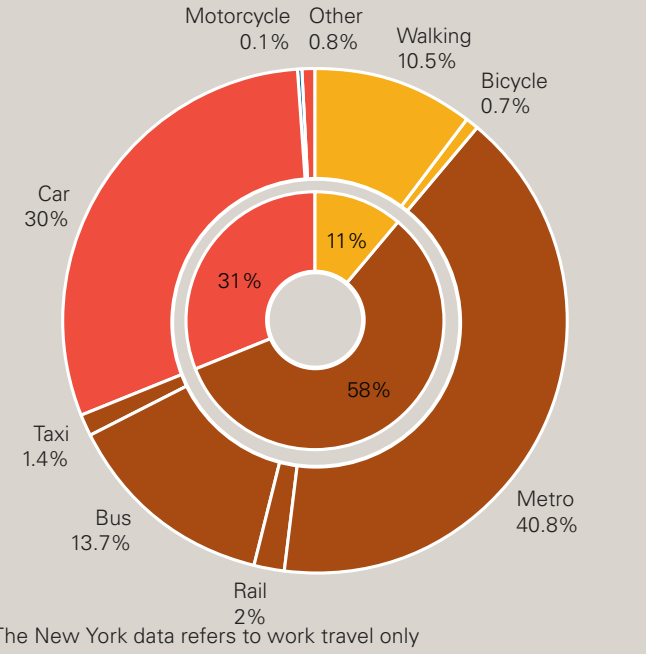
## RIO DE JANEIRO




## LONDON

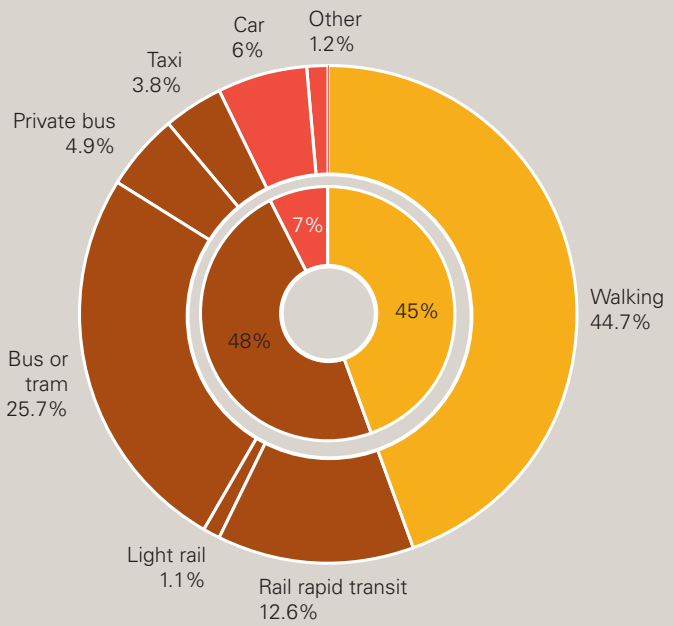



## NEW YORK

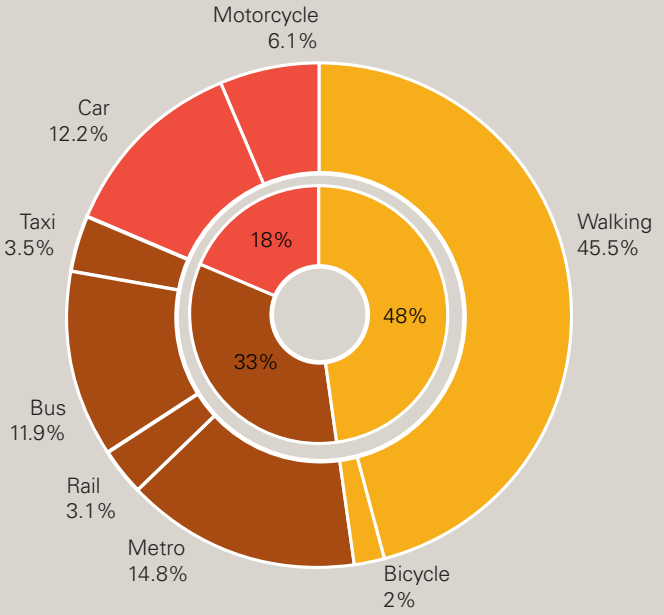



The New York data refers to work travel only

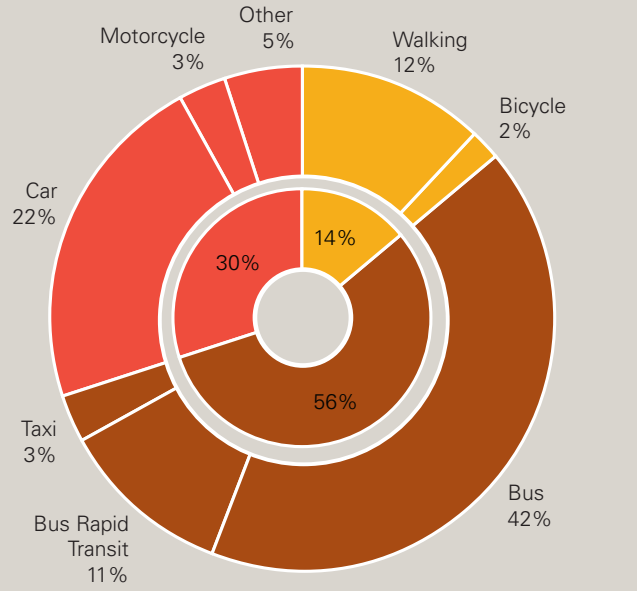
## HONG KONG



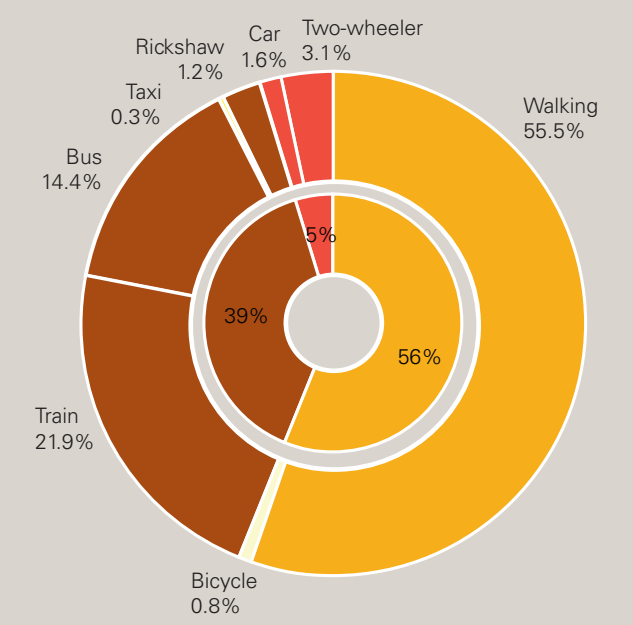

## BARCELONA



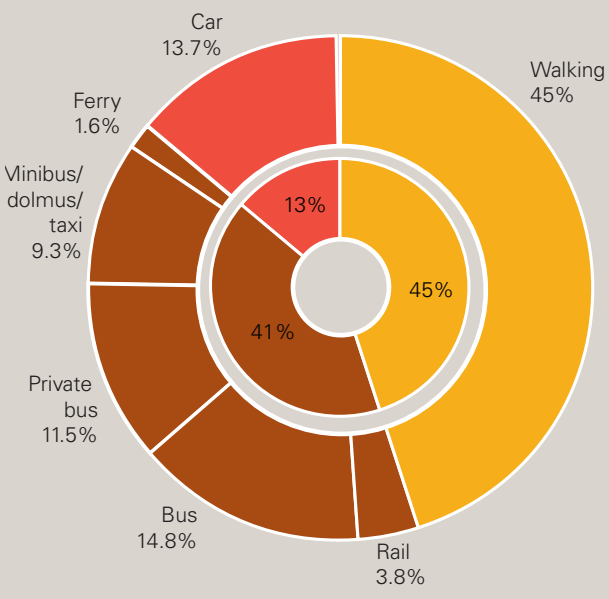

## BOGOTÁ



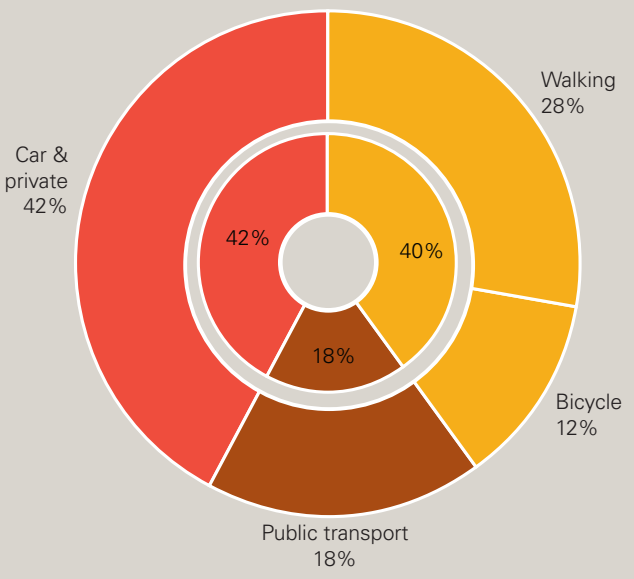

## MUMBAI




## ISTANBUL




## HAMBURG



# CITY TRANSFORMATIONS

## TRANSPORT INVESTMENTS

**RIO DE JANEIRO: Sistema BRT (Bus Rapid Transit)**
**BOGOTÁ: TransMilenio (Bus Rapid Transit)**
**LONDON: Crossrail**

## PATTERNS OF URBAN CHANGE SINCE 1980

**BARCELONA**
**LONDON**

## PORT REDEVELOPMENTS

**RIO DE JANEIRO: Porto Maravilha**
**HAMBURG: HafenCity**

## RETROFITTING URBANISM

**RIO DE JANEIRO: Complexo do Alemão**
**MUMBAI: Dharavi**

This section investigates examples of recent initiatives and projects that highlight the transformative potential of recent physical interventions on the social and economic life of six cities, moving from large-scale transport infrastructure, to the regeneration of brownfield sites and retrofitting of urban communities.

Starting at the city-wide scale, the connections between new investments in public transport, social equity and density are explored through the Bus Rapid Transit systems in use and under construction in Bogotá and Rio de Janeiro, and the ambitious Crossrail high-frequency rail line that is currently being built in tunnels under central London, allowing passengers to cross this 60km-wide city in under one hour.

The dramatic changes that have reshaped Barcelona and London – both Olympic cities – are documented to show the impact of subsequent phases of public and private investment, which have transformed the social and economic vitality of these European cities in the last decades.

Moving to a more detailed scale, the radical effects of the restructuring of city economies are explored in the redesign of redundant port areas located in critical points of the urban fabric of Rio de Janeiro and Hamburg, Germany's leading port city. The urban structure of Rio's Porto Maravilha and Hamburg's HafenCity are compared providing different models of spatial intervention.

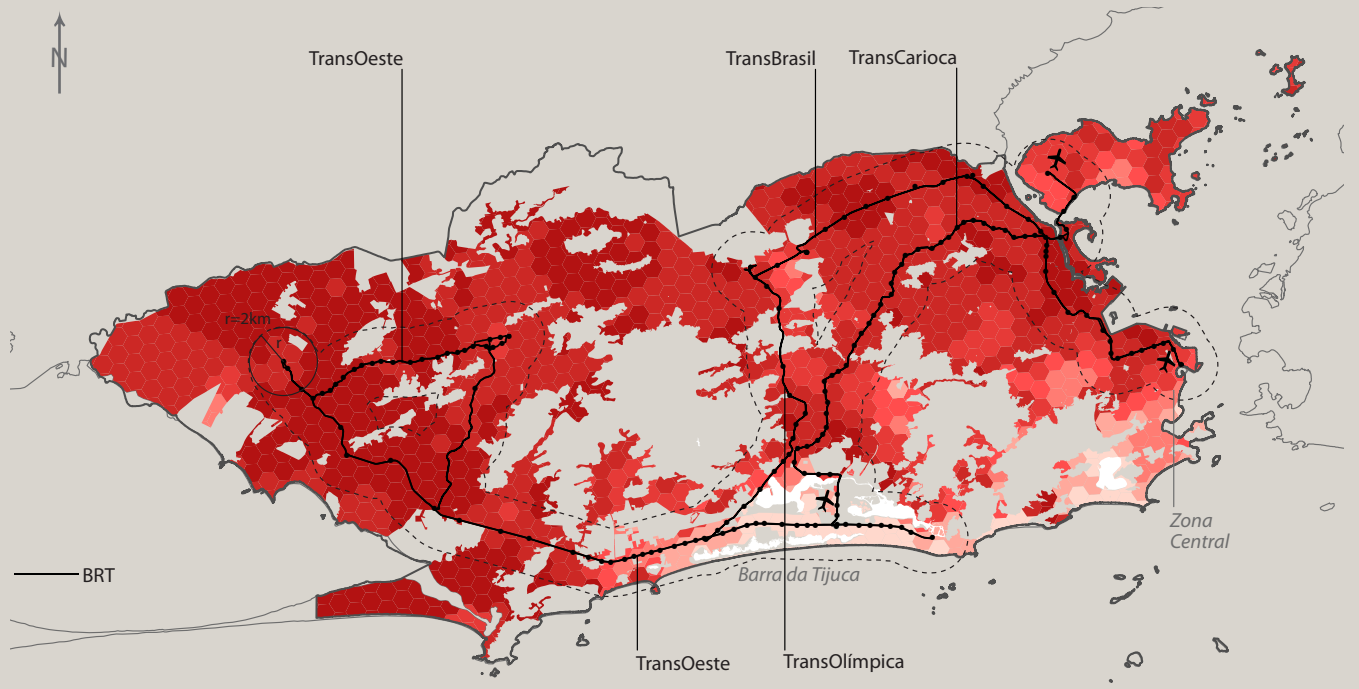
The need to improve and upgrade informal neighbourhoods – such as the Complexo do Alemão in Rio and Dharavi in Mumbai – sheds light on the potential of retrofitting existing communities with new facilities – schools, streets, transport, security – that make these areas more liveable and build social capital for their residents.

# TRANSPORT AND SOCIAL EQUITY

## RIO DE JANEIRO: SISTEMA BRT

**Total system length:** 159km
**Budget:** R$5bn (US$2.3bn)

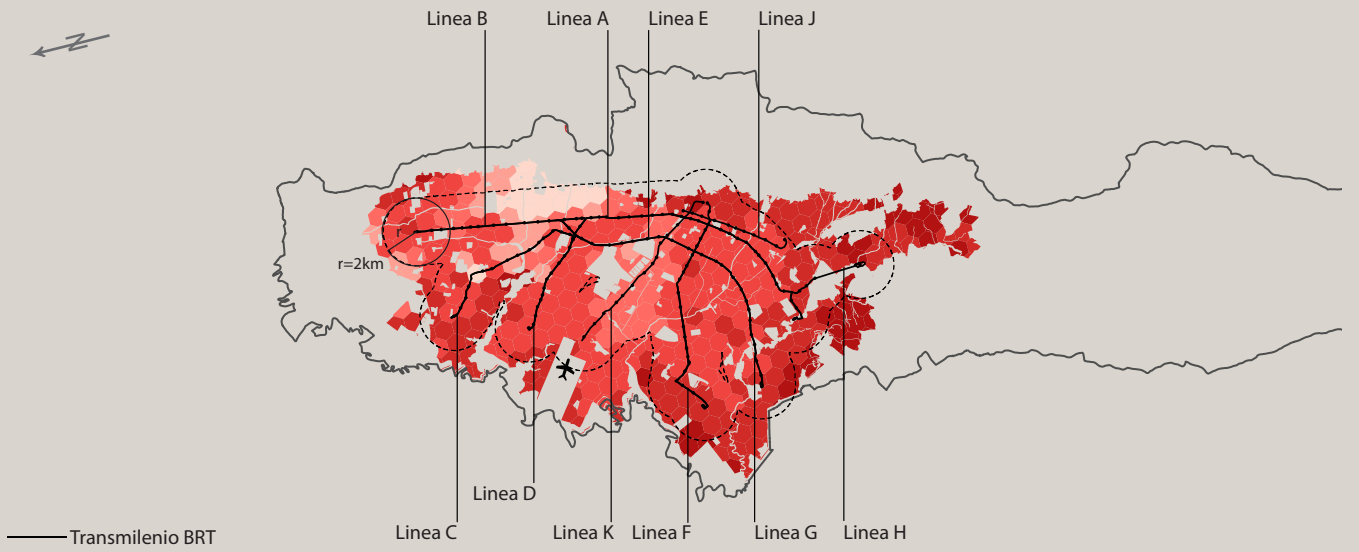
In preparation for the Olympic Games, Rio de Janeiro is undertaking the largest single investment in the history of the city's transportation network, centered on the construction of 159 km of Bus Rapid Transit (BRT) lines. The TransOeste line, operational since June 2012, connects the wealthy coastal strip area of Barra da Tijuca to the south with low-income neighbourhoods in the far West of the city. The line has reduced average travel times along this corridor by more than 50 per cent compared to traditional bus trips. The remaining TransCarioca, TransOlimpica and TransBrazil lines are currently under construction, connecting Barra to the city centre and main international airport to the west. These lines will improve connections between more deprived areas in the northern zone of the city with the western zone and city centre. As with any relatively dispersed city – Rio de Janeiro extends for over 60 kilometres in length – a number of areas remain ill-served by public transport, including some low-income neighbourhoods.




## BOGOTÁ: TRANSMILENIO

**Total system length:** 87km
**Budget:** R$1.71bn (US$785m)

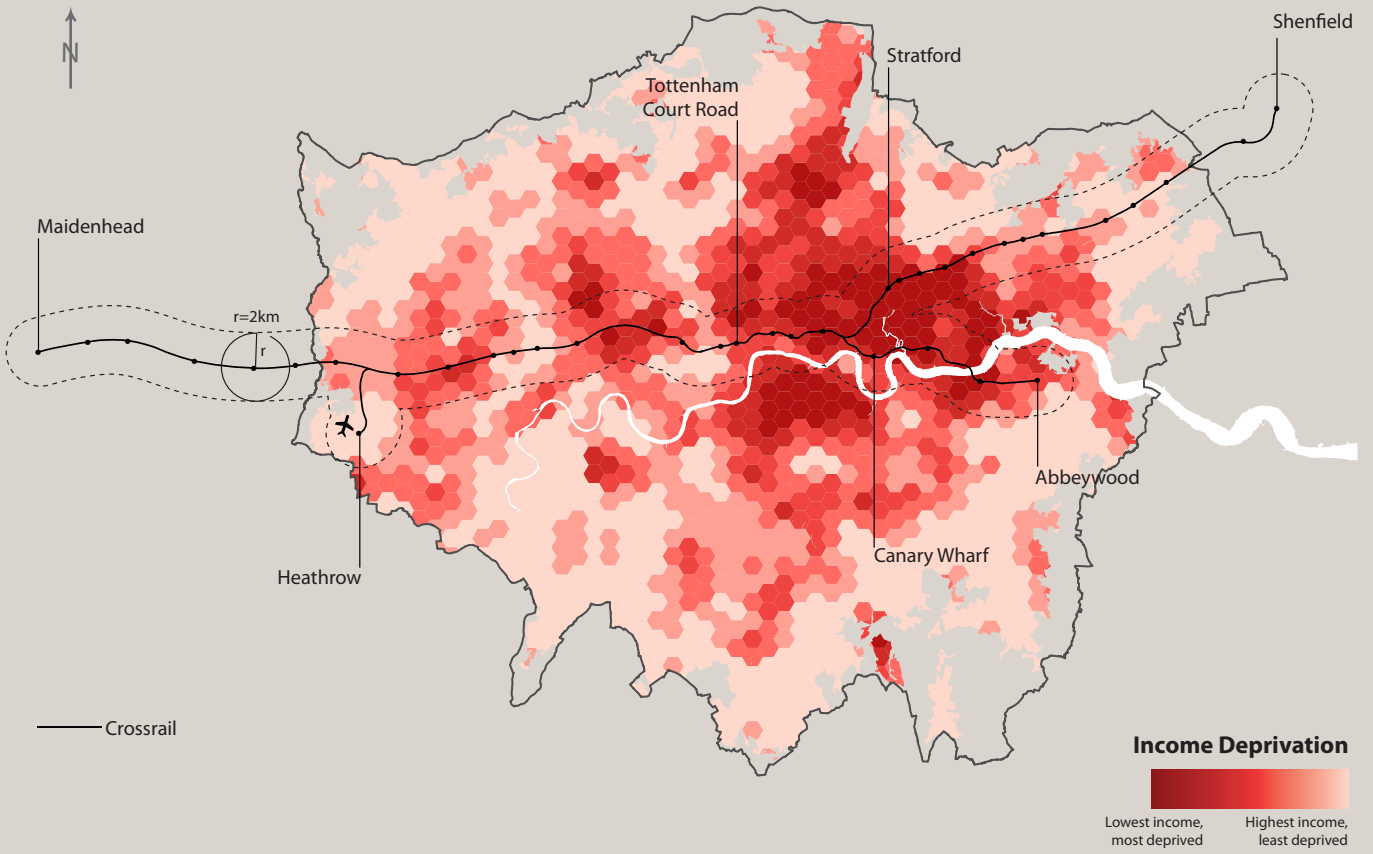
Bogotá's TransMilenio BRT system is recognised as a model of best practice of accessibility-based planning in a developing country context. The system, operational since 2000, has grown to encompass 11 lines totalling 87 km, with plans to expand this to more than 300 km by 2020. Recent upgrades include Linea K towards the airport and Linea J providing improved links to the university. TransMilenio has enabled greater transport equity in Bogotá by significantly increasing mobility for residents without car access, as well as by improving pedestrian safety through linked infrastructure investments. As the map (right) demonstrates, existing lines connect several of Bogotá's lowest-income neighbourhoods with the city centre. Yet the map also highlights that some of the poorest peripheries of the city remain outside the reach of the current system, partly due to the steep terrain and unpaved roads that characterise these settlements.




## LONDON: CROSSRAIL

**Total system length:** 97km
**Budget:** R$51bn (US$23.3bn)

London's ambitious new 97-km rail line, scheduled for completion in late 2018, will connect West London, including the major hub of Heathrow Airport, with the city centre and strategic development areas to the east, such as Canary Wharf and Stratford, drastically cutting travel times across the capital. Crossrail will help to focus investment activity in brownfield sites in the vicinity of new stations and also play an important role as a catalyst for regeneration in key areas of deprivation. As the map (right) shows, this is particularly relevant to East London, where the north-eastern and south-eastern branches of the line will improve services for some of the most deprived communities in London. Several of these areas have traditionally been isolated from the centres of work and services due to a lack of adequate public transport connections. Crossrail does not, however, improve accessibility for large areas of deprivation in north and south London. There are plans for a second North-South Crossrail line to address this gap, yet the great expense of tunnelling through Central London is a significant hurdle for these proposals.

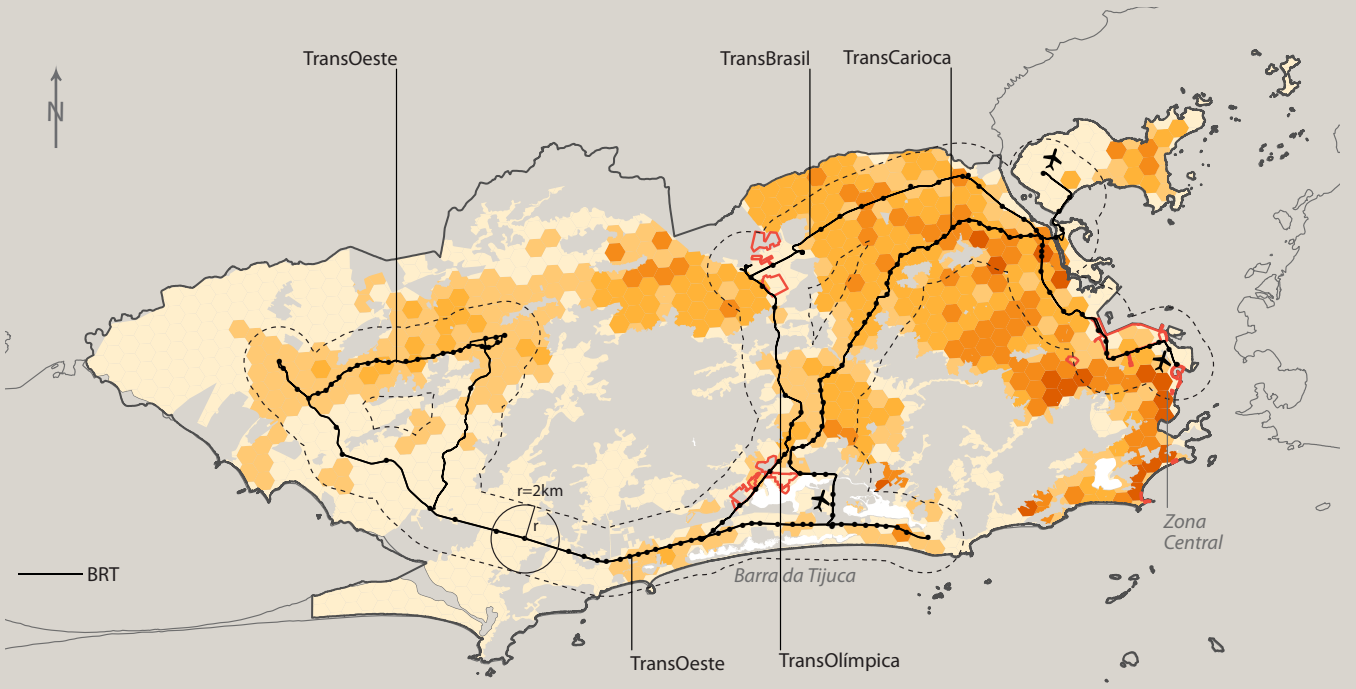


# TRANSPORT AND DENSITY RESIDENTIAL

## RIO DE JANEIRO: SISTEMA BRT

**Average built-up density:** 7,730 pp/km²
**Accessibility to BRT:** 49% of residents within 2 km of a stop

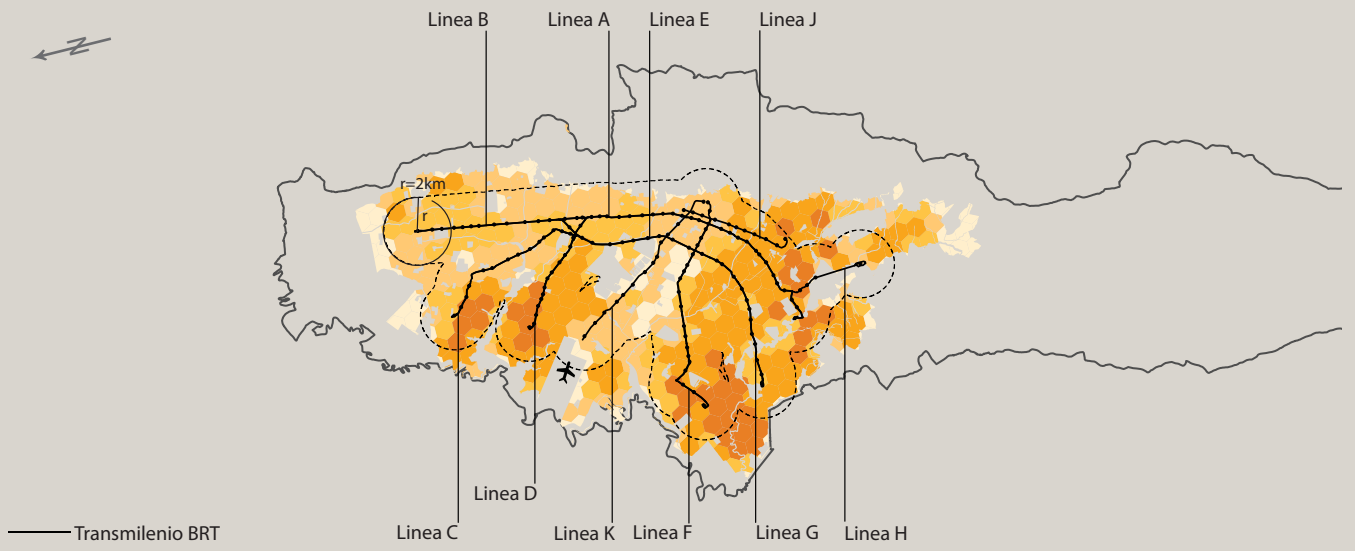
Rio's new BRT lines connect several high-density residential areas, particularly in the northern inner city and around the international airport. Nearly 50 per cent of Rio's population will be within two kilometres of a BRT stop when all the lines are completed. Yet many large high-density residential areas will not be covered by the system, particularly inner-city areas to the west and north-west. Denser areas in the southern and central northern zone are served by the metro and rail network. The completed TransOeste line passes through areas of fairly low residential density before reaching the higher-density suburbs of Santa Cruz and Campo Grande. Rio has been expanding rapidly towards the west, with average population increases of over 20 per cent between 2000 and 2010, suggesting that the line will be a timely investment to facilitate growth in an area of the city chronically underserved by public transport.




## BOGOTÁ: TRANSMILENIO

**Average built-up density:** 21,950 pp/km²
**Accessibility to BRT:** 76% of residents within 2 km of a stop

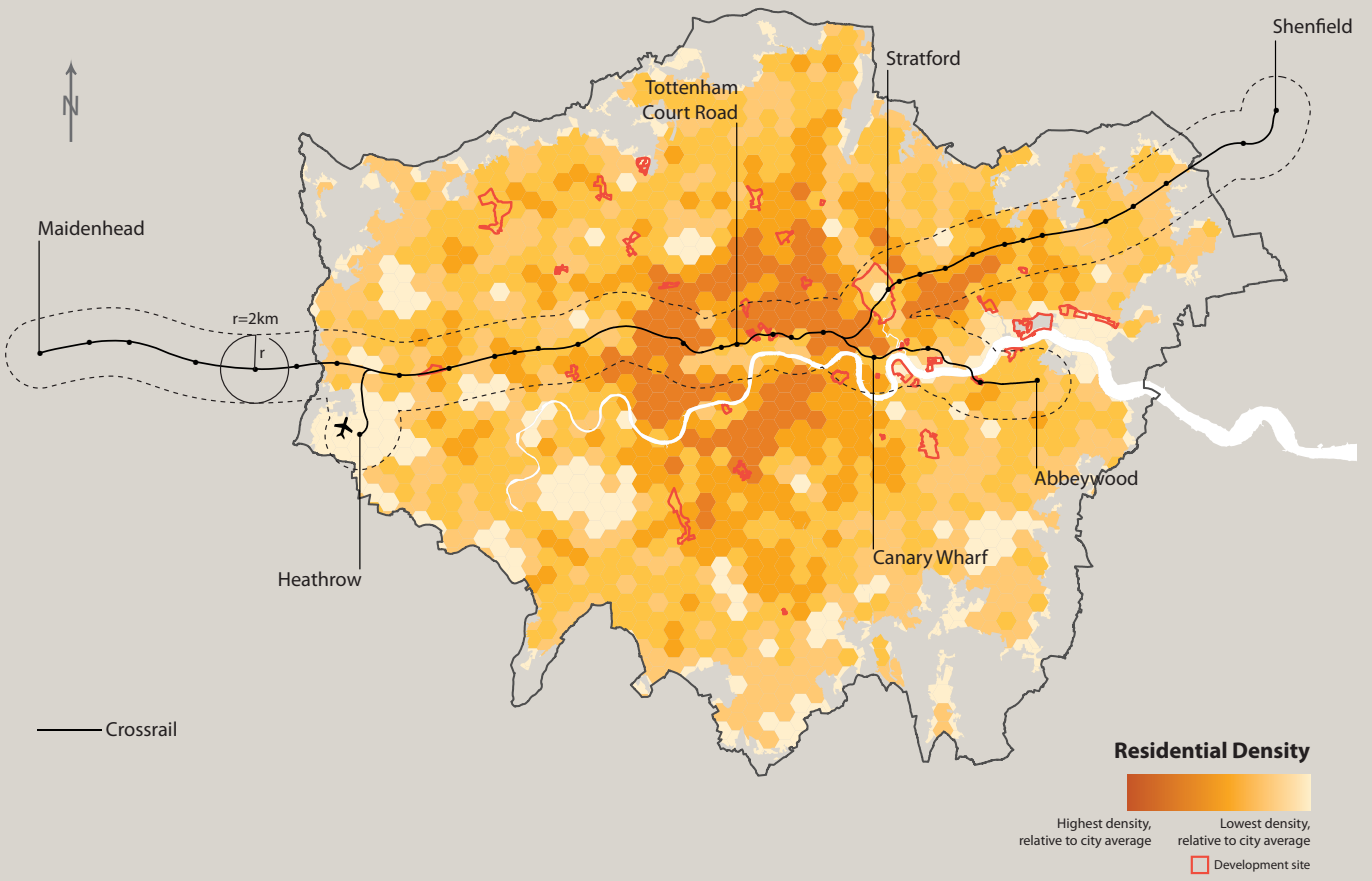
TransMilenio routes are closely linked to areas of high population density, with over three quarters of Bogotá residents living within two kilometres of a BRT stop. The exceptions are the informal neighbourhoods located on the outskirts of the city. Although there are more than 600 kilometres of additional feeder routes that move passengers from remote areas to the main TransMilenio system, a significant number of people continue to rely on other forms of transport. The wealthier residents of the city get around by car, while the more deprived continue to rely on walking, cycling and bus, which still makes up nearly 70 per cent of the city's public transport trips. One estimate shows that the number of jobs reachable within an hour's travel time increased by a factor of three for families moving along BRT lines. These programmes have the benefit of reducing housing and transport costs, which can often consume two-thirds of the income of poorer residents.




## LONDON: CROSSRAIL

**Average built-up density:** 6,080 pp/km²
**Accessibility to Crossrail:** 20% of residents within 2 km of a station

Crossrail was conceived as a project to improve journey times and capacity for east-west trips across London in the context of the city's extensive rail and underground networks. Although the route passes through metropolitan town centres and important residential hubs, it is not specifically aligned to areas of highest density, and only 20 per cent of London residents currently live within two kilometres of Crossrail station locations. Crossrail is expected to catalyse a significant increase in value of commercial and residential real estate along the new line, and to support the delivery of over 57,000 new homes and 3.25 million square metres of commercial space. A significant appreciation in property values is expected immediately around new stations. This means that residential densities along the line are likely to increase in the future, as previously remote locations become directly connected to the city centre and other areas with employment and service provision.

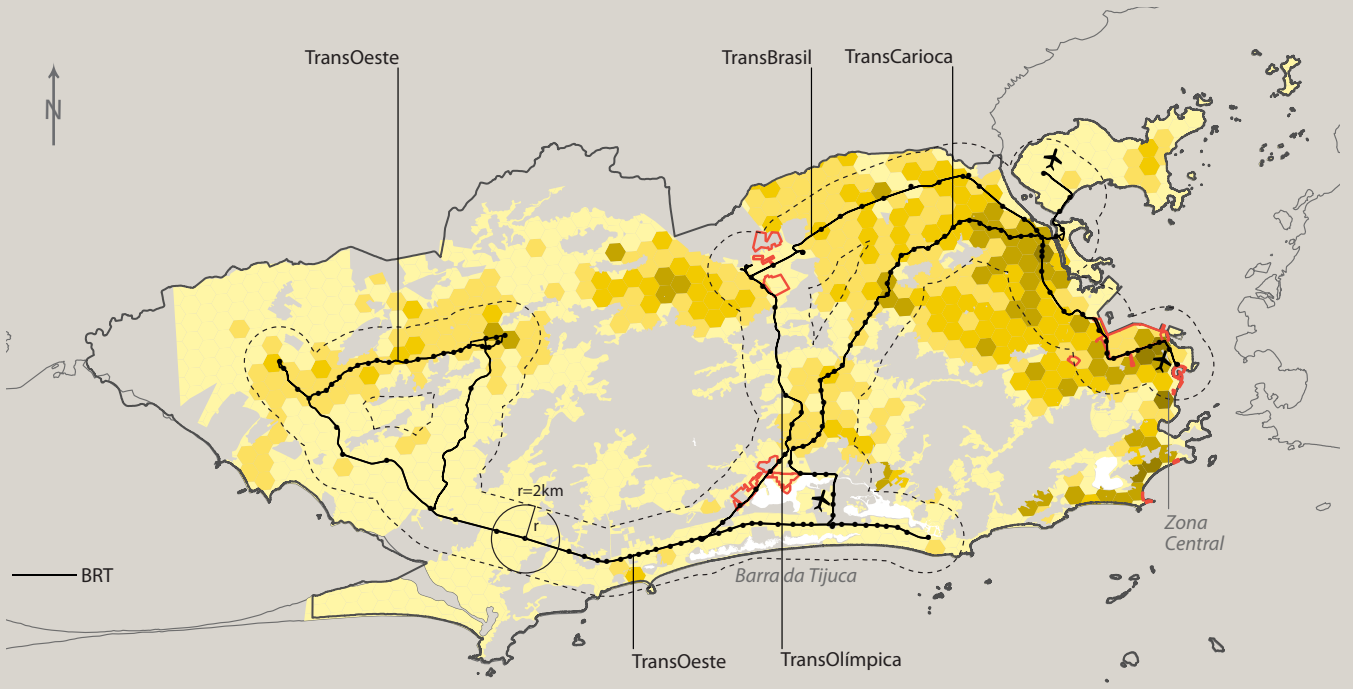


# TRANSPORT AND DENSITY EMPLOYMENT

## RIO DE JANEIRO: SISTEMA BRT

**Average employment density:** 4,580 jobs/km²
**Jobs accessibility to BRT:** 54% of jobs within 2 km of a stop

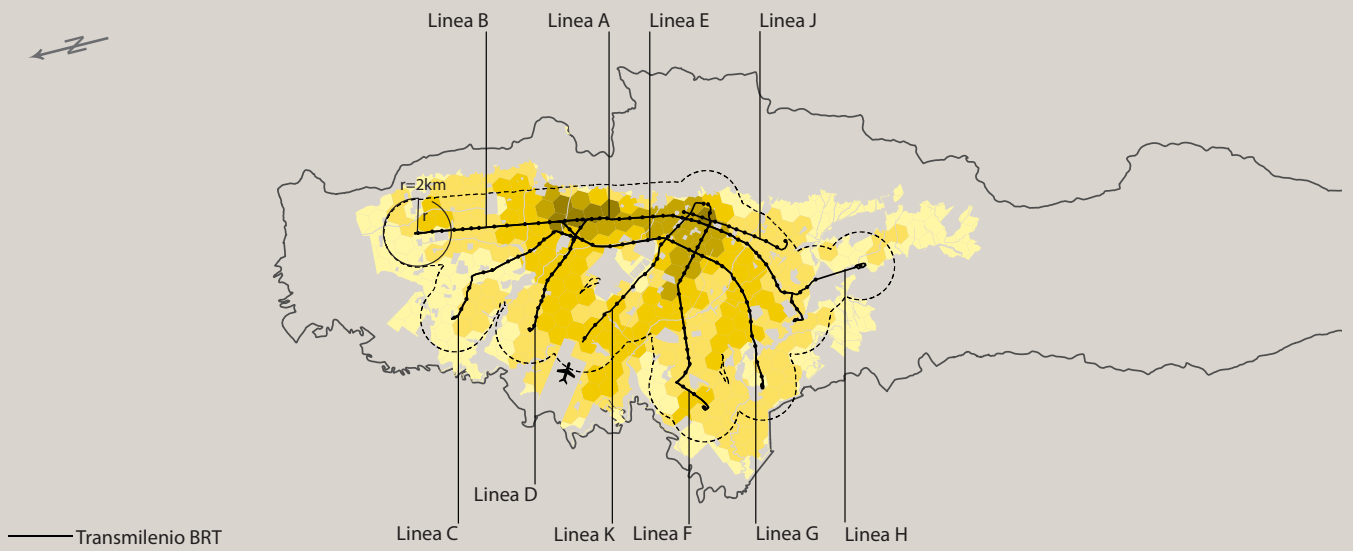
The connection created by the TransCarioca and TransBrasil lines between the populated areas of the northern zone and the airport and port region will have a significant impact on commuting times to these core employment centres. They will also improve connections from the North to Barra and the Olympic sites, although there is an obvious lack of connection to the South zone, which is served by the metro network. Three of the four lines will converge in Barra da Tijuca, an area which currently has fairly low employment densities, although an increasing number of international companies have located there in recent years. This trend is likely to be accelerated by the improved transport connections to the rest of the city. The presence of several large development sites along the TransOlimpica and TransBrasil is also likely to increase employment opportunities in these areas over the coming years.




## BOGOTÁ: TRANSMILENIO

**Average employment density:** 9,750 jobs/km²
**Jobs accessibility to BRT:** 88% of jobs within 2 km of a stop

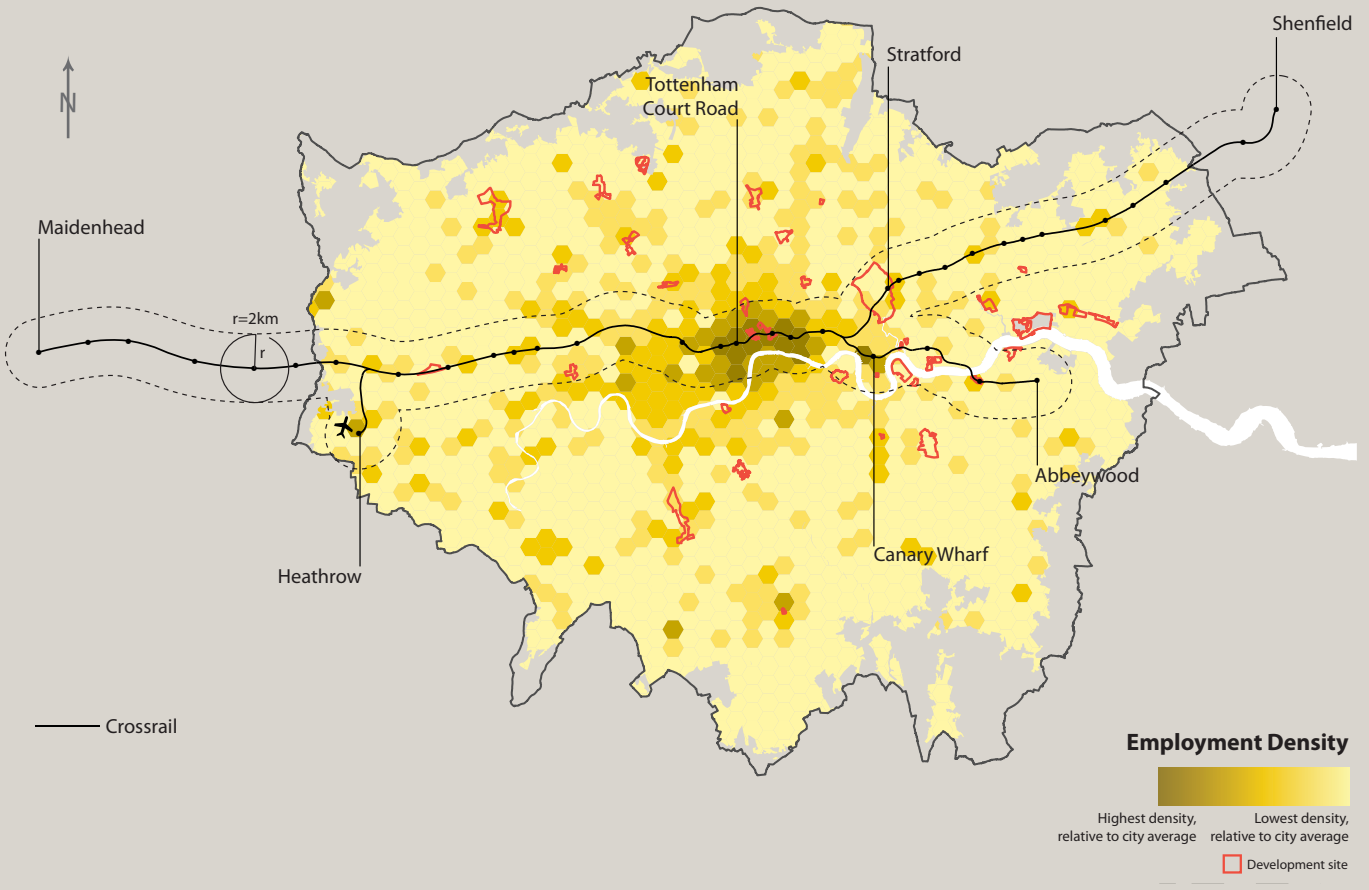
Today the system carries 1.6 million passengers a day, and has a throughput of 36,000 passengers per direction per hour, which matches the capacity of London's Crossrail project. The map (right) shows the correlation between the current TransMilenio lines and Bogotá's highly centralised pattern of employment density. This density distribution is essentially the inverse of the residential density map for Bogotá (opposite). TransMilenio links the main employment corridors with the areas of highest residential density, significantly reducing travel times for residents with access to the system. Residents of informal settlements not connected to TransMilenio often have a daily commute of more than two hours and have to pay multiple fares to take several informal minibus connections to work, consuming as much as 15 per cent of daily wages.




## LONDON: CROSSRAIL

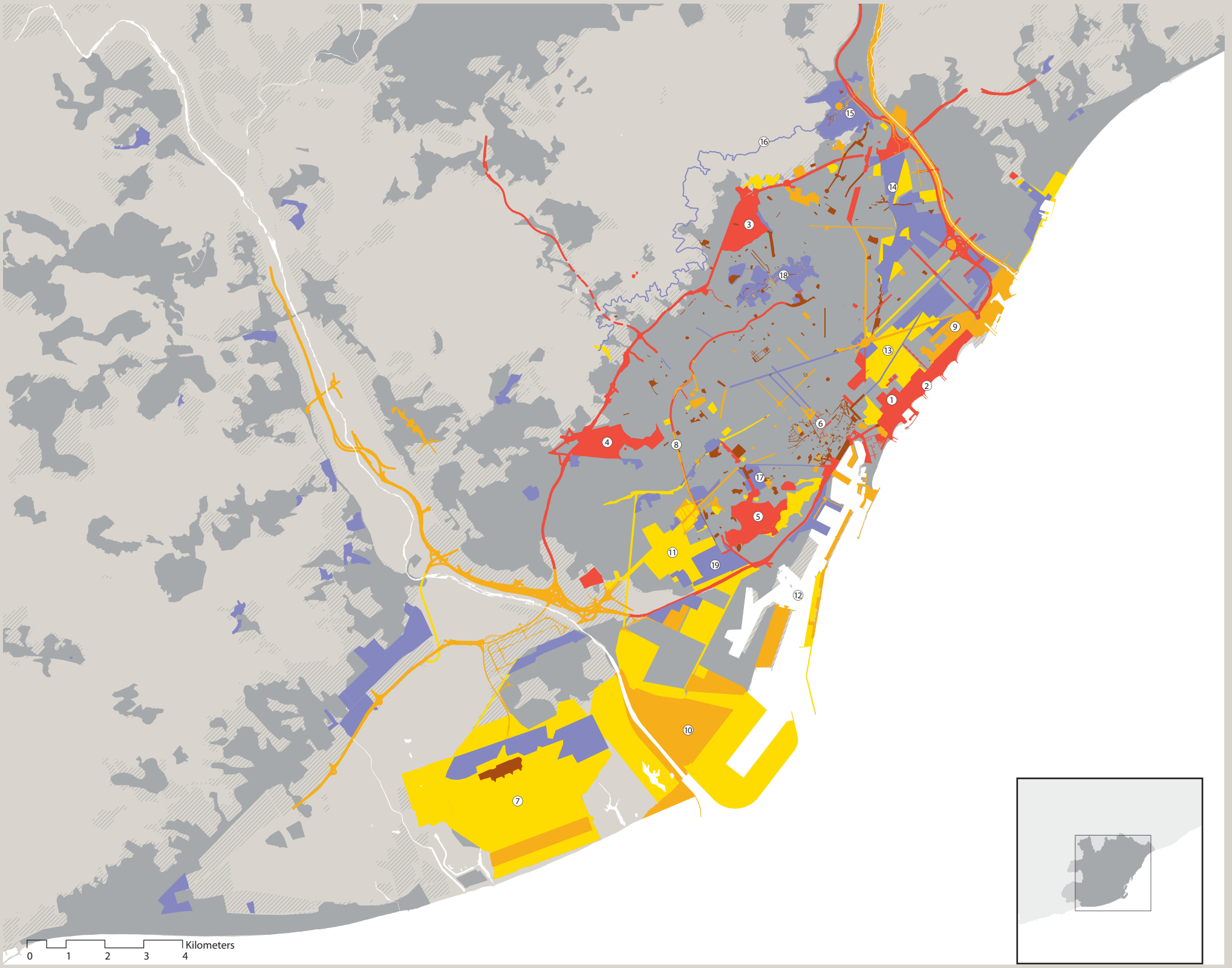
**Average employment density:** 3,300 jobs/km²
**Jobs accessibility to BRT:** 48% of jobs within 2 km of a station

The great expense of the Crossrail project has been justified in large part by the improved business and commuter connectivity that the line will enable. Businesses in London's central clusters of the City and West End, and the rapidly expanding location of Canary Wharf, have long complained about the need for new public transport capacity to allow expansion, and the long travel times to the key airport hub of Heathrow. Crossrail is intended to address these demands, bringing an additional 1.5 million commuters within 45 minutes of central London and increasing rail capacity by 10 per cent once the system is completed. The line will significantly improve connections between and East and West London, cutting travel times for many journeys by half. Expanding development locations in East London, such as the developments around the Olympic Park at Stratford, will become more accessible and arguably become more competitive for attracting businesses and residents.



# PATTERNS OF URBAN CHANGE SINCE 1980

## BARCELONA




Growth of urban form since 1980
1980-1987
1987-1992, Olympic projects
1993-2004
2005-2010
2010 onwards

① Olympic village and Port
② Seafront and beaches regeneration
③ Olympic venues, Vall D'Hebron
④ Olympic venues, Camp Nou upgrading
⑤ Olympic venues, Montjuic
⑥ El Raval and inner city upgrading
⑦ El Prat Airport expansion (various phases)
⑧ Ronda del Mig
⑨ Diagonal Mar and Universal Forum of Cultures 2004
⑩ Logistics hub
⑪ Barcelona Trade Fair
⑫ Port of Barcelona expansion and Cruise Liner Terminal
⑬ 22@Barcelona, Poblenou innovation district
⑭ La Sagrera Station redevelopment
⑮ Torre Baró
⑯ Carretera de les aigues
⑰ Museu Nacional Art Catalunya
⑱ Tres Turons
⑲ Marina del Prat Vermell

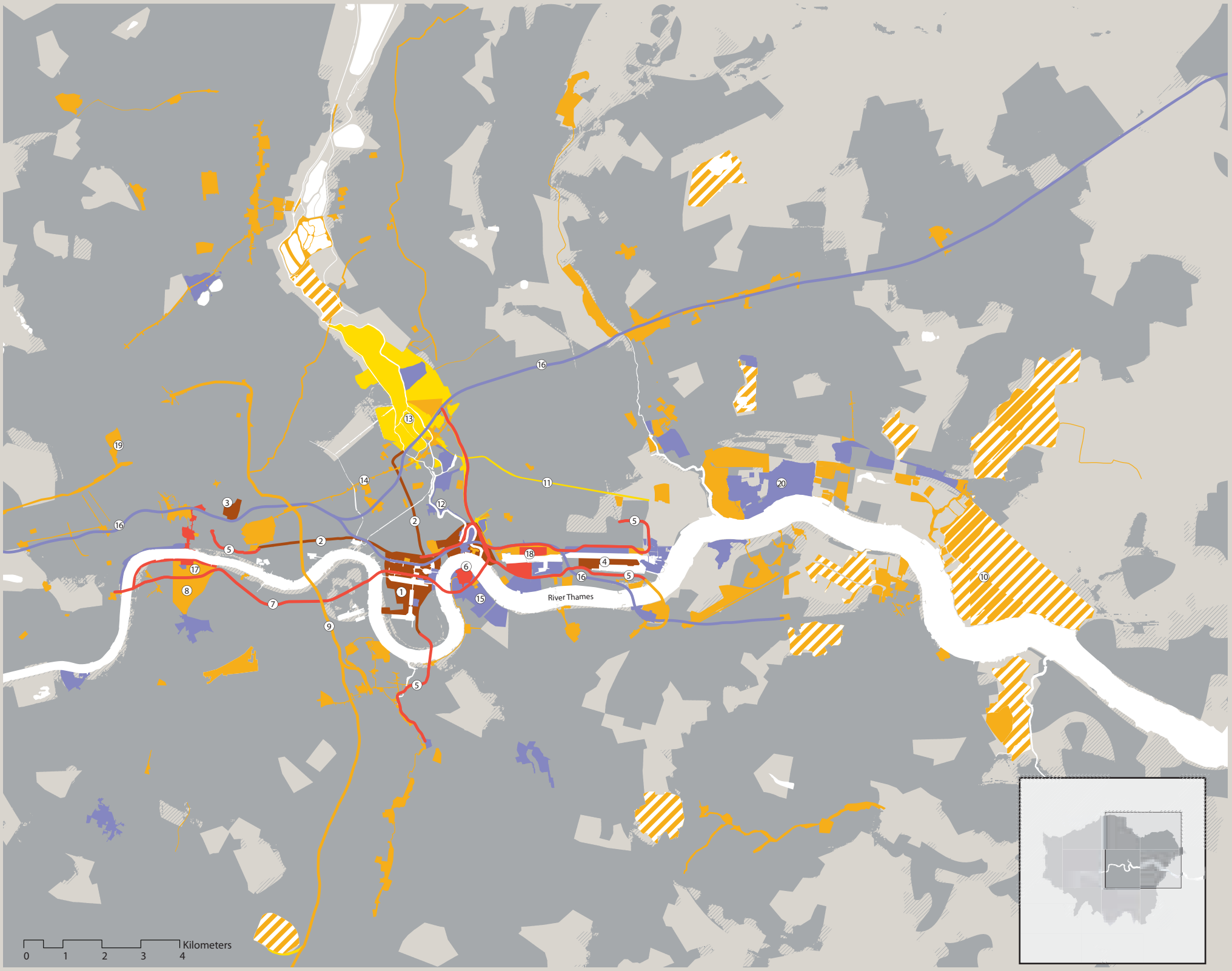
Many European cities have experienced the negative impacts of waves of deindustrialisation, successive recessions and political decline since the 1970s, but few have been able to respond as resiliently as Barcelona and London. Each in their own way has pursued its own path towards recovery and growth, with 'big planning', policy-led regeneration set by a succession of strong and visionary mayors – from Pasqual Maragall and Joan Clos in Barcelona, to Ken Livingstone and Boris Johnson in London. This has resulted in major shifts to the physical appearance, spatial dynamics and economic performance of both cities in the space of 30 years.

The maps indicate the broad time frames of this transformation since the 1980s when Barcelona rediscovered its freedom after the death of General Franco and London reinvented itself and its institutions after 15 years of absence of metropolitan governance following the abolition of the Greater London Council by Margaret Thatcher in 1985. Apart from creating the new role of a directly elected Mayor in 2000, London followed Barcelona in becoming host to the 2012 Olympics, 20 years after its Mediterranean counterpart held the successful 1992 Games.

Historically, land development in the two cities has been guided by two urban planning legacies. In Barcelona Ildefons Cerda's urban grid dating from the mid-nineteenth century has set a compact city benchmark for future development, which extends and connects the city fabric over time. In London the combination of the 1940s Green Belt, centrifugal transport network and large swathes of industrial land along the River Thames and its extension eastwards has framed the pattern of development.

Barcelona's urban resurgence started in the 1980s, a decade before London. The rebalancing was more widespread with the city providing public investment in disadvantaged areas with over 200 public squares, open spaces and schools spread across the city as part of the Olympic Games in 1992. The Olympics were also the catalyst to reorient the city towards the Mediterranean by removing the railway lines and re-using industrial land that separated the city from the sea. Post Olympics developments have focused on the logistics, port and airport area, the Forum of Cultures and conference centre along the coast, and La Sagrera high-speed railway hub as well as the extensive 22@Barcelona innovation district. More recent urban policies are focusing on hitherto neglected areas on the edges of the city, including the Torre Baró hills and Tres Turons green areas.

# LONDON




- Growth of urban form since 1980
- 1981-1994
- 1990-2000
- 1999-2012 (hatch denotes big green projects)
- 2005-2012, Olympic projects
- 2012 onwards

1. Canary Wharf
2. Docklands Light Railway (phase I)
3. Broadgate
4. London City Airport
5. Docklands Light Railway (phase II)
6. Millennium Dome
7. Jubilee Line Extension
8. Bankside Urban Forest
9. East London Line
10. Rainham Marshes
11. Greenway
12. Fatwalk and Lea River Park
13. Olympic Park and fringes
14. High Street 2012
15. Greenwich Peninsula
16. Crossrail
17. Tate Modern
18. ExCeL exhibition centre
19. King's Cross redevelopment
20. Barking Riverside

With the exception of London's Docklands and commercial investments in the City of London in the 1980s, London's urban renaissance only kicked off in the mid to late 1990s, with the economy recovering from a period of recession and a new alignment between metropolitan and national governments working together on a new 'urban agenda'. A series of large-scale projects such as King's Cross, the Olympic Park and the Royal Docks – the latter two forming part of the Mayor of London's Thames Gateway spatial strategy – are part of this continuing legacy that are rebalancing the East End with the city's historically more affluent western side.

# PORT REDEVELOPMENTS

## RIO DE JANEIRO: PORTO MARAVILHA


① Porto Olímpico
② Trump Towers
③ Media Village Rio de Janeiro 2016
④ Supervia, Central do Brasil
⑤ Morro da Providência
⑥ Biblioteca Nacional
⑦ AquaRio
⑧ Museu de Arte do Rio
⑨ Museu do Amanhã
⑩ Existing warehouse buildings

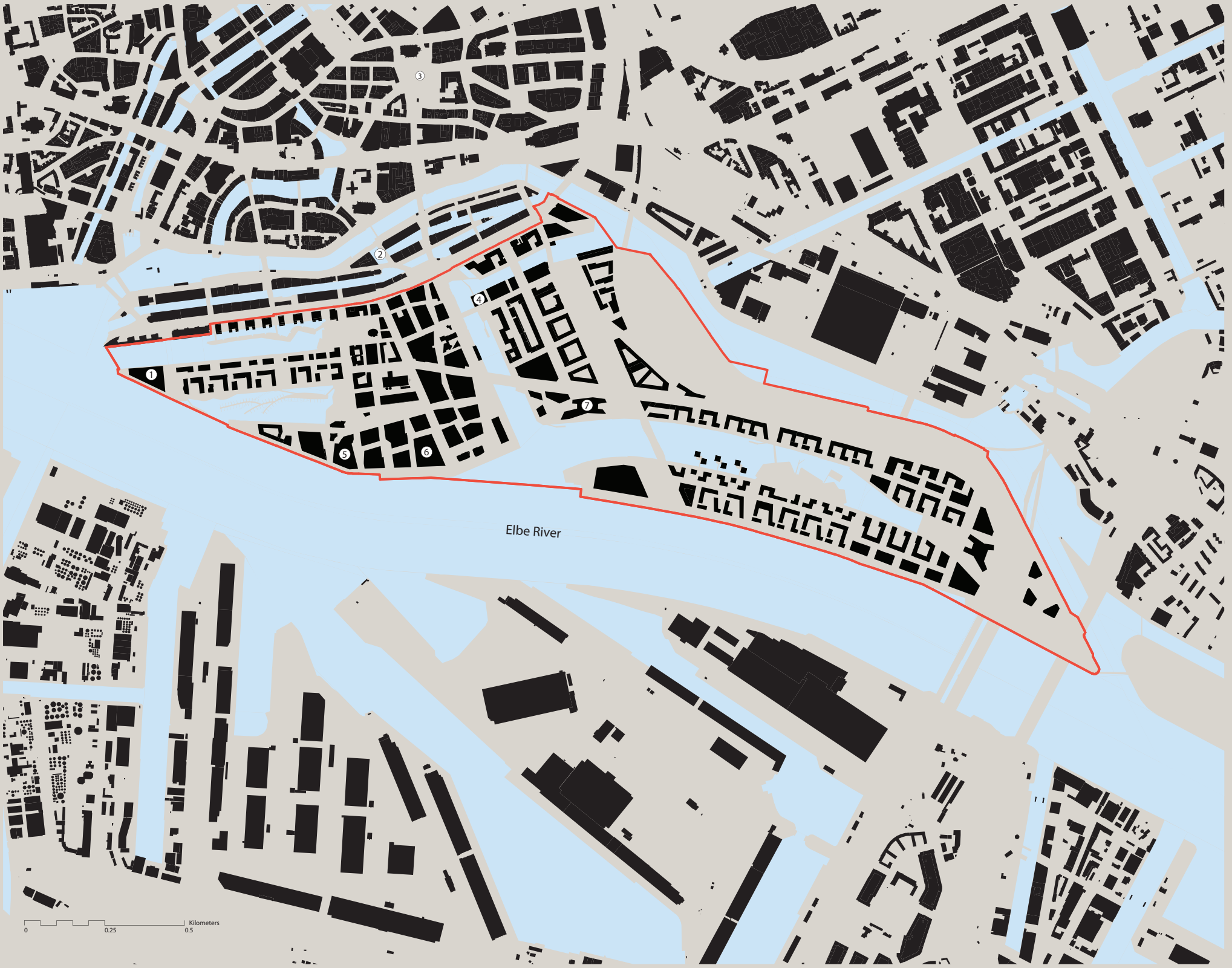
With the relocation of the Port of Rio's commercial shipping activities in the 1980s and the privatisation of Brazilian ports in 1998, a large swathe of valuable urban land became available for redevelopment, right on the doorstep of the city's historic centre. Porto Maravilha encompasses 500 hectares (1,236 acres) occupied by empty warehouses, industrial buildings and wharves that surround one of Rio's historic *favelas*, the Morro da Providência. Its west-facing waterfront offers extraordinary opportunities to reconnect the city with Guanabara Bay, close to the main railway station and the historic office district of *Centro*. Following a familiar process of abandonment and part-occupation by fringe activities (artists and small entrepreneurs), the City embarked on a programme of revitalisation of the area that has been given further impetus since Rio was awarded the 2016 Olympic Games.

As a delivery vehicle, Porto Maravilha has been set up a as public agency (CDURP), which acquired the land on behalf of the municipality, giving it full control over future developments. Since 2009, the agency has been tasked to sell development rights for each plot to help fund the considerable upfront investment in infrastructure, which includes the demolition of an elevated motorway (typical of post-war planning in port cities in Europe and North America), the construction of a light rail system and undergrounding of road traffic. The objective is to create a mixed housing and commercial neighbourhood that will both attract major international investors and increase the residential population in the area from 30,000 to 100,000 by 2020.

Porto Maravilha has chosen to operate a development model that provides maximum flexibility for potential investors. It has worked up a financial model with maximum allowable areas for individual plots that fit within a transport network and incentives for developers to provide more residential space. Nonetheless, it has stopped short of defining a three-dimensional spatial masterplan that regulates the footprint and character of buildings and public spaces, or the exact mix of functions on a street-by-street basis. While construction has already begun on several large scale projects – including the Olympic media village (Porto Olímpico), five 150-metre Trump Towers as well as high-rise hotels, residential and office towers – details of the proposed urban fabric and its porosity with respect to neighbouring areas are yet to evolve. Cultural projects include the completed Rio Museum of Arts and highly iconic Museu do Amanhã (Museum of Tomorrow) is seen by some as Rio's answer to Bilbao's Guggenheim.

Three per cent of the income raised from land sales is invested in social inclusion, heritage and arts programmes for communities living in the area. Not unlike other projects of this scale and ambition, Porto Maravilha is seen as an important part of the revitalisation of the city's waterfront, but has been criticised for over-development, increased traffic flows, alien urban typology, lack of provision of local services and public consultation.

# HAMBURG: HAFENCITY




① Elbphilharmonie
② Speicherstadt (old granaries)
③ Old Town
④ International Maritime Museum
⑤ Unilever House
⑥ Ferry Terminal
⑦ HafenCity University

Hamburg's historic role as a major European port, going back 800 years, has been recently recalibrated as a result of globalisation, market restructuring and rationalisation of port activities. Located on the River Elbe, the port remains a major force among Europe's maritime gateways, but a significant section of its dock areas was vacated and released to the City of Hamburg as part of a comprehensive city-wide redevelopment plan in the late 1990s. Hafencity, the 3.2km strip of over 150 hectares (371 acres) of waterfront land, provided a rare opportunity to expand the city core by 40 per cent, connecting the historic inner city to the water, revitalising the area with a mixed-use neighbourhood designed to promote jobs, inward investment and inner-city living. A number of high-quality granary warehouses close to the water provided further opportunity to connect to the city's past.

From the outset, the City of Hamburg (which owned the port) increased ownership of the land in HafenCity from 75 per cent to 97 per cent as a result of large-scale land acquisitions, giving it almost complete control over the land and its uses. The redevelopment is managed by HafenCity Hamburg GmbH, which is a subsidiary owned entirely by the Free and Hanseatic City of Hamburg. HafenCity launched a special fund called Stadt und Hafen which owned all of the land on the site. Fifty per cent of this land was sold upfront raising R$4.4 billion (US$ 2 billion) with a further R$2.7 billion (US$ 1.2 billion) billion of public investment. The entirety of the R$7.1 billion (US$3.2 billion) public funds were used to pay for the infrastructure covering roads, bridges, squares, parks, quays and promenades. However, the vast majority of investments,around R$23.6 billion (US$ 10.8 billion) billion, have come from private investments in real estate.

As an institution wholly owned by the City, Hafencity works in close collaboration with its Planning Department and shares the overall vision for how Hamburg is set to grow over the next decades. The agency drew up a three-dimensional spatial masterplan for the entire area, defining building heights, ground floor uses, street widths, public routes and landscaped open spaces. Connections to and from the old inner city were to be preserved and enhanced, taking into account flood risks and the need to ensure active street frontages throughout. Within this overall spatial framework, open design competitions were held for interested parties (developers, investors and architects) whose projects had to respect the strict design guidelines imposed by the masterplan. Around 50 per cent of the available land has been sold as 'building plots' (rather than 'development plots' as in Porto Maravilha).

The result of the process is architecturally varied and urbanistically consistent. It has proven attractive to the private sector even at a time of recession in Europe, with major media, insurance and commercial organisations locating new headquarters on the site, alongside housing and cultural buildings. When complete by 2015, Hafencity will have a population of 12,000 residents and 45,000 jobs.

# RETROFITTING URBANISM

## RIO DE JANEIRO: COMPLEXO DO ALEMÃO

The Complexo do Alemão – a complex of twelve communities - is one of the largest and most visible *favelas* in Rio with a growing population of over 80,000 people. It has undergone a continued and sustained process of upgrading and retrofitting for a number of decades. During the 1980s it benefitted from public investment in sanitation, paving and primary education. Since 2007, the government's Growth and Acceleration Programme (PAC) has funded new amenities including a library, youth centre, school, health centre, 2,600 new homes and a major cable-car system with six stations that extends for nearly three kilometres, with a maximum capacity of 30,000 passengers per day (highlighted on the map above). The pacification process (UPP) has added local and police facilities next to the cable car stations. 82 per cent of households are privately owned - with only 12 per cent renting. At 12 per cent, the unemployment rate is higher than the average in Rio and over 5,000 businesses are split between services and retail, with a small number of manufacturing activities. Some businesses are responding to the growing needs of tourists who use the cable car system. The process of retrofitting is on-going with a new hospital and other facilities in or next to the *favela*.

# MUMBAI: DHARAVI

Dharavi is spread over 200 hectares (494 acres), the size of the Olympic Park in London with a population of about one million people living at extremely high densities. The local community is engaged in traditional industries such as pottery, textiles and the recycling industry, with 80 per cent of its residents employed in the area's 5,000 businesses and 15,000 single-room factories (most of them illegal). The total turnover from formal and informal activities is between US$500-600 million (R$1.1-1.3bn). Major problems are related to inadequate sanitation and water supply, with only one toilet per 1000 residents. While most houses have electricity, 70 per cent is connected on an ad-hoc basis to the national grid and there is no official waste collection. Government interventions began in the 1970s when the area was formally declared a slum. As a retrofitting process, there have been some basic sanitation investments and new housing and infrastructure provided with 85 new buildings by the Slum Rehabilitation Scheme. There are controversial plans by the Dharavi Redevelopment Authority to transform the area by subdividing it into five sectors, with developers providing private sector housing to subsidise social housing for eligible slum dwellers and public infrastructure.

# LEARNING FROM RIO

The following essays, data and maps offer an over view of Rio de Janeiro's spatial, social, economic and political evolution.

## THE PARADOXES OF INEQUALITY

Luiz E. Soares

### Progress as a condition for rebellion

The series of startling events in June 2013 began with a movement against increasing public transportation costs in São Paulo. Until then, everything seemed business as usual, under the conservative media's fire, with arrogant declarations made by the right-wing governor and the left-wing mayor, who both refused to even negotiate a reduction in transport fares. The scene was typical and the unfolding events were predictable. At that juncture, the protests seemed to be waning and likely to remain local. But, on the second day of the protests, the military police in São Paulo offered its invaluable contribution to the country's history, acting with criminal brutality, also against journalists. It was enough to ignite Brazil's collective spirit. Within a few days the proposed increase in transport costs had been revoked, but the inflamed masses did not retreat.

The starting point is justified. In Rio and São Paulo, workers spend up to four hours every day making their way across urban spaces jammed with cars, which have multiplied in the last decade due to the growth of the middle classes by 40,000 Brazilians. This crisis in urban mobility is the unanticipated and contradictory result of a decrease in inequality together with rapid growth – one of whose focal points has been the car industry. In addition, the combination of more consumers, more access to education, and the citizenry's increased cultural appreciation creates a new context. Improvements have converged in such a way that certain situations that in the past would have been tolerated passively, have become unacceptable.

This apparent paradox is not new: in the nineteenth century Alexis de Tocqueville taught us that the social groups most willing to act and react are not the poorest and most powerless, but rather those that have something to lose. This means that the social improvements during Brazil's last two decades (especially the last ten years) have broadened the slice of the population potentially willing to resist if faced with losing. Those who have risen will not surrender their gains without a fight. What gains, exactly, am I referring to?

### Recent gains in Brazilian society

Using the Gini coefficient to measure income inequality, Brazil achieved its lowest level [representing less rather than more inequality, eds.] in 2011, the lowest for 51 years since this measurement was introduced in 1960. Between 1960 and 1990, inequality grew from 0.5367 to 0.6091. From that point it decreased until 2010, when it reached 0.5304. It continued to fall in 2011, when it reached the lowest number ever, 0.527. Even though the inequality coefficient was at its lowest ever two years ago, Brazil continues to be one of the twelve most unequal countries in the world.[1] Yet luckily, a steady trend is beginning to reverse the inequality at a considerable rate.

In the first decade of the twenty-first century, the compound annual growth rate in income for the wealthiest 10 per cent of Brazilians was 10.03 per cent, while for the poorest 50 per cent it was 67.93 per cent. Ricardo Paes de Barros, director of social policy and research at Brazil's National Institute for Applied Economic Research (IPEA), points out that the 10 per cent poorest obtained an increase in income per capita of about 7 per cent per year, between 2001 and 2009, only a little lower than the celebrated average growth in per-capita income in China. He estimates that few countries could achieve an outcome comparable to Brazil's decrease of income inequality between 1999 and 2009. The 10 per cent wealthiest Brazilians held 47 per cent of national income, and that decreased to 43 per cent, while the 50 per cent poorest had 12.65 per cent of total income in 1999, and went on to earn 15 per cent by 2009.[2]

The fact that stands out most is that in 1993, the year before the implementation of the Plano Real (designed to control inflation), 23 per cent of Brazil's people lived in extreme poverty. In other words, they did not have access to the income necessary to consume the minimum number of calories required for healthy survival. The Plano Real transformed that devastating situation in one year. In 1995, the first year of Fernando Henrique Cardoso's first term as President, the percentage of the population in extreme poverty decreased from 23 per cent to 17 per cent. By 2003, the proportion of people in extreme poverty had remained the same. In 2009 it fell to 8.4 per cent. While it is still an excessively high and unacceptable number, it is much lower than it was at the beginning of the 1990s.

In 1993, there were 51 million Brazilians with a monthly household income below R$752 (2011 value, US$450). In 2001, there were 46 million. By 2011, the number had decreased to 24 million. In 1993 there were 41 million Brazilians whose monthly household income was between R$752 and R$1,200, and dropped to 38 million by 2011. On the other hand, there were 45 million people in 1993 whose household income was between R$1,200 and R$5,147 and that figure more than doubled, reaching 105 million by 2011. Note that during the 18 years in question (1993 to 2011), Brazil's population grew at a slower rate than previous decades. The accelerated growth, seen in the 1940s (when the average birth rate was 2.39) and the 1950s (when it reached 2.99), fell in the 1990s (to 1.64) and even further (to 1.17) in the first decade of the twenty-first century.[3]

When the dynamics of demography are taken into account, the meaning behind the worthy process of inequality reduction is more effectively revealed. These figures enable Marcelo Neri, economist and former president of the IPEA, to affirm that '39.6 million Brazilians entered the tier of the so-called new middle class (class C) between 2003 and 2011 (59.8 million since 1993).'[4]

### Plural agendas and the collapse of political representation

The agenda of this evolving political movement is not uniform, and each participant holds up his small sign with a proposal, a criticism, a demand, in formal language or with humour, whether it is against homophobia or the technocratic authoritarianism of governments. Meanwhile, in spite of the immense thematic spectrum, some topics are constant: public transportation, urban mobility, corruption, police brutality, unequal access to justice, more resources for education and health, and fewer resources for building lavish stadiums for the 2014 World Cup, or the 2016 Rio Olympics. In this way, the price of public transport ticket merely put a metonymic chain into circulation in Brazil's individual and collective imaginary, connecting the most diverse contemporary national issues. And each individual felt motivated to contribute to this epic narrative their own description of what they find to be the fundamental and urgent drama. Note that the legitimacy of the federal government was never seriously questioned.

The common axis, however, underlying these diverse positions, is an indignant proclamation of the collapse of political representation. The protestors have lost faith in parties and politicians who renew their mandates through the electoral system without realising that a mere respect for the rules of the game is not enough to keep democracy on its feet. Since the establishment of the 1988 Constitution, following 21 years of military dictatorship and three hybrid years, Brazil has been a democratic state that follows the rule of law. But democratic institutionalisation came to be seen by the majority of society as a hollow shell, a form without content, taken over by unscrupulous political agents. The formal endorsement of members of parliament and political rulers through the electoral process, in a country where voting is obligatory, does not guarantee legitimacy from society's point of view. The breakdown of political representation has occurred while the country's leadership has demonstrated no sign of understanding the magnitude of the abyss that could open up – and swiftly deepen – between political institutionalism and the feeling of the majority.

The defining characteristic of the current movement is its intensity. The protests occur in the language of excess: many people, all day long, demonstrating about every possible theme and topic – and there is always the exalted and violent minority that defaces public property. On the fringes a few professional crooks go along for the ride, as well as those who enjoy destroying things for no reason. Why the passion and intensity? I suggest a hypothesis: the linked political problems and symbolic bonds are, as I explained, interrelated, accentuating one permanent feature: inequality. And this happens in an institutional and normative context, the democratic state under the rule of law, where equality is the declared and reiterated principle. For this reason, negative associations become aggravated, accentuating the emotional intensity with which they are experienced and communicated: anything that condones inequality stands out because it strongly contradicts the expectations created by the constitutional pact. In the end, is the dialogue about citizenship worth it or not?

### Persistent historic inequities

Despite the very significant reduction in inequality, it persists in many forms. Just as violence and police brutality against the poor and blacks persist. The outrageous inequality between blacks and whites has been decreasing, but it endures, revealing structural racism within the country. Between 1950 and 1980, whites lived 7.5 years longer on average than blacks and mulattos – classifications used at that time. In 1980, the life expectancy of blacks remained at 59 years. In 1987 the white population lived on average until the age of 72, while the life expectancy of blacks was 64.5. Another lurid confirmation. In 1980 the infant mortality rate of blacks and mulattos was the same as the infant mortality of whites in 1960: 105 out of every 1000 live births. Skin colour, which means nothing according to those who believe in the myth of Brazil's racial democracy, separated life expectancy among blacks and mulattos – by 20 years – from the social advances achieved by the white population, advances that would have been impossible without the labour of the non-whites.[5]

Marcelo Neri provides revealing data about three phenomena, the historical significance of which is profound. First, the demographic effect of the social construction of Brazilian identity: the portion of society that defines itself as black is growing dramatically. If you compare the last two censuses executed by Brazilian Institute of Geography and Statistics, 2000 and 2010, the number of blacks in Brazil's population increased by 22.6 per cent. In my mind, the main reason is the growing political consciousness of Afro-descendants, who increasingly acknowledge their colour and what it means with pride.[5]

The second phenomenon studied by Neri is the shocking level of inequality. The probability that a person who calls themselves white is poor is 49 per cent less likely than someone who is black, and 56 per cent less likely than a mulatto. For example, a white illiterate middle-aged woman who lives in a *favela* in the city of Salvador is 29.4 per cent less likely to be poor than if she is non-white. The 2010 census made clear the colour of economic inequality, indicating that 70 per cent of extremely poor Brazilians are black. I can add other alarming figures regarding violence, public safety and the criminal justice system.6 The Mapa da Violência, published in 2011, reveals that in 2002 to 2008, the number of blacks who had been murdered grew by 20.2 per cent, while the number of white victims of the same crime decreased by 22.3 per cent. There is no doubt that blacks and the poor are the main victims of the worst crime – premeditated murder – just as they are the main victims of lethal policy brutality and illegal searches.

The third phenomenon is good news. Between 2001 and 2009, 44.6 per cent of income growth occurred among blacks, 48.2 per cent among mulattos and 21.6 per cent among whites. The growth of the proportion of the black population in Brazil and the extreme significance of increased access by black youths to university – thanks to the affirmative actions of policies such as the Programa Universidade para Todos (Prouni) and bank loans for blacks – has created a new scenario that bodes well for the future democratisation of Brazilian society. According to data released by IPEA in its *Boletim Políticas Públicas: acompanhamento e análise* (No. 19), the net rate of student enrollment among 18- to 24-year-olds grew more than five-fold between 1992 and 2009. While in 1992 only 1.5 per cent of young blacks entered university, in 2009 8.3 per cent pursued higher education. In this period the net rate of enrolment of young whites jumped from 7.2 per cent to 21.3 per

cent, and the contingent of black students grew from 20.8 per cent of the total white group in 1992 to 38.9 per cent in 2009.[7]

### From invisibility to the fight for recognition

Another important dimension of the current political climate is captured by access to the Internet. In 2011, 115,433,000 Brazilians aged ten or older owned a mobile phone (in 2005, a little less than half, 56,105,000 Brazilians, had mobile phones) and 78,672,000 surfed the web. The growing participation in social networks made the June 2013 protests viable, which then began to depend on the conventional media itself. In addition, it has allowed Brazilians to identify themselves and put in practice the global model of taking over public spaces as a kind of direct democracy or political action not mediated by institutions, parties or representatives. The model recalls the classic idea of direct democracy as the ideal, while not achieving it entirely.

Once begun, the mediations never cease, connecting different institutionalised processes to the energy of the masses in the public squares. What matters in this dramatic scenario are idealised memories and common languages, as if these events were cited mutually creating a virtual constellation of hypertexts.

In this context, it becomes possible to feel included in the transnational narrative about new democracy; to feel pride for those who felt disrespected and invisible before public power; to promote the identification with the persona of the civic hero, where collective political experiences become cult entertainment for the anti-political (even if it involves the risking of one's life); to engage in a fraternal and gregarious experience (before an enemy that is abstract and ghostlike while being obviously and immediately identified with the face of a police officer); and, to participate in an experience that fills one's heart with joy, exalting the emotions and elevating them to an almost spiritual level.

This text, originally entitled 'Ground-shakes in a country of inequalities and paradoxes', was written just after the June 2013 protests that took place in many of Brazil major cities. It is an edited version of the text that was originally published in *Los Angeles Review of Books* on 1 July 2013; see http://lareviewofbooks.org/article.php?id=1821 for the full text. Original translation by Magdalena Edwards.

1 By comparison, the UK's Gini coefficient is 0.34, while South Africa's is 0.63, eds.
2 Paes de Barro cited by Rafael Cariello in 'O liberal contra a miséria', in *Revista Piauí*, No. 74, November 2012, p. 30.
3 Elza Berquó, 'Evolução demográfica', in Ignacy Sachs, Jorge Wilheim and Paulo Sérgio Pinheiro, eds., *Brasil, um século de tranformações*, São Paulo, Cia das Letras, 2001, p. 17.
4 Marcelo Neri, *A Nova classe media*. São Paulo, Saraiva, 2011, p. 26; PNAD – Pesquisa Nacional por Amostra Domiciliar, by IBGE, Instituo Brasileiro de Geografia e Estatística.
5 C.H. Wood & P.L. Webster, *Racial inequality and child mortality in Brazil*. Mimeo, 1987, APUD; Berquó, op.cit., 27; Garcia Tamburo, E.M., "Mortalidade infantile da população negra brasileira," Texto NEPO 11, Campinas, NEPO/UNICAMP, 1987, APUD.
6 Silvia Ramos and Leonarda Musumeci, *Elemento supeito*, Rio de Janeiro, Civilização Brasileira, 2005.
7 For data on college attendance see: hhtp://www.ipea.gov.br/igualdaderacial.

**Luiz E. Soares is anthropologist, film-writer and commentator, based in Rio de Janeiro.**

# CLOSE, YET FAR

## Sérgio Magalhães and Fabiana Izaga

Arriving in Rio de Janeiro in 1955, Nelson Pereira dos Santos, the director of *Rio 40 Graus* [Rio 100 degrees Fahrenheit] – a film that received an award at the Film Festival of Brasília – was enraptured by the view of what he called 'the exposed *favela*'. Originally from São Paulo, Nelson described how he found the perfect backdrop to the narrative of the ambiguous relationships of proximity and distance between the bourgeoisie of the asphalt, and the majority black population and rogues living on the hillsides in the South Zone of Rio de Janeiro. Although spatially close, that did not mean that they were integrated. In São Paulo, the *favelas* were not as exposed as those of Rio, juxtaposed with middle-class apartment buildings of the characteristic hillsides, typical of Rio de Janeiro's South Zone. With its depiction of Brazilian reality through one day in the life of five kids in a *favela* in the North Zone – Morro do Cabuçu – who sold peanuts in Copacabana, Pão de Açúcar hill, and at the Maracanã stadium, some of the city's main tourist attractions, the film inspired the Cinema Novo movement.

Since then, socio-spatial relationships in the city of Rio de Janeiro have deepened, and cannot be viewed simplistically through dual oppositions, as is sometimes attempted. Between the hills and the asphalt, legality and illegality, or even in the idea of a divided city, there is a lot more. The classic definition of rich central areas and poor outskirts manifested itself alongside the existence of pockets of poverty within wealthy neighbourhoods. The relations of proximity and distance between social groups focused on their material expressions, juxtaposed throughout the city, and came to represent and structure the metropolis of Rio de Janeiro.

The *favelas,* seen as a place of poverty, samba and trickery, and precarious areas ignored by public authorities, have gone through significant transformations since then. From the early 1970s onwards, the 'urbanisation', or upgrading, of the *favelas* has provided positive experiences in some communities that received infrastructure and pavements, the basic requirements of urbanisation. In Rio de Janeiro, for instance, this process was strengthened in 1993 and following years with the Favela-Bairro programme created by the Municipality.

However, perhaps the most remarkable aspect of low-income settlements – including the *favelas*, but also the irregular land divisions and housing complexes – is the presence, from the 1990s onwards, of armed violence, which has settled into those areas in connection with drug trafficking. The existence of areas dominated by organisations, gangs or commandos came to define territories of exception, characterised by the 'absence' or 'scarcity' of the State, shaping a social reality in which there is no rule of law. It is only since 2008 that these areas have been tackled by public authorities, through the Pacifying Police Units, or UPPs. What we need is a better way to understand how these areas have come about and how they are ingrained in the political, social and economic fabric of the city.

### The origins of armed violence

Initially, the city treated *favelas* as provisional settlements, with the expectation that development would soon arrive and replace them. This meant that these sites were ignored. This was followed by a period in which the Brazilian State banned them, at the same time as it discouraged the construction of rental housing and took up the task of producing subsidised homes – a task that was evidently not accomplished. The *favelas* could not be part of the city map.[1] And since they were not on the map, the problem was solved. This legal determination prevailed even into the 1990s.

Irregular developments, in turn, appeared in the mid-twentieth century, at a time when accelerated population growth could not be accommodated in rental houses and when there was no funding for the construction of homes. The families that did not want to live in the *favelas* occupied new areas in the West, building their own houses.

We could think that both the *favelas* and the clandestine development areas resulted from low-income families adopting the nuclear family model, which they achieved without support from collective savings. Thus, *favelas* and irregular settlements did not come about as a rejection to the city; they actually show the willingness of poor people to integrate in the city.

Housing complexes are the result of government decisions. Throughout the middle decades of the last century, complexes were built as the main – and almost exclusive – housing policy action. Residential complexes were to a large extent aimed for the compulsory resettlement of families living in *favelas* that were demolished by public authorities.

In Rio de Janeiro, recent data (2010) indicates the existence of about 425,000 households in 763 clusters called 'subnormal', including *favelas*, irregular development areas, and settlements without infrastructure or land ownership. These numbers suggest that about 1.5 million people live in informal areas, or about 25 per cent of the population of Rio. The first census of the *favelas*, carried out in 1948, revealed the existence of about 35,000 households, 138,000 inhabitants, or 7 per cent of the total population. This significant increase marks the tortuous trajectory of poor people in relation to the city's housing stock.

*Favelas*, developments and housing complexes are the three main models of low-income urban settlements in Brazil. In Rio de Janeiro nearly half of its population lives in these conditions. This is clear when we look at the city map.

### Common conditions

From the point of view of access to infrastructure and urban services, the degree of integration of these settlements varies. But there is a condition common to almost all of them: the absence of the State. Governments are not as present as they are in the ordinary city – on the asphalt. Even in the residential complexes of Cidade de Deus, Vila Kennedy and Vila do João/Maré, where regular settlements were created, governments usually do not provide good public services to the residents.

Regularisation of property, for instance, does not exist, even though the earliest communities date back to the 1960s. 'Absence' or 'lack of State presence' is not a way of saying public services are bad, it is much more: a reality in which there are no effective laws governing society. In most of these low-income settlements, tenancy law does not apply. Relationships between landlords and tenants are mediated by forces that do not comply with the Brazilian Constitution. In case of tension, the parties will seek to resolve their conflicts with support from the powers that replace the absent State.

The tax code and building laws have no power either. In those *favelas*, in case of land divisions and housing developments where the State is not present, there are no guarantees that the right to legal defence, the right of the adversary or the right to come and go – key pillars of the Brazilian Constitution – will be respected. So, what are the rules in force? How are they established? Who enforces them?

### Structuring of territorial control

Without a rule of law, these settlements are at the mercy of organisations or gangs for which the areas have some value. In general, the value attributed is one linked to the drugs trade. Today this business is certainly a relevant aspect, but it is no longer the only one, and perhaps not even the most important.

Illegal trade of public services, like transport, communications and electricity, are part of everyday life in these settlements, the control of which has acquired increasing value. Recently, with the advent of the *milícias*, security services were also created. The construction of irregular housing is another very profitable business, with much better profits than the ones in the formal housing economy. And, as rent collection cannot be dissociated from the 'dissuasive argument' of the strongest, it reinforces the circle of illegality, secrecy, and of the better armed.

In Rio de Janeiro, the way territorial control is structured is no longer based on drugs sales points, but on a network. By consolidating itself, this network of illegality forms 'islands' that are controlled by different laws. The absolutists at the top exceed the control of their territories and expand their tentacles beyond the archipelago. Thus, the network also unfolds over the legal urban fabric and reaches successive neighbourhoods and important regions of the city.

Thus, in these territories ignored by the State, an economic-political-social network has been established with negative impacts on the economy, politics, society, and urban life.

### Causes and effects x recovery and permanence

Since urban violence has become part of everyday life, it was first understood to be part of the economic forces of modernity. Trapped between authoritarianism and social chaos, illegality was seen as part of a kind of political protest. Next, violence was treated in a context of symbiosis between marginality and the agents of the State, where corruption was the common element. To this we could add the absence of fully-shared moral boundaries, which attributes a certain incentive to illegality in the pursuit of social mobility. Permeating these stages, there were several ways to tackle violence based on the role of the repressive apparatus of the State, which assumed greater or lesser importance, without connections to the social, political or economic causes.

It was only after the Brazilian State lost its legitimacy – and citizens their spirit – that the Pacifying Police Units, or UPPs, started to be deployed from 2008 onwards. Since then, there has been an arduous attempt to re-constitutionalise those territories. This does not mean the end of clandestine networks. On the contrary, the symbolic recovery that is the result of the presence of the State in these areas represents the beginning of a new process.

Close, yet far from the rest of the legal city, those territories of exception are beginning to recover their citizenship. Permanent services, viewed as banal in great part of the city, such as regular refuse collection, home delivery of goods and mail, among others, in addition to the simple possibility for children to get to and from school in safety, have started to happen without the threatening control of drugs trafficking. With the now permanent presence of the State, it is a matter of time before services reach these areas. The ways vary, and new problems may arise. In the

**LIVES APART**
With a population of over 130,000, the Complexo da Maré is one of Rio's largest unpacified *favelas*. Travelling from the Maré to Leblon – a high income neighbourhood in Rio's South zone- life expectancy decreases by nearly half a year for every kilometre travelled.

South Zone, boutique hotels have already arrived, and sightseeing tours take place in the pacified *favelas*, attracted by the proximity of the wealthy areas and the fine views over the city. However, many areas of the metropolis, especially the North Zone, from Bonsucesso to Irajá, remain critical.

Once the initial stages of recovery of these territories are overcome, one of the main challenges arising is the permanence of public services – which cannot be understood merely as the presence of police forces. Full consolidation of state control is essential. The recent mass protests have brought to the fore the issue of lack of consistent public urban development policies. Our cities still need a more cohesive agenda, with a much stronger commitment to urban development.

1 According to Rio de Janeiro's Municipal Legislation of 1937.

**Sérgio Magalhães is President of the Brazilian Institute of Architects. Fabiana Izaga is Vice-President for Institutional Relations of the Brazilian Institute of Architects - Rio de Janeiro.**

# WORK HAS ONLY JUST BEGUN

## Julia Michaels

In Brazil, change has always come slowly, while inequality has weighed heavily. In this context, Rio de Janeiro developed with informal settlements scattered among middle- and upper-class neighbourhoods. The rich didn't want to live on hilltops without electricity, water or rubbish and sewage collection, but they didn't mind if their servants resided conveniently close by. Such geography led to a symbiosis that produced rich interconnecting webs of personal relations, Carnival, samba, funk, beach culture, art, and much else worth celebrating. At the same time, those webs, unchecked by government or the press, together with a phase of liberalisation following the departure of the 1964–85 military government, allowed criminal gangs to take over and run informal territories, or *favelas*.

As kidnappings and other crimes spread, and the economy foundered, in the 1980s Rio lost banks, the stock market and much else, to São Paulo. Factories closed. The city's downtown and its contiguous port went into decay and lost its residential population.

Due to the ensuing safety issues as well as the daunting complexity of urban renewal, residents, commerce, investment and real estate developers turned westwards to rural and empty beachfront areas within the city limits.

This exodus was particularly devastating for the industrial and working-class North Zone, close to the port and the international airport (which then became assets for those who went into the drugs and weapons businesses). But even the glitzy South Zone – Copacabana, Ipanema, and Leblon – suffered private- and public-sector neglect and depreciation, with residents dodging bullets flying off drug-dealers' hilltops.

And, although there are few hilltops in the expanding lagoon-dotted West Zone, a similar pattern emerged there: construction workers and other unskilled labourers were relegated to the edges of mangrove swamps, while their employers swarmed to beachfront property, gated communities and shopping malls. Ultimately, the city had allowed developers to build what amounted to a Brazilian Miami – without a sewerage system or effective public transportation. Traffic jams, *favelas* and clogged lagoons ensued, with the city's poorest section in its furthest reaches.

The 1990s and 2000s saw the rich building ever-higher walls in the entire city, hiring ever-bigger armies of security personnel, and keeping close to home and work. The city withered. In the latter decade, the Rio's state-run police force, largely corrupt (partnering with the drug and weapons trade), kept an uneasy peace by way of periodic incursions into North and South Zone *favelas*. In the West Zone, off-duty and retired police and firemen organised *milícias*. Welcomed at first, these groups evolved into violent extortionist gangs with their own wheeling and dealing in the areas of transport, bottled cooking gas and infrastructure – and got themselves duly represented on the city council and in the state legislature.

With the election of Sérgio Cabral as governor in 2006, the Rio police took a new approach to public safety, which gained continuity with his 2010 re-election. Dubbed pacification, the largely successful policy focuses on retaking territory from drug traffickers, mostly in the North and South Zones. Reducing daily gun violence directly, so far, for about 500,000 *favela* residents, the policy has halved Rio's homicide rate (to 24 per 100,000 a year, although numbers seem to fluctuate slightly between sources), raised real estate values, drawn investment and allowed citizens greater mobility. [1]

Thus began an urban turnaround that now faces huge challenges. Rio has become in effect two cities. The sprawling West Zone, riddled with *milícias* and new construction, will host most of the 2016 Olympic Games. The degraded, more densely populated North and South Zones, safer than in decades past, are starting to integrate both formal and informally settled areas into a single vibrant fabric.

Then there is the Centre, where tunnels and open areas will replace an elevated motorway, augmenting access to the Bay. Light rail transportation will connect new office buildings in the renovated port area to the traditional centre. A cable-car system will take residents and tourists up and down to Rio's oldest *favela*, Morro da Providência. What the expanded downtown will look and feel like in five or ten years is an open question.

It should be noted that all of this takes place in a context of nearly full employment, the result of local petroleum and gas investment, a series of mega-events, federal funding for local initiatives, significant national economic growth (starting to ebb now), and the widening of Brazil's socio-economic pyramid, with thousands of Rio's 1.4 million *favela* residents joining the formal economy and the lower ranks of the middle classes.

The challenge is basically to transform a two-tier system (public, for the poor, and private, for the better-off) of transport, education, public safety, housing and health into something more democratic. Added to this are the inefficiencies of a state-run public sanitation company that provides water to just about everyone, but collects and adequately treats the sewage of only 30 per cent of the city.

The transformation requires changing the priorities, the mindset and the standing of a host of entrenched interests, political and economic. These interests have long called the shots in Rio. Elected representatives rubber-stamped the mayor and governor's wishes, with little initiative or accountability to voters, perpetuating and strengthening the power of urban players, including the *milícias*, bus and construction companies, and real estate developers.

The elected city council is apparently so useless that Mayor Eduardo Paes, a modern-minded, yet authoritarian young politician voted into a second term last year, appointed a new City Council of 136 members to advise him on two strategic plans. Notably, none of its illustrious, mostly white, mostly male, members live in a *favela*.

Meanwhile, citizens have traditionally shunned what they consider to be 'dirty politics', with the upper classes simply pulling strings when they need to. Local media, virtually monopolised by the Globo empire, have only this year begun to report on how Rio truly functions.

To further close the inequality gap, preserve diversity and hasten lasting social change – in other words, to realise its enormous cultural and economic potential – the city of Rio proper (population 6.3 million) must now provide full-blown city and state services to both formal and informal areas, address transportation issues stemming from urban sprawl, and bring together North, South and West Zones into a workable territory that, at 1,182 km$^2$, is an enormous challenge even without the neighbouring towns that double the population to a metropolitan area of twelve million souls. In comparison, New York City, covering 1,213 km$^2$ and London, at 1,572 km$^2$, are each home to just over eight million. But these megalopolises are set in more highly developed democracies, with many more checks and balances on urban development.

Governor Cabral and Mayor Paes, supported by ample federal funding, have achieved much. Yet the progress seems diminished by the long roster of what remains to be done:

- Coordinate with neighbouring cities around metropolitan issues such as harbour clean-up, inter-municipal transport, employment and long-term public safety policies. Greater Rio accounts for three quarters of the state's total population of 16 million.
- Demilitarise and unify Rio's several police forces, with better training and efficiency, to reduce abuse and improve pacification efforts. Although public safety officials have arrested growing numbers of drug traffickers, they must also address criminals' flight within the metropolitan area.
- Focus on housing, particularly low-income, and particularly close to jobs. Housing policy centres on the federal low-income Minha Casa Minha Vida (MCMV, My House My Life) programme, plagued by corruption, bureaucracy, shoddy construction, and a lack of community participation and vision as to where and how low-income families should live in dignity. The MCMV programme contracted the build of 90,211 homes in the state of Rio de Janeiro, and by last July had only delivered 16,216 units. Other efforts have produced even smaller results.
- Further improve public health and education, while increasing coordination between state and municipal levels.
- Make good on a widely heralded programme, Morar Carioca, to upgrade all *favelas* by 2020, now scaled back to provide infrastructure only – due to lack of government funds and market incentives.
- Further improve public transport. This has focused on connecting the West Zone to the rest of the city, with dedicated bus lanes and an extension to a line of the state metro concession. Experts call for upgrades of existing North Zone train lines, to keep residents closer to the centre and add value to a region in decline. The city has noticeably reorganised and improved bus service but this still falls far short of passenger demands, at the centre of constant pressure on the city council.

The constant pressure on the elected city council demand has arisen from street demonstrations that erupted last June, settling in downtown Rio and outside the governor's South Zone offices and apartment building.

Before June 2013, it looked as though Rio's transformation would undermine the unusual symbiosis among its diverse groups, gentrifying the South and some North Zone hilltops and pushing westwards those unable to afford these areas. It seemed as though the historic port area, almost wholly restricted to office buildings, museums and cruise ship services (including tourism), would remain mostly dark and silent at night and on weekends.

This may still happen. But politicians have demonstrated increased sensitivity to voters. Some backtracking has occurred, and new dialogues are under way. Growing foreign interest and pressure, together with better access to information and a sense that real change is possible, are fuelling the process.

Notably, significant give and take, particularly on the subjects of mobility and housing, has begun between city hall and the local chapter of the Brazilian Architects' Institute, which represents the city's top architects and planners. The mayor's July decision to allow urban renewal for residents of Vila Autódromo, an informal settlement previously in the path of Olympic Village bulldozers, indicates the possibility of preserving, in some cases, the positive features of informal settlements. And the governor is rethinking plans to privatise the renovated Maracanã football stadium, set to exclude less prosperous sports enthusiasts and slated to demolish a public school, a swimming complex and a building used by Brazilian indigenous groups.

Rio's citizens and media (and, perhaps, the politicians themselves) have begun to understand that politics need not be quite so 'dirty'. In fact, what's occurring in Rio de Janeiro is a transition away from a favour-exchanging populist system towards a more complete participatory democracy. And this, though messy and unpredictable, can only bode well for one of the world's most charming and unique cities.

1 United States Department of State, Bureau of Diplomatic Security, OSAC. Brazil 2013 Crime and Safety Report: Rio de Janeiro. Available at https://www.osac.gov/Pages/ContentReportDetails.aspx?cid=13966.

**Julia Michaels is a journalist and produces the RioReal blog.**

# IN THE VIOLENT FAVELAS OF BRAZIL

## Suketu Mehta

My Brazilian friend Marina and I were picking up a visiting friend from New York, who heads an NGO, in her hotel lobby near Paulista, the most prestigious avenue in São Paulo. It was 7.30pm on a busy Friday night last October. We walked up to a taxi outside the hotel. I sat in the front to let the two women chat in the back. I saw a teenage boy run up to the taxi and gesticulate through my open window. I thought he was a beggar, asking for money. Then I saw the gun, going from my head to the cell phone.

'Just give him the phone,'
Marina said from the back seat.
I gave him the phone. He didn't go away.
'Dinheiro, dinheiro!'
I didn't want to give him my wallet.
The boy was shouting obscenities.
'Dinheiro, dinheiro!'

The boy's body suddenly jerked back, as a man's arm around his neck pulled him off his feet. The man, dressed in a black shirt, was shouting; he had jumped the boy from behind. He started hitting the boy. The taxi driver sitting next to me was stoic. He said that this had never happened to him before, but he couldn't have been more blasé.

The next thing I saw was the boy and another teenager, probably his accomplice, running away fast up the street. The man in the black shirt chased them a bit, then came back panting to the taxi. 'Did the bastard get anything?' our saviour ... asked. He wasn't a plainclothes cop, as I'd originally thought; he was just an ordinary citizen who was tired of the criminals. The taxi driver drove us to the nearest police station. Two lethargic cops were the only people there. 'We get ten of these a day, just in this precinct,' said one of them. The other cop went over to check in his register. 'Three before you today.' There are 319 armed robberies a day in São Paulo.

Everyone in this country has a story. The cities of Brazil are some of the most violent places in the world today. More people are murdered in Brazil than in almost any other country. In 2010, there were 43,684 murders, 22 per 100,000 inhabitants, according to the United Nations Office on Drugs and Crime (UNODC), compared to the global rate of 6.9 or to London's rate of 1.6 (in 2009). Between 5 to 8 per cent of Brazilian homicides are solved – compared to 65 per cent of murders in the US and 90 per cent of murders in the UK. Most of the victims are male and poor, between 15 and just shy of 30. The homicide rate has shaved seven years off the life expectancy in the Rio *favelas*.

The violence hasn't prevented Brazil from emerging on the world stage as the preeminent country in Latin America. Next year, it will host the World Cup, two years after that the Olympics. Between 2003 and 2011, Luiz Inácio Lula da Silva – Lula – Brazil's remarkable president, brought about one reform after another that improved the country's economy. Rousseff, his successor, was until the protests of this June favoured to win a second term next year. Both she and Lula are from the centre-left Workers' Party. Now, while not growing as fast as it did in the days before the crisis of 2008, the economy is still the world's seventh largest.

Brazilians like to think of themselves as a multiracial society, but a walk around the *favelas* of the cities demolishes this myth. Most of the residents have a dark complexion, much darker than most of the rich who live by the water or in the suburbs, and darker than most of the young people who have recently been protesting in the streets. Over the last year and a half, I have been visiting São Paulo and, especially, Rio de Janeiro, observing the process of 'pacification', by which the government attempts to peacefully enter and re-establish state control over the most violent enclaves of the city; those dominated by drug gangs, called *traficantes*, or by syndicates of corrupt police called *milícias*. Until 2008, when the pacification programme started, the *traficantes* controlled roughly half of the *favelas*, and the *milícias* the other half. Both still hold power in most *favelas*. The ultimate aim of the state government of Rio's plan, called the Unidade de Polícia Pacificadora (UPP), or Police Pacification Unit, is to drive both of these groups out and replace them by the state.

Today, of Rio's 6.3 million people, 1.4 million live in the *favelas*. There are some 630 of them, containing more than a thousand 'communities'. The state government aims to 'pacify' 40 of these *favelas* by the time of the World Cup next year – a kind of demonstration effect that will get attention from visitors. In the past, the police would raid individual *favelas*, capture or kill the biggest drug dealers, and leave. They would soon be replaced by other dealers, and the violence would continue. 'The new strategy is not to target individual drug dealers. It is to take back territory,' a high-ranking police official told me.

Under the UPP program, elite police units – and in some cases troops from the army and even the navy – invade the *favelas* and stay for up to three months. Then they are replaced by the regular police and squads of UPP civil servants. The UPP establishes schools and rubbish collection, brings in public and private companies to provide utilities such as electricity and television, and hands out legal documents such as employment and residency certificates. In the areas under its control, the UPP has set up community security councils, which attempt to mediate conflicts between local hotheads before they spread. The message is: the State is here to stay. So far, the programme has generally been seen as a success, and was a major factor in the re-election of Sérgio Cabral in 2010 as the state governor backed by the Workers' Party.

One night in Rio, Walter Mesquita, a street photographer, took me to a *baile* funk, a street party organised by the drug dealers, in the unpacified *favela* of Arará. It was an extraordinary scene: at midnight, the *traficantes* had cordoned off many blocks, turning the *favela* into a giant open-air nightclub. One end of the street was a giant wall of dozens of loudspeakers, booming songs and stories about cop-killing and underage sex. Teenagers walked around carrying AK-47s; prepubescent girls inhaled drugs and danced. On some corners, cocaine was being sold out of large plastic bags. Everybody danced: grandmothers danced, children danced, I danced. It went on until eight in the morning.

Although such parties are officially prohibited in the pacified *favelas* because of their multiple breaches of the law, ranging from noise violations to exhortations to murder – even the music played there is called *baile* funk *proibidão* – the State and its forces were nowhere to be seen. The rival gangs were a bigger threat than the police. The three gangs that control much of Rio have remained more or less stable for the last couple of decades: the Red Command, the [Pure] Third Command, and Friends of Friends. According to a top police official I spoke to, in a city of just over 6 million there are some 30 to 40 thousand people in the gangs.

The day after the *baile* funk, I was flying in a police helicopter over Rio. It took us over Ipanema and the newly pacified *favela* of Rocinha. I asked if we could fly over Arará. The pilot pointed it out in the distance, and said he could not fly directly over it. He was concerned about getting shot down. A couple of years ago, the *traficantes* had brought down a police helicopter with anti-aircraft guns. This, too, is the future of many megacities in the developing world, from Nairobi to Caracas. There is a de facto sharing of power between the legitimate organs of the state and the gangs, the *milícias*. Many people will die as the exact contours of this power sharing are negotiated.

Mário Sérgio Duarte is the high-raking police official who led the invasion of Alemão, one of the largest and most dangerous *favelas* in Rio. In an eight-day operation in 2010, the police found more than 500 guns: 106 carbines, rocket launchers, bazookas, 39 Browning anti-aircraft guns. 'Pacification started with me,' he tells me in the bar at the top of my hotel. Duarte's mother was a seamstress, his father was murdered in 1972 over a 'personal dispute'. Duarte studied philosophy in college, but chose to join the police force. His T-shirt says, 'Listen as your day unfolds'.

In the 1980s, cocaine from Colombia and Bolivia started coming into the *favelas*, accompanied by Eastern European AK-47s from Paraguay. A carbine, such as an AK-47 or M-15, now costs around R$15-20,000 (US$6,800-9,000). The *traficantes* have rocket launchers now, says Duarte, 'better weapons than the police,' who have .38s and 9-millimetre revolvers. Each year, some 50 cops and around 1,500 traffickers are killed. Last year, over a hundred police in São Paulo were murdered by the drug dealers, and police promised to kill five 'bad guys' for every cop killed.

The drug trade in just one *favela*, Rocinha, Duarte tells me, runs to around a million R$ (US$450,000) per week. But it's not just drugs. The dealers run a parallel economy in pirated cable TV, phones, and *moto* taxis, and have their own systems of justice. 'We don't expect drugs to be stopped, just the violence with the drugs,' Duarte says. He points to Santa Marta as an example of a pacified *favela* where drugs are still traded, but there are no visible weapons, 'no king of the hill.'

The state government has increased the armed police force in Rio from 36,000 to 42,000, towards a target of 50,000, with another 10,000 'civilian police'... Their salaries start at R$1,500 reais (US$680) per month, and in six years go up to R$1,900 (US$860). A policeman stationed in a pacified area gets another R$500 a month to help him fight the temptation to take bribes or join one of the violent syndicates – the *milícias* – run by corrupt police.

What is happening in the *favelas* of Rio is not so much pacification as legalisation. The dictatorship that ruled from 1964 to 1985 was brought down after many years and great sacrifices. Everyone who was not connected to the junta was its victim. People rushed to spend their pay as soon as they got it in their hands, because by the afternoon it would be worth much less. When democracy came, everybody – the rich in Leblon and the poor in Rocinha – felt they should benefit from it, and in Brazil, for a time, most people did.

But in the *favelas* there was no democracy. The traffickers continued with their own dictatorship; the people of the favela still had great trouble getting access to the courts or casting a vote. Pacification is an attempt to interrupt a despotic process. It is, for the construction workers and ladies who sell *feijoada* – a black bean stew – in the slum, the final fall of the dictatorship.

During the last twenty years, the drug dealers took informal control of much of life in the *favelas*, including, most importantly, music, the cultural lifeblood of Brazil. 'Our challenge is what will happen after the pacification,' I was told by Ricardo Henriques, who was until last year the head of the Instituto Pereira Passos, the government's urban think tank that formulates policy for the UPP. As Henriques rather optimistically sees it, the takeover of the *favelas* will happen in three phases. The first consists of the police moving in and denying the drug dealers the ability to do what they want, legally and culturally. The second: 'It's a little bit boring, the police are here.' The third phase consists of the state replacing the prohibited culture by an officially sanctioned culture, or at least culture that doesn't continue to glorify rape and murder. 'You do it in a creative manner,' explained Henriques. 'No guns. Less erotic, but really creative. The music is not proibidão.'

For decades, the *favelas* have existed in a parallel system to the rest of Brazil. 'The idea of the state is to stay there for the long, long term,' Henriques said. He wants to reduce the inequality between the favela and the rest of the city. If this schematic-sounding vision of pacification works – and the ongoing protests throughout the country are putting it in doubt – what would come after it? One night I went to a jazz club in the *favela* of Tavares Bastos, which had been pacified for a year, right below the headquarters of the Batalhão de Operações Policiais Especiais (BOPE). The rooms of the club were packed with sweaty bodies and heavy with marijuana smoke. If the BOPE wanted to find drugs it wouldn't have to go far. But it will never come here, because these are people from the rich, white areas of Ipanema and Leblon. The only black people I could see were the saxophonist and my guide, the street photographer, who lived here. 'The people from the *favelas* can't imagine themselves here,' said the photographer. The music was bebop and bossa nova, an American idea of the jazz that Brazilians listen to. No samba here, much less funk.

The club was opened five years ago. A beautiful white economist who works for a bank, wearing an expensive dress, told me she was already bored. 'Two years ago there used to be more interesting people. Now I only see all the people I would see near the beaches.' It costs R$50 (US$23) to get in; a beer is R$15 (US$7). On the way to the club, I passed a number of small cafés. In some, neighbours were enjoying beers that cost a third as much. In one, pleasantly overweight couples were dancing close together to samba. All the lights in the houses of the *favela* were out; it was after midnight. But the white patrons on their way to the jazz club were raucous, laughing, energised by the thrill of the expedition to this clandestine destination.

In Tavares Bastos, and in *favelas* like Cantagalo, with its easy access to the rich southern zone of Rio and increased security after the pacification, the residents are being forced out, not by violence, which they can live with, but by high rents, which will make living there impossible. Their right to live there was protected as long as it was illegal. After pacification, the biggest threat to long-time residents of the Rio *favelas* will come not from drug dealers, but from property dealers.



**Suketu Mehta is author of *Maximum City,* and Associate Professor of Journalism at New York University.**


**RESILIENT COMMUNITIES**
Motorcycle taxis skirt the crowds on the narrow streets of Rocinha, one of Rio's recently pacified favelas that sits cheek-by-jowl with the city's affluent neighbourhoods.

# SELF, COMMUNITY AND URBAN FRONTIERS IN RIO DE JANEIRO

Sandra Jovchelovitch

Rio de Janeiro is a city of multiple and contradictory layers, at once exposed and hidden by its beauty and complex topography. The distances and overlaps between its neighbourhoods and people are vast and operate at many levels, all immediately noticeable to the senses of those who are in the city. Walking in Rio, close to the Atlantic Ocean, or beyond, through its forests, mountains, people and buildings, it is difficult to focus the eye on one single aspect, because the key characteristic of the city is juxtaposition and mixture, a vibrant carnival of geography and humanity, a space that is both urban and psycho-social, made of many lives, emotions, representations and behavioural patterns.

Nowhere is this more evident than in the contrast between the *favelas* and affluent paved areas of the city, described in the everyday language of Cariocas, as the dichotomy morro/asfalto (hill/asphalt), a signifier everyone understands and uses to navigate the complexity of divisions and lines of segregation that characterise Rio. The separation morro/asfalto is deeply connected to the process of urbanisation in Rio de Janeiro, which kept apart and yet grew dependent on the *favela* communities it marginalised.

Officially called urban subnormal agglomerates, Rio's *favelas* are ecosystems of great complexity, in which a rich and diverse sociality coexists with chronic lack of state services, and heavy social control imposed by drug bosses and police violence. Since the 1980s drug cartels have gradually gained control over *favela* territories, initiating an undeclared and subterranean war with the police. Caught in the middle of this confrontation, *favela* dwellers became a target for the police and over-exposed to the routes of socialisation established by the institutional and business-like character of narco-traffic.

As the population of *favelas* grew, the increase in violence and homicides, combined with the chronic lack of services and socio-economic deprivation configured an environment of intense social exclusion. Despite being integral to the economy and socio-cultural life of the city, *favela* communities were pushed underground, their actual sociability and multiple life forms hidden away by geographical, social, economic, symbolic and behavioural barriers.

This preponderance of marked urban frontiers is a central aspect of Rio de Janeiro and a major component of life in the *favelas*. *Favela* dwellers love their communities as well as the city, but they are acutely aware of borders and separation. Crime, violence and marginalisation are equated from the outside with the identity of *favela* residents, who regularly experience discrimination as they cross borders into the wider city. Negative representations and the stigma generated in the asphalt hurt both socially and psychologically by barring access to work and earnings, and by affecting identity and self-esteem. The words inside and outside are strong signifiers, deployed to express both differences between the urban worlds and the sharp borders that separate them. Border controls in the city are subjectively internalised: people understand that there is danger when crossing into different *favelas* and feel the pain of prejudice and discrimination when crossing into other areas of the city.

These issues can be illustrated by the psychosocial cartographies of four communities of Rio: Cantagalo, Cidade de Deus, Madureira and Vigário Geral, each located in a different area of the city (enter image 1 about here). Cantagalo and Vigário Geral fit the accepted definition of *favelas*, whereas Cidade de Deus was built as a planned area for relocating *favela*-dwellers displaced from the city centre during the 1960s. Madureira is a formal neighbourhood surrounded by *favelas*. In their similarities and differences, each one of these four communities illuminates how geographical borders intersect with social and psychological frameworks to connect territory, community identity and a sense of self in the city.

As with any map, psychosocial cartographies are established by borders. These can be more or less porous, depending on a combination of psychological and geographical elements, which establish the relations between the *favelas* and the city. These elements include the range and quality of social institutions present in a community, its location in relation to the wider city, the presence or absence of urban connectors, the experience of leisure of its inhabitants and the social representations held by the city as a whole about the area.

### Cantagalo

It is located between Ipanema and Copabacana, at the heart of South Rio and its beautiful natural landscape. It benefits from the state services and commercial facilities of these formal neighbourhoods, despite the absence of these from the *favela* itself. The community is connected to Ipanema by a lift and a paved road, which makes it easy to come and go, even more so since the expulsion of the drug trade and the introduction of the Pacification Police Unit (UPP). Social representations of the area are mixed, including positive and negative dimensions. There is flow both ways in terms of leisure, services and intergroup contact, making Cantagalo's borders highly porous.

### Madureira

It is in the centre of North Rio and open to the city, although distance gives some density to its borders. There are multiple institutions in Madureira and the neighbourhood enjoys its own facilities and vibrant popular culture. It is placed at the crossroads between the different cultures of Rio and offers multiple references for the sociability of its residents. Madureira is associated with poverty, but also with conviviality and important cultural traditions of the city. Its large market is a strong urban reference, and samba schools such as Portela are exemplary of its rich influence in the life of Rio. Its borders show medium to high porosity; they are very wide and not controlled by the drug trade.

### Cidade de Deus

It is located remotely in the western part of Rio, close to forests and to the Barra neighbourhood, its beach and overall facilities. References for sociability are focused on the drug trade and the evangelical churches, although the UPPs are introducing a new, if uneasy, relationship with the state. There is freedom to come and go but leisure is concentrated inside the community, mainly for fear of discrimination. Dominant social representations of Cidade de Deus continue to link the community to the drug trade, poverty and violence. Its borders show low porosity: they are no longer controlled by narco-traffic, but internalised segregation keeps the horizons of the community primarily inside its own territory.

### Vigário Geral

In Vigário Geral, scarcity of social institutions and distance from the city reduce the references for the sociability of its residents, which is polarised between AfroReggae, an important NGO originated in the community, and the drug trade. The drug trade is the central organiser of community life, and, along with the evangelical churches, AfroReggae, and the sporadic presence of the police, comprise the social institutions of the *favela*. Crossfire and stray bullets are part of everyday life; the area is closed and tightly controlled, and circulation is difficult. Vigário Geral is strongly associated with wars between factions of the drug trade and the violence of the police. The territory of the community circumscribes the leisure and the horizons available for its residents.

Levels of porosity in community borders shape the context that is offered to pathways of socialisation inside *favelas* as well as the nature of the relationship between the communities and the wider city. Levels of porosity of borders correlate with the breadth of social networks and potential crossings that are available in the everyday life of *favela* dwellers. The broader the networks and looser the borders, the more the experience of the self is broadened. The denser the borders, the lesser the chances of expanding networks and crossing into the wider city, while the need and importance attributed to the few institutions, good or bad, that operate in the community rise.

Porosity of borders between peripheral communities and the wider public sphere of the city is a major factor defining the routes of socialisation and the individual and collective experience of the city. Actions on the flexibility of urban frontiers are central for the enlargement of the self, the regeneration of territories of exclusion and for giving back to *favela* dwellers the right to the city. Keeping borders open contributes to the transformation of identities and the development of citizenship. It connects a divided society and avoids the formation of ghettos that isolate and prevent the vibrancy embedded in the social and cultural encounters of the contemporary city. The Viaduto in Madureira and the Centro Cultural Waly Salomão in Vigário Geral are exemplary of these processes: they operate as places of encounter, learning, development, psychosocial containment and conviviality, bringing the city to the *favela* and the *favela* to the city. In regenerating the public sphere and the built environment of popular communities, they also regenerate Rio de Janeiro, establish a bridge between hitherto separated social worlds, and take a further step towards the communicative city.

The experience of Rio corroborates the need to decentralise urban planning and consolidate the vistas offered by the mixed city of the twenty-first century. Cleaning the city of its poor by removing *favelas* and unwanted populations from sight is not a sustainable urban solution, and not only because it violates the fundamental right to the city. The study of *favela* life shows that despite social exclusion there is resilience, a powerful culture and a proud collective intelligence living on the edges of the city. To recognise the *favela* and the potentials of its people, culture and economy requires urban policy committed to social integration, without which Rio de Janeiro's development will always be partial.

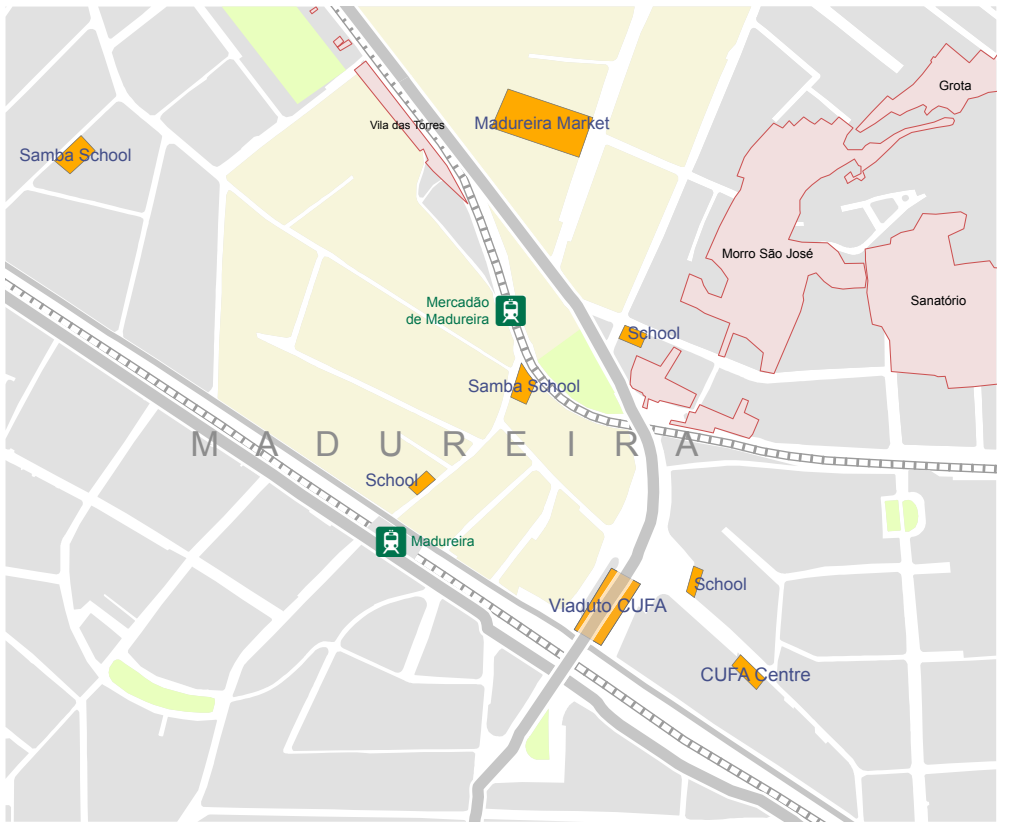
**Sandra Jovchelovitch is Professor of Social Psychology at the London School of Economics and Political Science and co-author of Underground Sociabilities, a study of Rio's *favelas*.**

## Legend

- Community Assets
- Urban Blocks
- Favelas (as defined by Rio gov.)
- Green Space
- Retail Activity
- Rail / Metro Station
- Major Highway
- Rail Lines
- Access Routes
- Lift Access

## Cantagalo

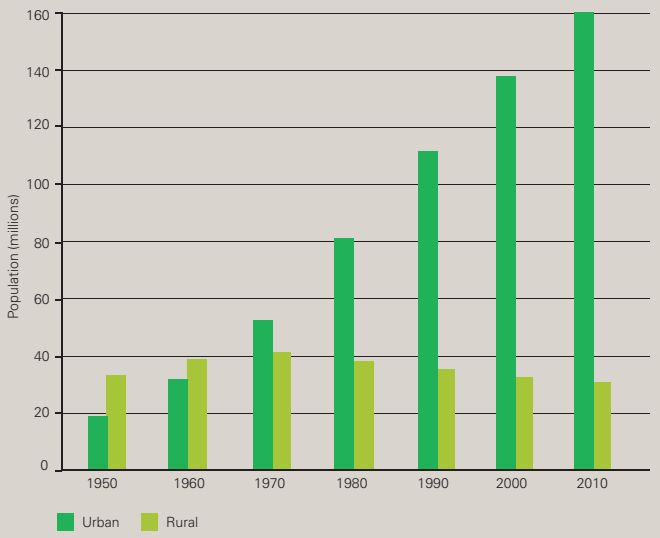

## Madureira



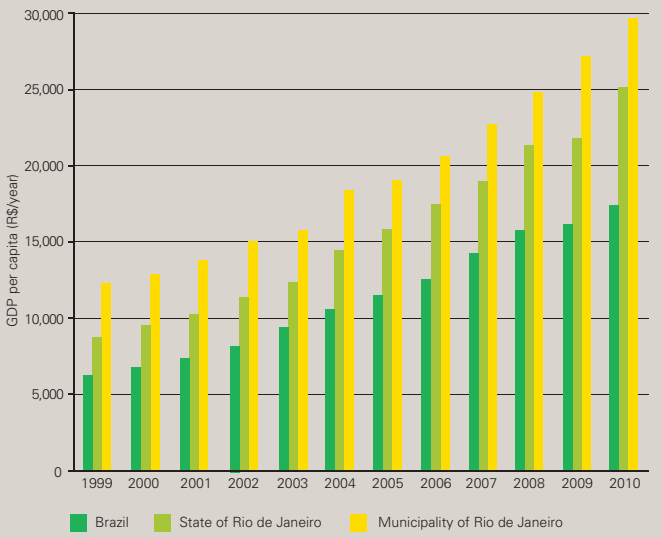

## Cidade de Deus


## Vigário Geral

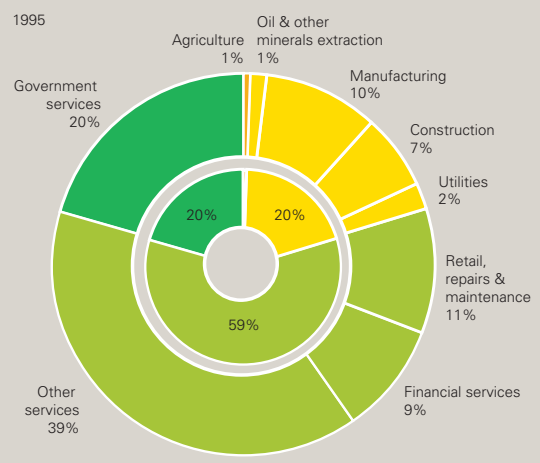
# CITY DYNAMICS

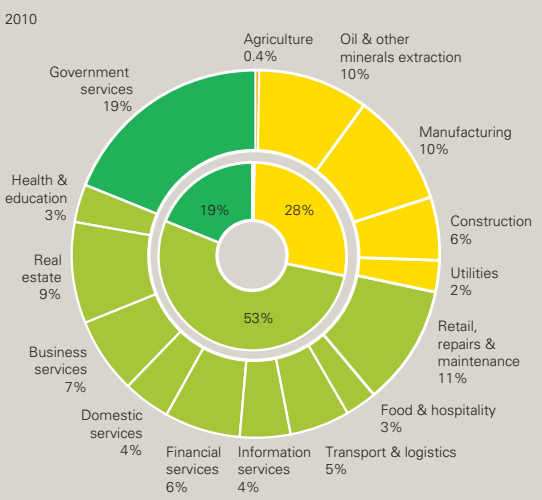



**Urbanisation in Brazil**
Source: Instituto Brasileiro de Geografia e Estatística (IBGE)

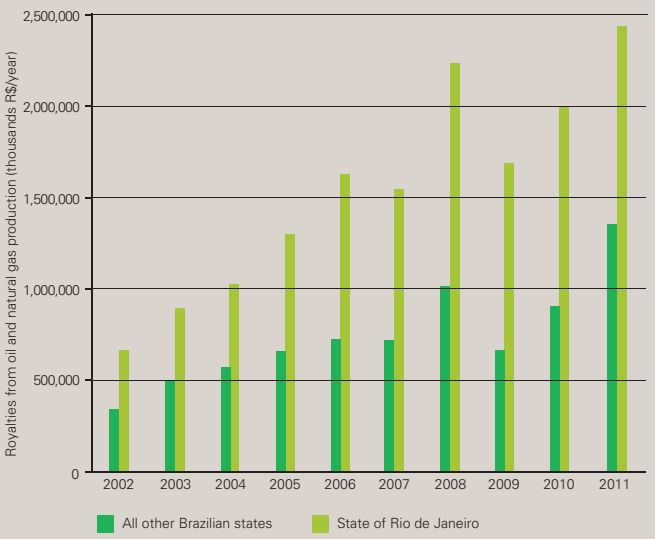



**Gross domestic product per capita**
Source: Instituto de Pesquisa Econômica Aplicada (IPEA)

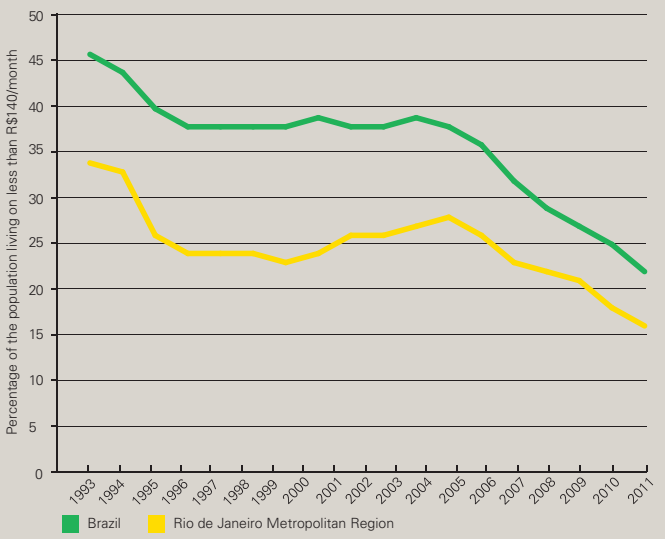



**Sectoral composition of the economy**
Share of economic activities in gross value added of State of Rio de Janeiro (1995 and 2010)
Source: IBGE




**Oil and natural gas royalties**
Source: IBGE




**Poverty reduction**
Source: IETS


**Income Inequality**
Source: IETS

Over the past 60 years Brazil's population nearly quadrupled, reaching 190 million inhabitants in 2010. The vast majority of this growth has been accommodated in cities: while only 36 per cent of the population lived in cities in 1950, this figure increased to 84 per cent by 2010, making Brazil one of the most urbanised countries in the world today. The rapid rural to urban migration has accelerated the growth of Rio de Janeiro into a city of more than six million people, with a metropolitan region nearly double that population.
Rio's population has been growing steadily since the late-nineteenth century, with accelerated growth in the post-World War II years and gradual slow-down in recent years. However it is only in the last ten years that Rio's economic growth has outpaced its population growth.

## Economic Transformations

Rio's socio-economic renaissance is underpinned by a national economy that has been growing rapidly over the past decade, and has weathered the global recession nearly unscathed. For the Municipality of Rio, per capita GDP more than doubled since 1999, increasing to more than R$30,000 (US$13,000) in 2010, with the total GDP for the city now at more than R$190bn (US$85bn). The presence of large reserves of oil and natural gas off the coast of the State of Rio de Janeiro has further boosted Rio's economy in recent years. The State is currently responsible for 74 per cent of Brazil's total oil production, holding more than 77 per cent of the nation's oil reserves and more than 60 per cent of the natural gas reserves. In terms of GVA, Rio is one of a small number of cities in the world that are re-industrialising, largely due to the record investments in the oil and natural gas industry, which are expected to generate 250,000 new jobs across the country by 2016. Between 1995 and 2010 the contribution of the extractive sector to state GVA increased from one per cent to ten per cent. This same sector is behind more than R$2.4bn (US$1.1bn) in oil and natural gas royalties flowing into State of Rio de Janeiro's coffers in 2011, with a further R$2.6bn (US$1.2bn) going directly to the municipality. This is nearly twice as much as the funds received by all other states in Brazil combined, although the current restructuring of royalties payments has put this reliable influx of cash into jeopardy.

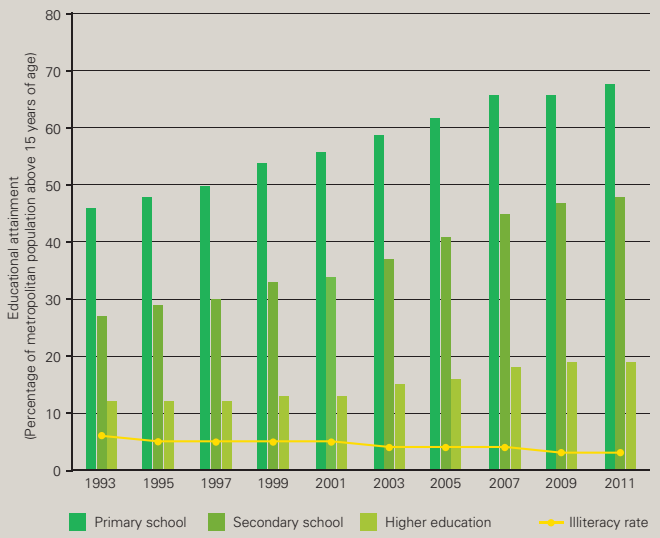
## Social Transformations

Over the past twenty years, the country's strong economic growth coupled with a continued political commitment to social equity has led to a remarkable transformation in socio-economic realities of the country's poor. The percentage of the population living in poverty (income of less than R$140/US$62 a month) has decreased substantially since 1993, with a marked drop following the 2003 introduction of the Bolsa Família, a social welfare programme introduced by former president Lula that has lifted millions of families out of poverty across the country. In 2011, only 16 per cent of the population of the Rio de Janeiro Metropolitan Region was categorised as living in poverty, a reduction of more than 50 per cent compared to 1993 levels. Inequality also improved for Rio over this time period, although the change is nowhere as drastic as for Brazil as a whole, which experienced a reduction in its Gini coefficient (a measure of inequality) from 0.60 to 0.53. This is due to the positive effect the Bolsa Família programme and other social policies have had in combating rural poverty and moving large numbers of people into the middle class. Despite these encouraging developments, Rio remains a highly unequal city, where extremes of wealth and poverty continue to exist side by side.

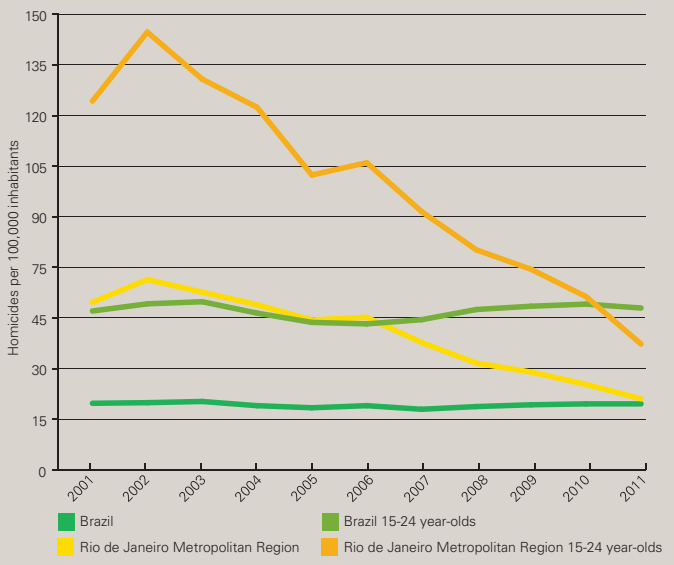
From 1991 to 2010, life expectancy in the Municipality of Rio increased from 67.9 to 75.7 years while infant mortality dropped from 30 per 1,000 to 13 per 1,000. The metropolitan


**Life expectancy**
Source: IBGE, www.atlasbrasil.org.br

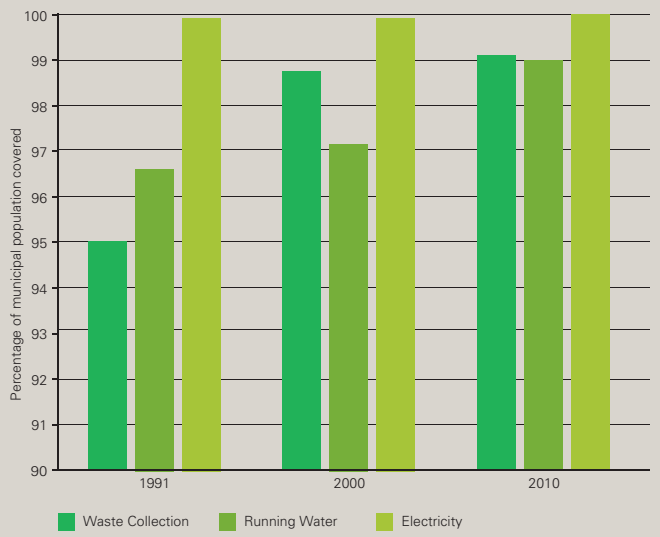

**Infant mortality**
Source: IBGE, www.atlasbrasil.org.br



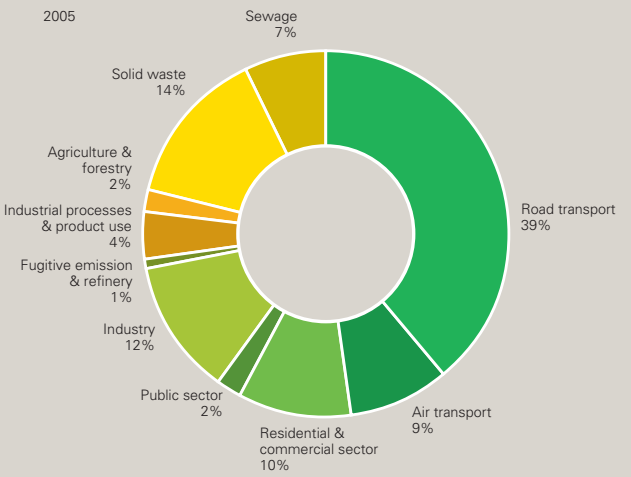

**Education and illiteracy**
Source: IETS



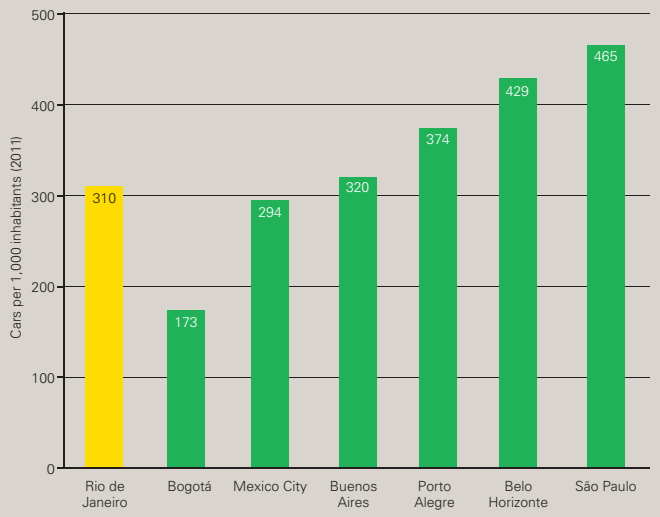

**Homicides**
Source: www.mapadaviolencia.org.br



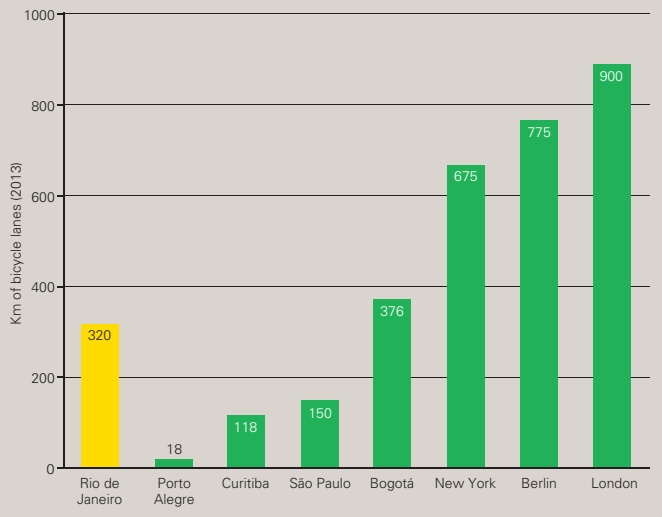

**Sanitation and electricity**
Waste collection data excludes informal areas of the city
Source: www.atlasbrasil.org.br




**Greenhouse gas emissions by sector**
Source: Rio de Janeiro Municipal Environment Department (SMAC)




**Motorisation**
Source: Institute for Transportation and Development Policy (ITDP)




**Cycling infrastructure**
Source: For full references please see http://rio2013.lsecities.net/newspaper/

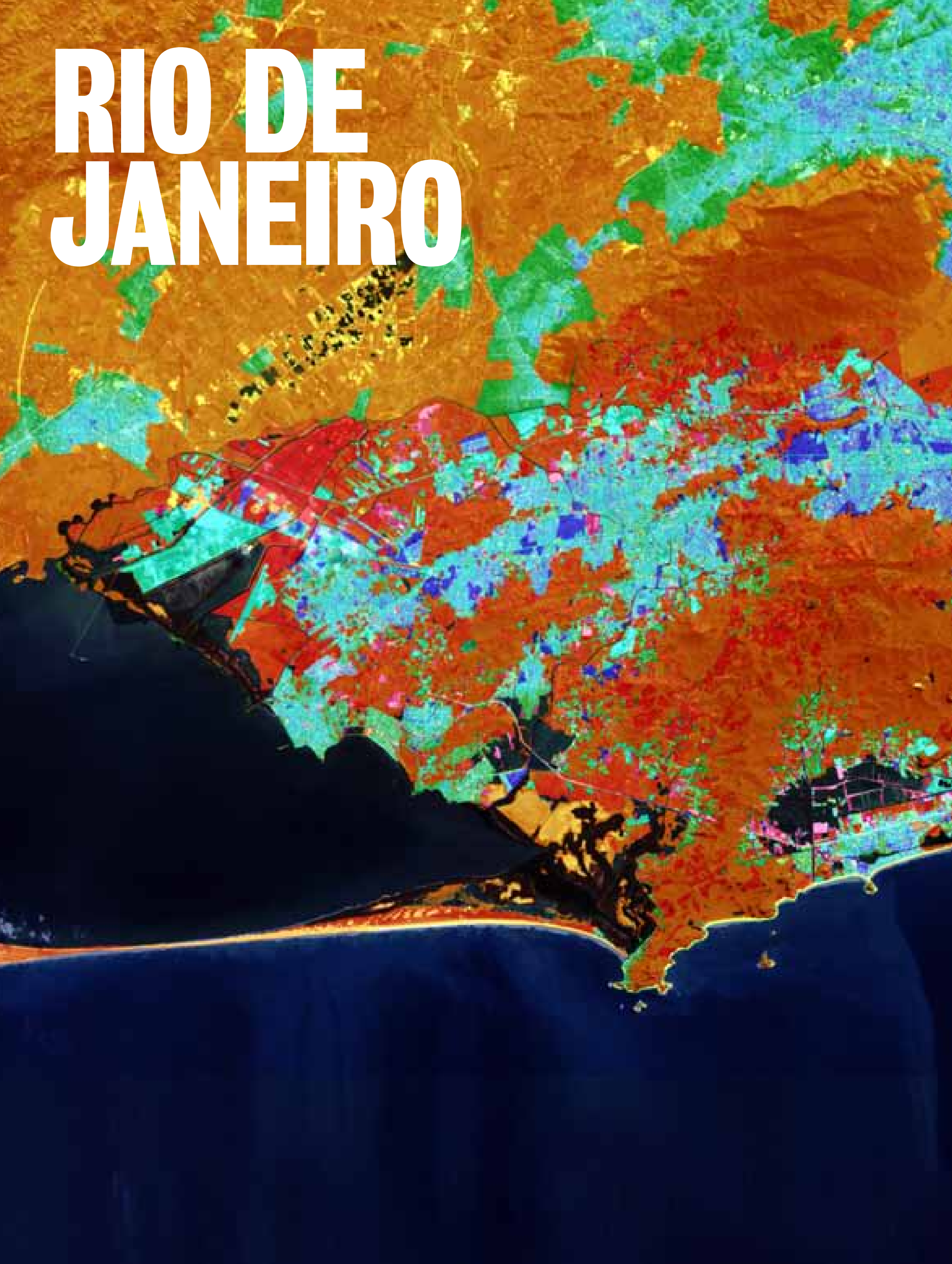
level illiteracy rate dropped from 6 per cent in 1993 to 2.9 per cent in 2011, a significant achievement compared to the rate of 8.4 per cent reported for the rest of Brazil in 2011. Secondary school graduation rates have doubled over the same period. However, 31.9 per cent of the metropolitan population above 15 years of age did not finish primary school and less than 20 per cent go on to study beyond secondary school.

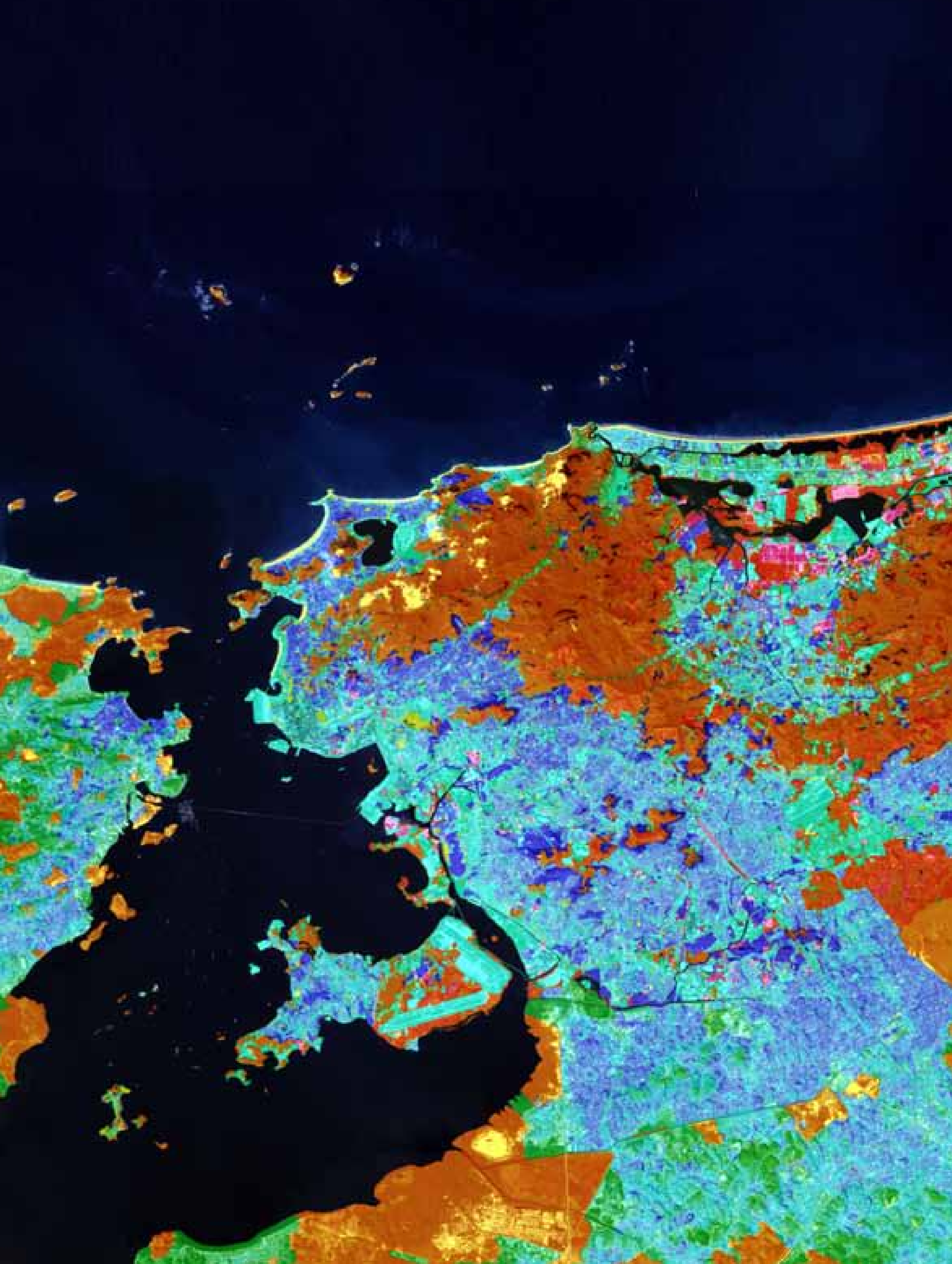
In the first decade of this century, new policies were implemented in Brazil to reduce crime levels and homicides in particular. In 2003, legislation was passed introducing tighter controls on firearms, in conjunction with disarmament campaigns. Following the 2006 introduction of the UPP programme in Rio de Janeiro, the city experienced a marked drop in homicides, especially among its young population, although the current rate of 23 homicides per 100,000 inhabitants remains higher than for most other global cities.

## Physical Transformations

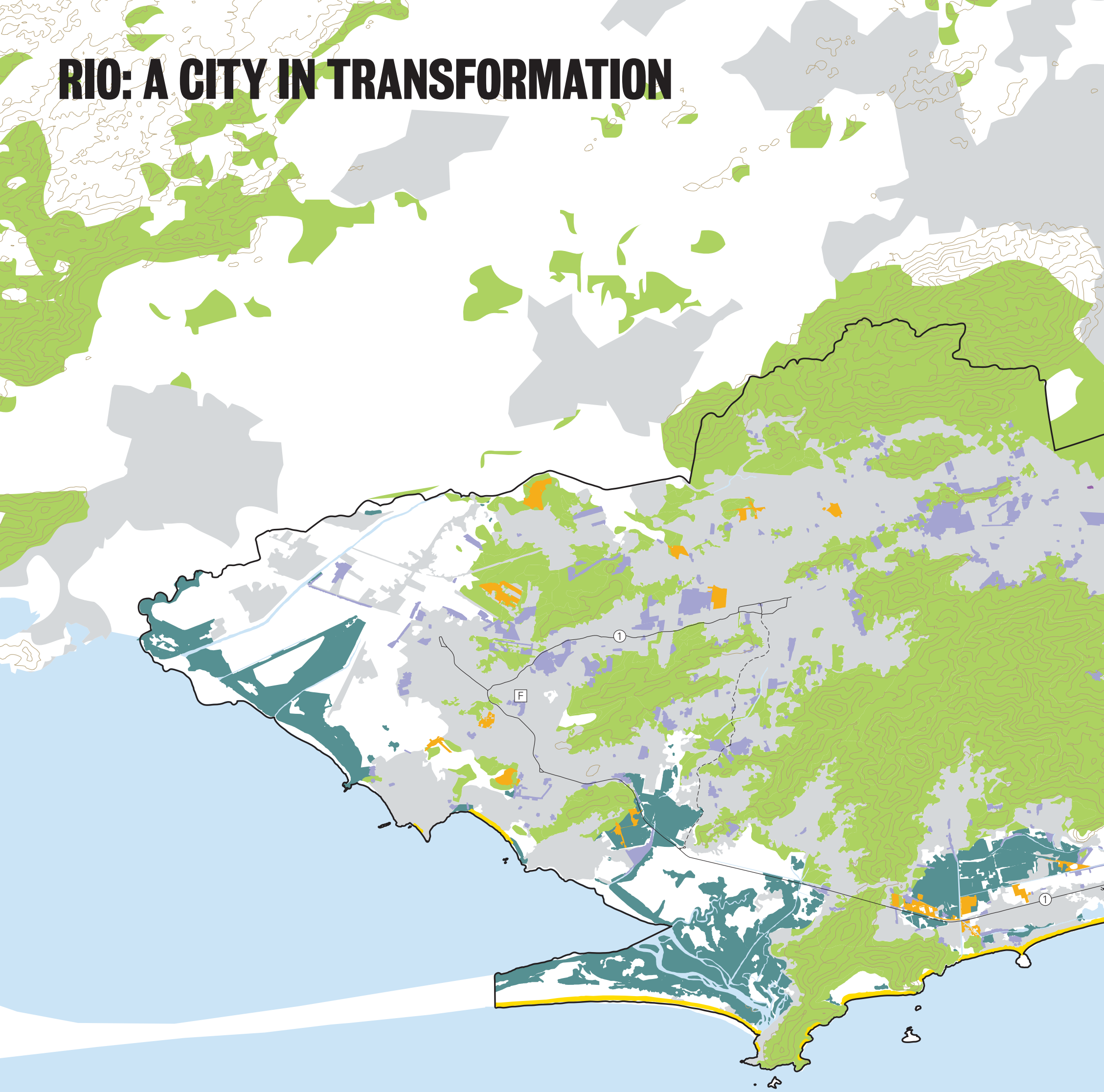
While an impressive 99 per cent of municipal households now have running water and electricity, and almost all formal neighbourhoods receive regular waste collections services, waste collection in the *favelas* remains patchy and comprehensive recycling services are only slowly picking up across the city. Rio already generates 525 kg of waste per person every year, comparable to the rates of cities like New York and London, and the waste sector accounts for a staggering 21 per cent of Rio's total greenhouse gas emissions. Road transport is responsible for a further 39 per cent of emissions, highlighting the importance of rethinking the city's transport infrastructure. This will help address some of the sustainability concerns while also improving accessibility, another central issue for the city. Rio is growing towards the West, which has seen average population increases of over 20 per cent between 2000 and 2010. This population shift is driving development in the area. In 2011, whereas 611 residential and commercial units were added to the Centro and Port Area, over 15,806 units were added in Barra da Tijuca and its surrounding areas. Due to the distance and limited public transport connectivity to the city centre, modal splits in these neighbourhoods are heavily oriented towards car use, putting further strain on the city's already congested road network. The city is adding more than 200 new cars to its streets every day and has now reached a motorisation rate of 310 cars per 1,000 people. Current investments in the BRT system are aiming to improve accessibility along the main growth corridors and provide an alternative means of transport for millions of the city's residents. Additionally, Rio has doubled the number of cycle lanes in the city since 2009, creating the largest cycling network in Brazil and quickly catching up with Bogotá as the most bicycle friendly city in Latin America. Currently measuring 320 km, the extension of the city's bike lanes is part of a bigger initiative to reach 450 km in time for the Olympic Games in 2016.

# RIO DE JANEIRO





# RIO: A CITY IN TRANSFORMATION

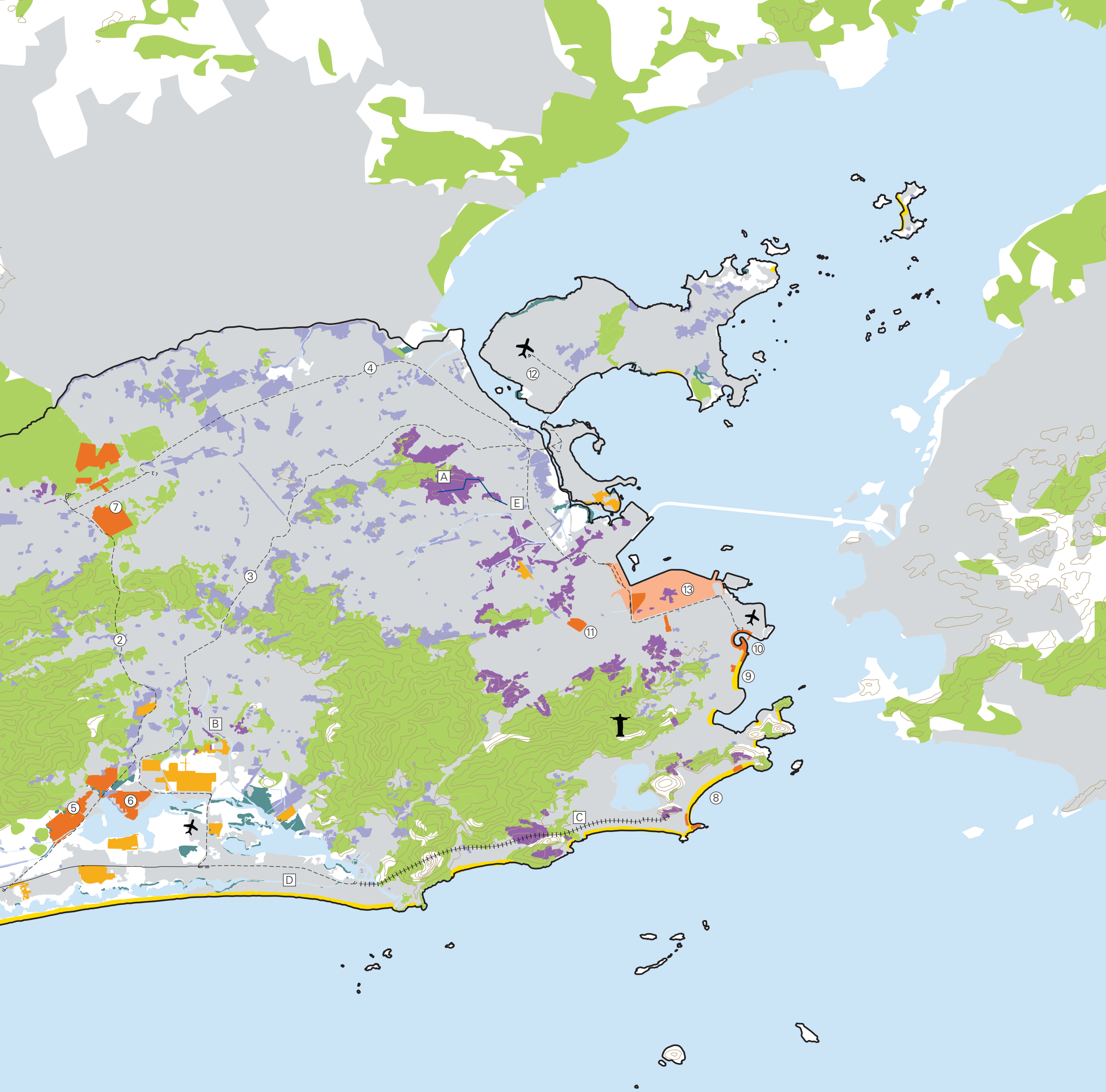



- Urban built area
- Un-built land
- Water
- Favela
- Pacified favela (UPP)
- Forest
- Mangrove/area subject to flooding
- Beach
- Rio 2016 Olympic venue
- Porto Maravilha
- Vacant land in urban areas (over 20ha) from IPP Uso Do Solo 2011
- City administrative boundary
- Bus RapidTransit (existing)
- Bus RapidTransit (planned)
- Metro extension (in progress)
- Cable Car (Complexo do Alemão)
- Contour (100m intervals)
- Airport
- Cristo Redentor

- A Complexo do Alemão
- B Cidade de Deus
- C Leblon
- D Barra
- E Bonsucesso
- F Santa Cruz

- ① TransOeste (BRT line)
- ② TransOlimpica (BRT line)
- ③ TransCarioca (BRT line)
- ④ TransBrasil (BRT line)
- ⑤ Riocentro Exhibition and Convention Centre, Athletes' Village
- ⑥ Olympic Park, Barra da Tijuca
- ⑦ Deodoro
- ⑧ Copacabana
- ⑨ Parque do Flamengo
- ⑩ Marina da Glória
- ⑪ Maracanã
- ⑫ Galeão–Antonio Carlos Jobim International Airport
- ⑬ Porto Maravilha, Morro da Providência and Olympic Media Village

Kilometers
0 2.5 5 10


A
B
C
D
E
2
3
4
5
6
7
8
9
10
11
12
13

# URBAN TYPOLOGIES

Nestled between steep mountains, mangrove swamps and the Atlantic Ocean, Rio de Janeiro's complex urban form has always been shaped and constrained by its dramatic topography. Together with the unequal distribution of wealth and contrasting formal and informal development, Rio has produced very distinct characteristics of urban form and order. Six neighbourhoods have been selected to display typologically diverse but nonetheless typical *Carioca* qualities. Arranged from highest to lowest density, the aerial photographs, figure-ground maps (showing built form in black and all open space in white over 1 square kilometre) and street-level images provide a snapshot of spatial variety in a dynamic city that includes informal hillside settlements, high-rise gated communities, everyday suburbia and traditional urban fabric overlooking the Copacabana waterfront.

## A COMPLEXO DO ALEMÃO

Density: 37,000 pp/km$^2$

Built-up land: 54.7%

Average annual income: R$7,540 (US$3,374)

## B CIDADE DE DEUS

Density: 21,560 pp/km$^2$

Built-up land: 39.8%

Average annual income: R$10,710 (US$4,792)

## C LEBLON

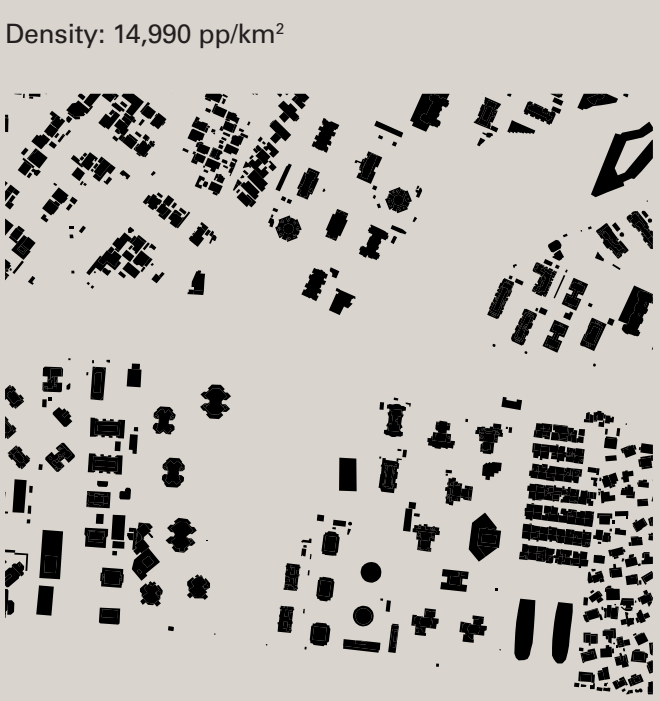
Density: 20,890 pp/km$^2$

Built-up land: 45.5%

Average annual income: R$92,160 (US$41,239)

## D BARRA DA TIJUCA

Density: 14,990 pp/km$^2$



Built-up land: 17.5%

Average annual income: R$97,250 (US$43,516)

## E BONSUCESSO

Density: 14,570 pp/km$^2$

Built-up land: 56.4%

Average annual income: R$19,680 (US$8,806)

## F SANTA CRUZ

Density: 6,940 pp/km$^2$

Built-up land: 24.7%

Average annual income: R$14,280 (US$6,390)

## URBAN AGE

The Urban Age programme, jointly organised by LSE Cities and supported by the Alfred Herrhausen Society, the international forum of Deutsche Bank, is an international investigation of the spatial and social dynamics of cities. The programme centres on an annual conference, research initiatives and publications. Since 2005, twelve conferences have been held in rapidly urbanising regions in Africa and Asia, as well as in mature urban regions in the Americas and Europe.

## ORGANISED BY

### LSE Cities

LSE Cities is an international centre supported by Deutsche Bank whose mission is to study how people and cities interact in a rapidly urbanising world, focusing on how the design of cities impacts on society, culture and the environment. Through research, conferences, teaching and public lectures, the centre aims to shape new thinking and practice on how to make cities fairer and more sustainable for the next generation of urban dwellers.
Extending LSE's century-old commitment to the understanding of urban society, LSE Cities investigates how complex urban systems are responding to the pressures of growth, change and globalisation with new infrastructures of design and governance that both complement and threaten social and environmental equity.

### Alfred Herrhausen Society, The International Forum of Deutsche Bank

The non-profit Alfred Herrhausen Society is the international forum of Deutsche Bank. Its work focuses on new forms of governance as a response to the challenges of the twenty-first century. The Alfred Herrhausen Society seeks traces of the future in the present, and conceptualises relevant themes for analysis and debate. It works with international partners across a range of fields, including policy, academia and business, to organise forums for discussion worldwide. It forges international networks and builds temporary institutions to help to find better solutions to global challenges. It targets future decision-makers, but also attempts to make its work accessible to a wide public audience. The society is dedicated to the work of Alfred Herrhausen, former spokesman of the Deutsche Bank board of directors, who advocated the idea of corporate social responsibility in an exemplary manner until his assassination by terrorists in 1989. The Alfred Herrhausen Society is an expression of Deutsche Bank's worldwide commitment to civil society.

### London School Of Economics and Political Science

LSE is a specialist university with an international intake and a global reach. Its research and teaching span the full breadth of the social sciences. Founded in 1895 by Beatrice and Sidney Webb, and set up to improve society and to "understand the causes of things", LSE has always put engagement with the wider world at the heart of its mission.

## LSE CITIES

### Executive Group

**Ricky Burdett**, *Director, LSE Cities, London School of Economics and Political Science*
**Philipp Rode**, *Executive Director, LSE Cities, London School of Economics and Political Science*
**Fran Tonkiss**, *Academic Director, LSE Cities, London School of Economics and Political Science*

### Governing Board

**Paul Kelly** (Chair), *Pro-Director and Professor of Political Theory, Directorate, London School of Economics and Political Science*
**Ricky Burdett**, *Director, LSE Cities, London School of Economics and Political Science*
**Thomas Matussek,** *Managing Director, Alfred Herrhausen Society*
**Rahul Mehrotra**, *Professor and Chair of the Department of Urban Planning and Design, Graduate School of Design, Harvard University*
**Philipp Rode,** *Senior Research Fellow and Executive Director, LSE Cities, London School of Economics and Political Science*
**Richard Sennett,** *Professor of Sociology, and Honorary Fellow, London School of Economics and Political Science and University Professor of the Humanities, New York University*
**Nicholas Stern,** *IG Patel Professor of Economics and Government and Chair, Grantham Research Institute on Climate Change and the Environment, London School of Economics and Political Science*
**Ute Weiland,** *Deputy Director, Alfred Herrhausen Society*

### Advisory Board

**Richard Sennett** (Chair), *Professor of Sociology, and Honorary Fellow, London School of Economics and Political Science and University Professor of the Humanities, New York University*
**David Adjaye**, *Principal Architect, Adjaye Associates*
**Alejandro Aravena**, *Executive Director, ELEMENTAL S.A.*
**Amanda Burden**, *Commissioner, New York City Department of City Planning*
**José Castillo**, *Principal, Arquitectura 911 SC*
**Joan Clos**, *Executive Director, UN-Habitat*
**Job Cohen**, *Leader, Labour Party, the Netherlands*
**Marcelo Ebrard**, *Mayor, Mexico City*
**Sophie Body-Gendrot,** *Emeritus Professor, University Paris-Sorbonne and CNRS Researcher*
**Amanda Burden,** *Commissioner, New York City Department of City Planning*
**José Castillo**, *Principal, Arquitectura 911SC*
**Joan Clos,** *Executive Director, UN-Habitat*
**Job Cohen,** *Leader, Labour Party, the Netherlands*
**Marcelo Ebrard,** *Mayor, Mexico City*
**Richard Haryott,** *Chair, Ove Arup Foundation*
**Anshu Jain,** *Co-Chairman of the Management Board and Group Executive Committee, Deutsche Bank*
**Julian Le Grand,** *Richard Titmuss Professor of Social Policy, LSE*
**Enrique Peñalosa,** *Urban Vision and Strategy Consultant, City of Bogotá, Mayor, City of Bogotá, 1998-2001*
**Edgar Pieterse,** *Director, African Centre for Cities, University of Cape Town*
*Richard Rogers, Founder, Rogers Stirk Harbour + Partners*
**Saskia Sassen,** *Robert S. Lynd Professor of Sociology, Columbia University*
**David Satterthwaite,** *Senior Fellow, Human Settlements Group and Editor, Environment and Urbanization, International Institute for Environment and Development (IIED)*
**Deyan Sudjic,** *Director, Design Museum, London*
**Alejandro Zaera Polo,** *Dean, School of Architecture, Princeton University and Director, Alejandro Zaera Polo Architects*

### STAFF

**Sobia Ahmad Kaker,** *Researcher*
**Andrew Altman,** *Visiting Senior Fellow*
**Karl Baker,** *Researcher*
**Kiera Blakey,** *Programme Coordinator, Communications Assistant*
**Ömer Çavuşoğlu,** *Project Manager*
**Andrea Colantonio,** *Research Fellow*
**Sarah Davis,** *Management Accounts Coordinator*
**Graham Floater,** *Principal Research Fellow*
**Suzanne Hall,** *Lecturer and Research Fellow*
**Catarina Heeckt,** *Researcher*
**Anna Livia Johnston,** *Administrator, Cities Programme*
**Adam Kaasa,** *Research Officer*
**Jens Kandt,** *Researcher*
**Madeleine Lee,** *LSE Graduate Intern*
**Tessa Norton,** *Communications Manager*
**Antoine Paccoud,** *Research Officer*
**Neil Reeder,** *Research Officer*
**Emma Rees,** *Executive and Admin Assistant*
**Andrea Rota,** *Researcher, Web Developer and Operations Co-ordinator*
**Priya Shankar,** *Research Officer*
**Andrew Sherwood,** *Centre Manager*
**Jonathan Silver,** *Researcher*
**Mona Sloane,** *Researcher, Programme Coordinator*
**Duncan Smith,** *Research Officer*
**Myfanwy Taylor,** *Research Officer*
**Adam Towle,** *Urban Designer and Researcher*
**Savvas Verdis,** *Senior Research Fellow*
**Austin Zeiderman,** *Research Fellow*

### ALFRED HERRHAUSEN SOCIETY, THE INTERNATIONAL FORUM OF DEUTSCHE BANK

**Thomas Matussek,** *Managing Director*
**Ute Weiland,** *Deputy Director*
**Anja Fritzsch,** *Project Manager*
**Claudia Huber,** *Senior Researcher and Project Developer*
**Ingo Rollwagen,** *Senior Analyst*
**Christiane Timmerhaus,** *Project Manager*
**Freya Tebbenhoff,** *Assistant to Ute Weiland*
**Pia Zimmerman,** *Assistant to Thomas Matussek*

### CONFERENCE MANAGEMENT AND LOGISTICS

**Anja Fritzsch,** *Project Manager*
**Ömer Çavuşoğlu,** *Conference Coordinator, London, LSE Cities*
**Danielle Hoppe,** *Conference Coordinator, Rio de Janeiro, LSE Cities*
**Flavio Coppola,** *Conference Assistant, Rio de Janeiro, LSE Cities*
**Ana Claudia Maeda,** *portodeideias, Event Agency, Rio de Janeiro*
**Maria Clara Rezende, T***homas Manns & Company, Design and Venue Consultancy, Rio de Janeiro*

### CONFERENCE COMMUNICATIONS

**Clean Barros,** *AHS*
**Claudia Huber,** *Senior Researcher and Project Developer, AHS*
**Tessa Norton,** *Communications Manager, LSE Cities*
**Kiera Blakey,** *Programme Coordinator, Communications Assistant, LSE Cities*
**Andrea Rota,** *Web Developer and Operations Coordinator, LSE Cities*
**Bia Bansen,** *Bia Bansen & Associados, Press and Communications*

### PRODUCTION

**Ömer Çavuşoğlu,** *Publication Coordinator*
**Tuca Vieira,** *Photography*
**Atelier Works,** *Design*

### CONTACT

LSE Cities
London School of Economics and Political Science
Houghton Street
London WC2A 2AE
United Kingdom

T +44 (0)20 7955 7706
lse.cities@lse.ac.uk
www.lsecities.net
facebook.com/lsecities
twitter.com/LSECities
#UARio

Alfred Herrhausen Society
Deutsche Bank
Unter den Linden 13/15
10117 Berlin
Germany

T +49 (0)30 3407 4201
ute.weiland@db.com
alfred-herrhausen-gesellschaft.de



First published in 2013
LSE Cities
London School of Economics and Political Science Houghton Street London WC2A 2AE UK



Unless otherwise noted, all sources for the data analysis in this document can be found at http://rio2013.lsecities.net/newspaper/

**URBAN AGE IS A WORLDWIDE INVESTIGATION INTO THE FUTURE OF CITIES**

**NEW YORK/FEBRUARY 2005**
**SHANGHAI/JULY 2005**
**LONDON/NOVEMBER 2005**
**MEXICO CITY/FEBRUARY 2006**
**JOHANNESBURG/JULY 2006**
**BERLIN/NOVEMBER 2006**
**MUMBAI/NOVEMBER 2007**
**SÃO PAULO/DECEMBER 2008**
**ISTANBUL/NOVEMBER 2009**
**CHICAGO/DECEMBER 2010**
**HONG KONG/NOVEMBER 2011**
**LONDON/DECEMBER 2012**
**RIO DE JANEIRO/OCTOBER 2013**
**DELHI/DECEMBER 2014**

**WWW.LSECITIES.NET**

URBAN AGE

LSE THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

Alfred Herrhausen Society
The International Forum of Deutsche Bank

RIO PREFEITURA

2013–2014
DEUTSCHLAND+BRASILIEN
*Wo Ideen sich verbinden*
ALEMANHA+BRASIL
*Quando ideias se encontram*