

LONDON AT A CROSSROADS

*Rob Whitehead with Richard Brown, Claire Harding, Jack Brown,
Sara Gariban and Dr Tim Moonen*

“**The future**, we treat it like a noun. It's not. It's a verb. It **requires action**. It requires us to push into it. It's not this thing that washes over us. It's something that we actually have total control over. But in a short-term society, we end up feeling like we don't. We feel like we're trapped. We can push through that.”

Ari Wallach, Futurist

Like the tides of the Thames, London's fortunes have ebbed and flowed over the centuries. It may no longer be the capital of the world's only superpower, but still ranks as one of the world's leading cities. Over the last 30 years, London has grown and evolved. By many measures it has been a success story, but in other areas, there has been little progress. Today, the world is changing, perhaps faster than ever. London finds itself at a crossroads.

This report is the first from the London Futures review. It examines London's recent history and development to the present day, explores the global challenges facing London and considers their potential impact on London's future.

This project has been generously supported by Major Sponsors, City of London Corporation, Greater London Authority, London Borough of Lambeth, and London Councils; our Supporting Sponsors, Bosch and Heathrow; and our funders, Mastercard, Sir Trevor Chinn, and Van and Eva DuBose.

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Initial report from the London Futures review

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About London Futures

London Futures is an ambitious programme to shape the future of London. In partnership with London's leading organisations – including the Mayor, London's boroughs, national government, businesses, charities and universities – this multi-year programme will examine the state of London today, explore possible futures, and work with Londoners to create a shared vision for the city to 2050 and beyond. It will deliver a new narrative for London, its role in the UK, and its position in the world.

This report is the culmination of the first phase of London Futures. Examining London's recent history and development to the present day, it also looks at the range of challenges facing the city and how these might play out in the future.

The next phase of London Futures will focus on engaging Londoners with the big questions raised by this report. This will be undertaken through our partner organisations as well as by gauging Londoners' views directly. This next phase will now include the delayed mayoral election. As Londoners consider who should next lead the city, London Futures will also give them a chance to reflect on the long-term issues confronting London and help shape a new consensus on how we should tackle these.

The final phase of London Futures will see a concerted effort to place the new vision for the city at the centre of conversations about London and London policy. This will help shape our neighbourhoods, our services, and our city – while also articulating its future place in the UK and the world.

Acknowledgements

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Executive summary	8
Introduction	14
Part 1: London today	20
1. London's people	21
2. London's economy and business	27
3. London's places and environment	34
4. London's institutions	42
5. London in the UK	47
6. London and the world	54
Part 2: London futures	66
7. Major forces shaping our world	69
8. Challenges, trade-offs and future scenarios	88
Appendix	91
Endnotes	95

Executive Summary

Like the tides of the Thames, London's fortunes have ebbed and flowed over the centuries. It may no longer be the capital of the world's only superpower, but today it still ranks as one of the world's leading cities in an age of cities.

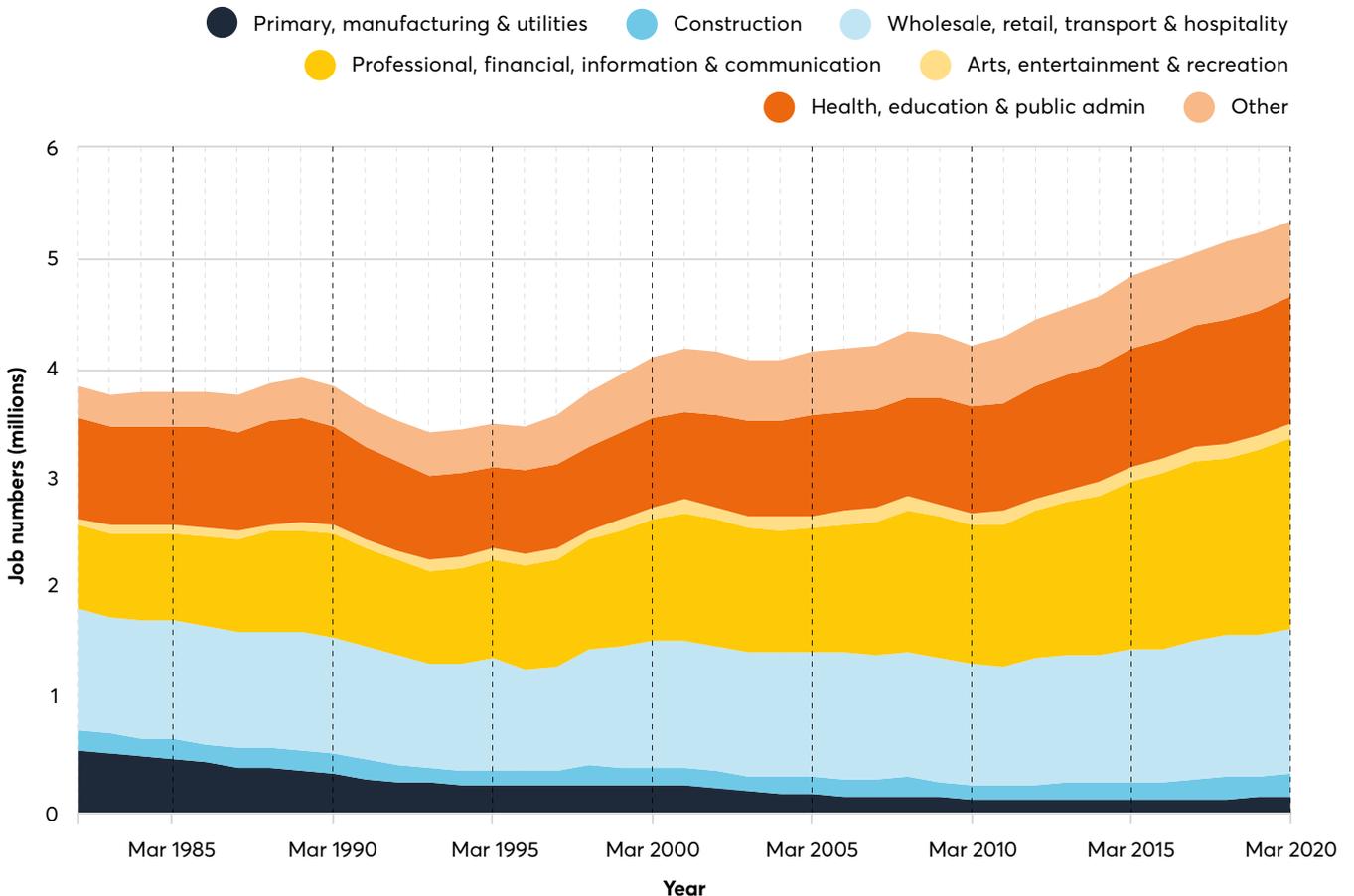
Over the last 30 years, London has grown and evolved. By many measures it has been a success story, but in other areas, there has been little progress...

What has gone well and less well since 1990?

London's changing population	
After decades of decline, London's population has grown sharply since the early 1990s and is projected to increase by an additional two million by 2050.	
What went well	London has successfully absorbed this growth, becoming much more diverse, with persistently positive perceptions of social cohesion.
What went less well	Inequalities remain in education, employment, safety and health, sometimes stoked by racism. London also has high wealth inequality, with more Londoners living in poverty than in any other part of the UK.

The key trends in London's economy	
Home to 14 per cent of the UK's population, London now accounts for 24 per cent of its economic output.	
What went well	London's economy has boomed, employment has grown steadily and the city has become a global hub for headquarters, professional services, creative industries and education.
What went less well	Productivity has stalled, while wages have stayed low for many workers.

Sectoral shift in employee job numbers 1982-2020



Source: ONS, Workforce jobs by industry, NOMIS July 2020⁵⁰

Changes to London's places and environment

London has grown largely within its boundaries, building clusters of skyscrapers in the city centre, and much denser residential development in some neighbourhoods.

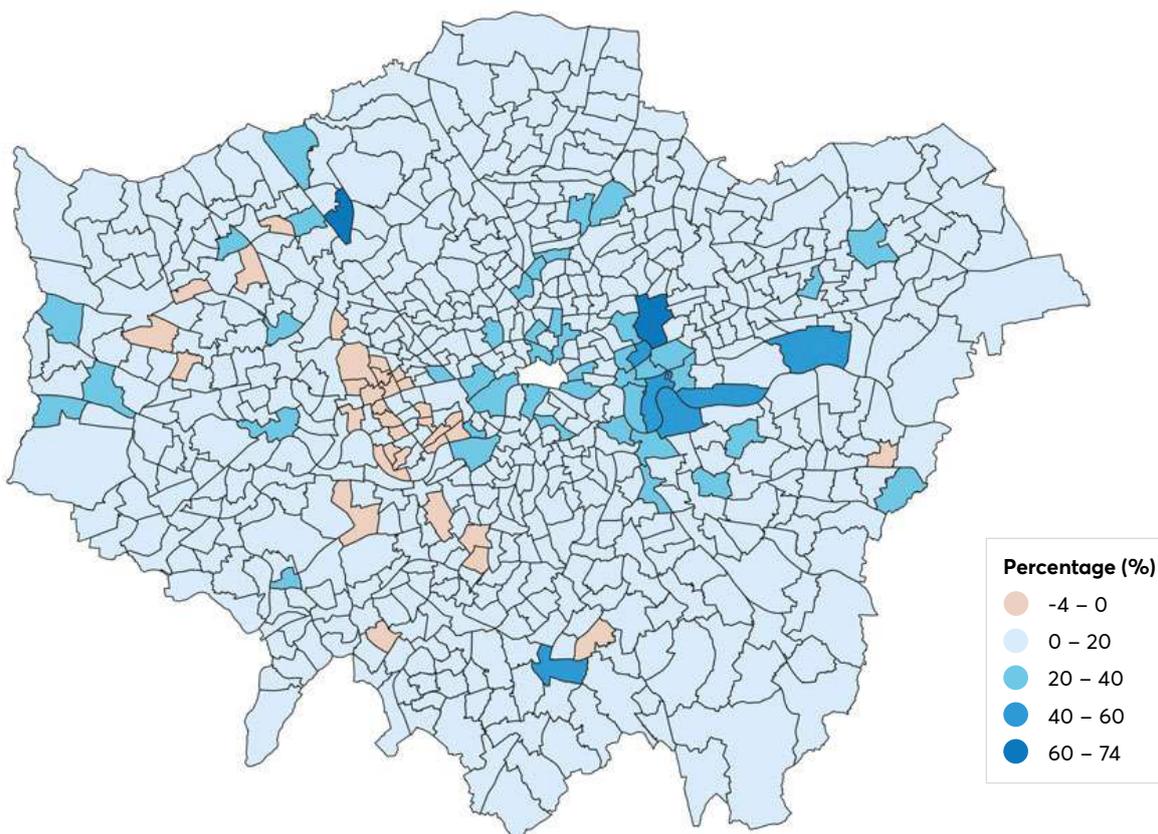
What went well

Transport investment has improved connectivity and helped London accommodate its economic and population growth. Air quality has improved, but is still poor.

What went less well

There has been little progress on decarbonising transport or heating. Congestion remains a major challenge. Housing costs have increased, overcrowding has become more common and homelessness has re-emerged.

Change in population density (people per square kilometre), 2011-18



Source: GLA, 2016-based population projections (housing-led model), March 2018

The institutions serving London

London returned to metropolitan governance in 2000 with its own Mayor and Assembly.

What went well

The mayoralty has been seen as a success, innovating in transport, winning and delivering the 2012 Olympics, and gaining more powers over planning and housing.

What went less well

Devolution to the capital has stalled in recent years, with concerns about the longer term implications of clashes over policies.

London's relationship with the rest of the UK

As the UK's only global city, London's profile and its growth are sometimes seen as a problematic part of the UK's regional imbalances.

What went well

London's success has helped to fund the rest of the UK, and has acted as a magnet for international investment as well as tourism.

What went less well

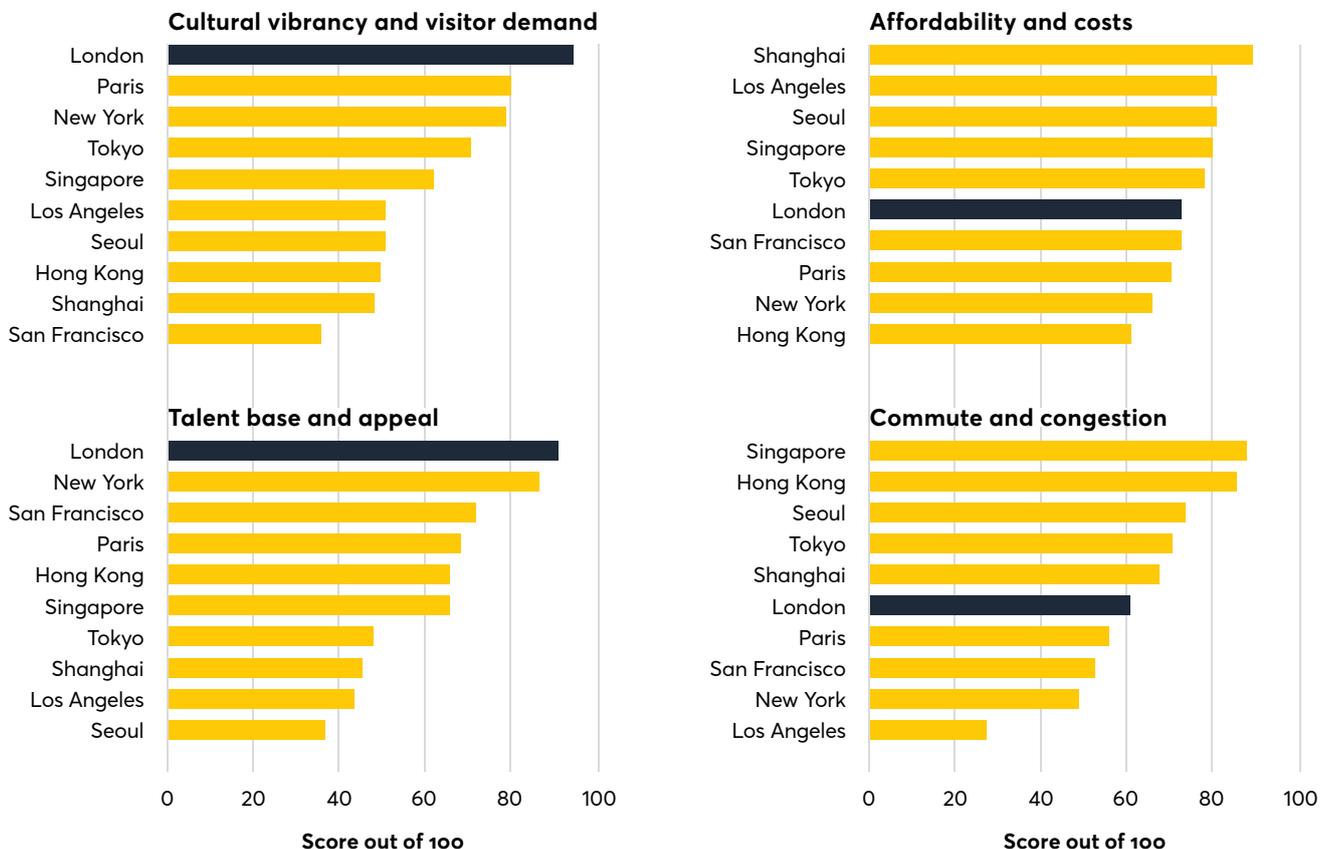
London's economic, political and cultural dominance has come at a cost, through growing dissatisfaction with the city and perceptions of London-centrism across the UK.

National institutions physically based in London

Political	House of Commons; House of Lords; Government Departments; Parliament Square; National Archives
Cultural	The British Museum; National Portrait Gallery; The British Library
Monarchy	Buckingham Palace; Clarence House
Sporting	Wembley Stadium; Marylebone Cricket Club; the Football Association; Olympic Park; Wimbledon
Media	BBC (in part); Sky; Channel 4 (in part); Telegraph Media Group; Guardian Media Group; News International
Legal	Supreme Court of the United Kingdom; Royal Courts of Justice
Educational and academic	The Royal Society; The British Academy; The Francis Crick Institute
Economic	Confederation of British Industry and other employers' groups; trade unions

London's international ranking	
London is still widely rated the world number one city but this status is at risk.	
What went well	London has been open to talent, attractive to investors, improved its infrastructure offer and been able to wield its soft power across the globe.
What went less well	The competition from other global cities is growing, and London has not been able to keep up on affordability, employment, safety, and congestion.

London's strengths and weaknesses relative to the global top 10, across all benchmarks



Source: The Business of Cities Research (based on Elo algorithm that computes cities' scores across all benchmarks). For sources and measures imputed in each theme, see Appendix.

Six major global forces

Today, in the midst of a pandemic and Brexit looming London finds itself at a crossroads. The world is changing, perhaps faster than ever. Six of the major global forces shaping our world are set to have a profound impact on London's future in ways that are not yet fully understood...



The recovery from COVID-19



Disruptive technologies and services



Resurgence of nationalism and populism



The climate emergency



The rise of Asia



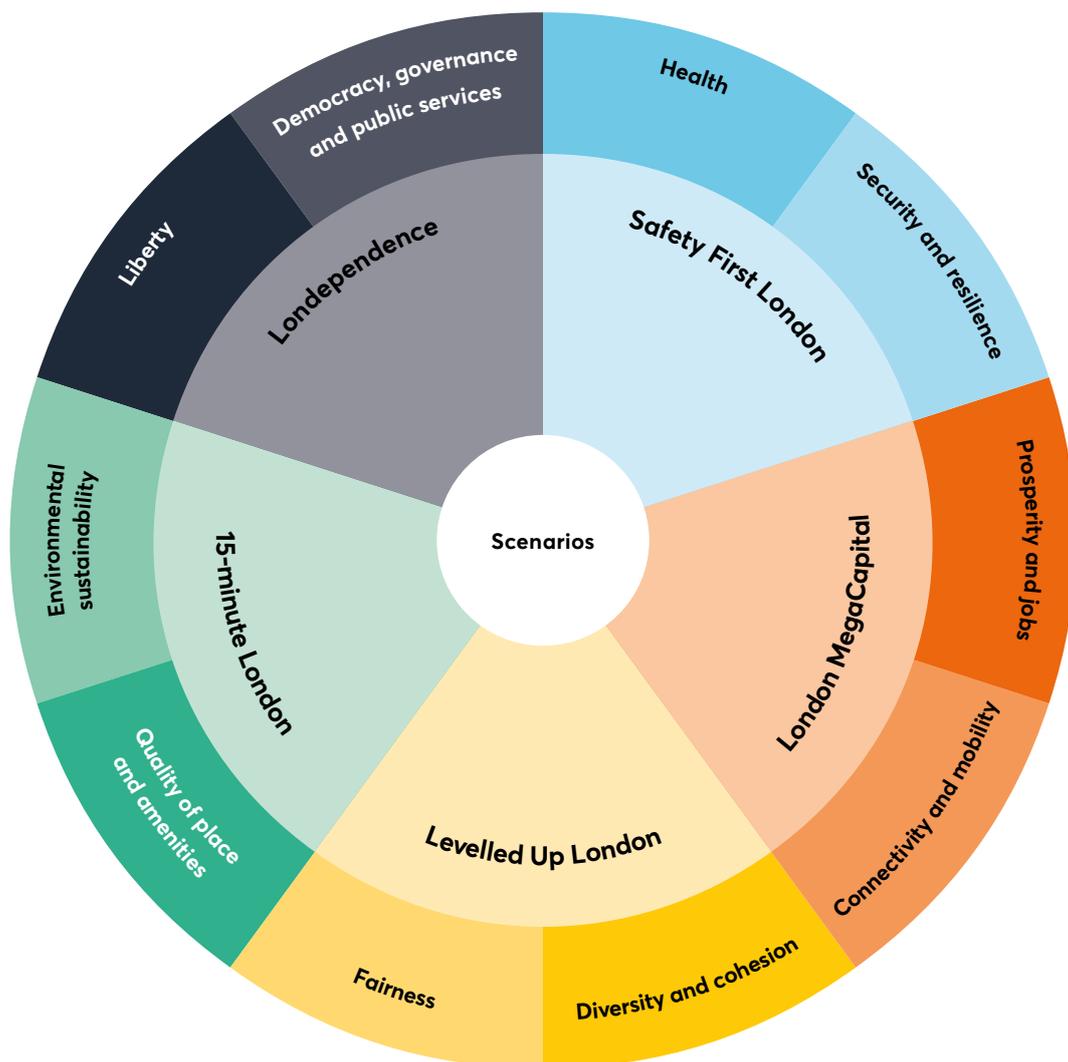
An ageing population

The challenges ahead, trade-offs and future scenarios

Where does this leave the future of London? Understanding where London is today helps us explore what futures might be possible. There are many challenges ahead, and no easy answers but choices will need to be made across competing priorities...

To help us explore London's possible futures, we suggest five long-term illustrative scenarios for London that could all be possible over the next 30 years. Each prioritises two complementary attributes of city life, and addresses the challenges facing London differently...

How possible future London scenarios relate to the capital's challenges



Introduction

“The future, we treat it like a noun. It’s not. It’s a verb. It requires action. It requires us to push into it. It’s not this thing that washes over us. It’s something that we actually have total control over. But in a short-term society, we end up feeling like we don’t. We feel like we’re trapped. We can push through that.”

Ari Wallach, Futurist¹

This report is about the long-term future of London. Founded on the banks of the estuarial Thames, London has always faced inland, and out to sea. Like the tides of the great river, London's fortunes have ebbed and flowed. Mostly, however, London's story is a positive one. It may no longer be the capital of the world's only superpower – as it once was – but today it still ranks as one of the few premier “world” cities. It remains an economic powerhouse, a magnet for the educated and the ingenious, for the wealthy as well as for those in need. Migration to the city over millennia means that London's communities harbour elements of most cultures of the world. By any international or historical measure, Londoners live together in remarkable harmony. This effervescent diversity powers London's creativity and dynamism, its economic and cultural reach, and therefore also its wealth.

Nonetheless, away from this central story of success lie many darker aspects. Too many Londoners suffer poverty, homelessness, job insecurity and a low quality of life. Inequality is rife, and has been worsened by the recent coronavirus pandemic. Invisible pollutants fill the city's air, harming the health of thousands, and compounding catastrophic damage to the planet's climate and biosphere.

In September 2020 London finds itself at a crossroads. The coronavirus pandemic has prematurely ended the lives of thousands of Londoners, but the shock has been felt by everyone. The capital's faltering economy is still emerging from a government-ordered deep freeze. Many long-held assumptions about the city's future look fragile. The flood of international visitors surging through the city's airports is reduced to a trickle. The future of office life is uncertain, and theatres remain closed. Central London in particular has been dealt a devastating blow. Looking beyond the pandemic, we are in an official “climate emergency”, yet are still unable to ascertain clearly whether this crisis hinders or aids our decarbonisation plans. It's time to take stock, to link up across our great city, to listen and to share ideas, and to build a new vision of the city we want.

Back to the future

London's development, largely unplanned and sporadic, has often been unexcitingly gradual. Occasionally drama does intercede – the Plague, the Great Fire and the Blitz all changed the fabric of the city in their day. But this is the exception rather than the rule. Yet even in a culture where incremental change trumps revolutionary zeal and grand schemes are scorned in favour of smaller-scale projects, plans are sometimes drawn up that change the city profoundly. The engineer Joseph Bazalgette's reworking of London's sewers reflected the imperious Victorian grandeur of his times; and the “Abercrombie Plan” (actually two plans) drawn up during World War Two also helped shape the reconstruction and development of London. To these familiar examples, however, we may add a third – a less well-known but highly influential report, *London: World City* published in 1991.

Three decades ago, London was in the doldrums. There was a national recession, a spike in unemployment and a high interest rate. Rough sleeping was commonplace. There was no citywide government at the time, the Greater London Council having been abolished by the UK government five years before. London was a city perceived by many to have lost its way. Yet in the 30 years since then, London has both transformed and expanded: the city has become brighter, richer and more dynamic than ever before.

This transformation was shaped to a significant extent by *London: World City*. This report, commissioned by London Planning Advisory Committee on behalf of a coalition of local authorities, arts, regeneration and transport bodies, argued that London could be a pre-eminent global city, a central node of the world economy. It advocated action to enhance London's infrastructure, more active marketing of the city, and a return to citywide government alongside other citywide bodies. As its recommendations took hold, much that it had pushed for came to pass. By the year 2000 London had

a new Mayor and London Assembly, the two parts of the Greater London Authority (GLA). A new economic development agency and a spate of promotional agencies for tourism and inward investment were created, while a business grouping, London First, also emerged. These each, in turn, helped to remake the city.

The *London: World City* report, and those works and ideas that preceded it, are some of the inspirations for our new stock-take and exploration of London's possible futures. That report also frames our immediate reflections on our past. We will look back three decades and examine what has succeeded; we will also cast a critical eye on the less positive aspects and the persisting challenges of London's recent past, such as poverty, inequality and the deepening climate emergency.

What went well

Over the last 30 years London has evolved and, in many ways, improved. The end of the Cold War led to a phase of global opening, increased trade and growth. In England, First Division football was recast as the Premier League, refocused and ultra-commercial, with an eye to global markets. The European Community shed its skin and emerged as the European Union. London too started to reinvent itself. Stoked by deregulation in the UK and the "big bang" of 1986 in particular, as well as newly opening global markets and an increasingly free Europe, London grew – in commercial importance, in the diversity of its people, and in its cultural punch. Against expectations, London's declining population – which had dropped to 6.5 million people – also started to grow again, eventually reaching nearly nine million. Economic output more than tripled, and jobs grew from 3.8 million to 5.3 million.

The birth of the Euro in 1999 – and deepening economic integration of the Eurozone countries – seemed to threaten London's position as a financial hub. The UK government hovered on the Euro, and eventually ruled out membership. But the new openness of London fed its prosperity. It became a hotspot for a new wave of global businesses, and many chose London for their headquarters. Services replaced manufacturing as the mainstay of economic activity. The City became synonymous with a turbocharged, deregulated global capitalism, and cemented its position as a pre-eminent financial centre. Alongside finance, London now also became a hub for media, creative industries and higher education – a poster child for the post-industrial economy.

Culturally London boomed too, driven by increasingly diverse newcomers. Its attractions, revitalised by national lottery funding, and nourished by inventiveness and a new appreciation of creativity's economic importance, were unlocked to a new European audience by cheaper flights, and flourished. London's shops, theatres, galleries and restaurants had a renaissance. And the London pub, previously a corner-hugging city stalwart, reoriented itself around good food and was reborn as the gastropub.

Many areas, especially central ones, grew busier and denser through redevelopment. Architecturally, London shed its fusty image and embraced the new and the bold, pushed along by a civic desire to mark the turning of the millennium – even if the result was to make it look a bit more like other global cities, with a skyline full of glass and steel towers London's new cultural swagger was bolstered by a successful bid for the Olympics. By the opening ceremony, in 2012, London's cultural energy and confidence seemed boundless. The city's international brand, reputation and image reached a new high.

Shorn of citywide government by a hostile national politics in 1985, London regained its own democratic bodies only in 2000. The London Mayor, London Assembly and GLA sprang to life – taking the reins of transport, and to varying degrees, planning, city promotion and policing. On London's streets the car had been dominant since before World War Two. But with population growth, car-based congestion became intolerable. New thinking at City Hall and the rebranded Transport for London (TfL),

in close partnership with London's businesses, nudged Londoners away from their cars. Investment and a clear strategy led to a transformation of the bus network, and bus lanes sprang up. The Tube improved too, though more slowly, and Crossrail (promoted since Abercrombie but shelved in 1994) was finally given the go-ahead. A bold, totemic scheme to charge drivers entering central London came into force. Public transport ridership grew as a result. The Oyster smart travel card was also born – a big city first. London became a rare modern success story in pushing back the tide of car use.

The inner cities, long a byword for decline, benefited from these and other targeted policies for “urban renewal”. Some public services also underwent their own revolutions. London's schools and universities, often derided as second-rate, had their fates transformed through a cocktail of good fortune, good policy and good leadership. London by 2020 had become something of a modern education Mecca. And through the concerted efforts of authorities and charities, London's rough population of rough sleepers also shrank.

How things could have been even better

That many Londoners benefited from these changes over three decades is beyond doubt. London's increasingly magnetic appeal drew in talent and produced innovation, creativity and enterprise. Yet the carapace of success hid many dark truths, which rarely pierced the new “global city” narrative.

Although generally prosperous, London's income and wealth inequalities remained stubbornly high. Worklessness was, at times, amongst the worst of all UK regions. Street homelessness was tackled, but then allowed to re-emerge; and hidden homelessness, the iceberg below the water, mushroomed. Housing became a new battleground. London homes surged in value, becoming regarded by some as a new investment asset class. Policymakers did little to resist. The result is a market for privately owned homes increasingly dominated by the wealthy and excluding far too many. Coupled with a near-terminal decline in council and “social” housing, alongside slow overall housebuilding, this led to a vast new population of private renters, often on precarious tenancies, and often living in overcrowded, unsuitable homes. Socially, a veneer of cohesion and tolerance masked persistent prejudice and racism, and so nourished inequalities.

Elsewhere, the London education system failed too many at primary school and was ill-equipped to deliver skills to those not going on to a university education. Linked to this, London witnessed an epoch-defining arrival of new migrants, especially following the eastward expansion of the EU, ready and able to work.

Some London suburbs, especially in the outer ring, declined. The perception was that they were unloved by the newly dominant “centre”. In part, this was due to a reckoning with the motor car. Pollution and its ill effects on our health were now better understood, and policy shifted accordingly.

Global warming slowly caught the world's attention throughout the 1990s and 2000s. Politics and policy started to reflect this. But the banking crisis of 2007/08 and the subsequent recession acted to dampen this shift and even actively reverse some aspects of it. As the eventual recovery advanced, so did the perceived urgency of action on climate change. International accords on sustainable development and climate goals in 2015 gave the agenda fresh impetus. Then in 2019 – triggered by a school protest led by the Swedish teenager Greta Thunberg and the emergence of the direct action group Extinction Rebellion – the pace quickened. In the UK a “climate emergency” was declared, echoed in London and in most London boroughs. A commitment to getting to net-zero carbon emissions by 2050 was also enshrined in British law. But, just as the momentum for urgent action to decarbonise seemed

unstoppable, COVID-19 arrived. Despite its immediate climate-positive impact (through grounded aeroplanes, unused cars and lower energy consumption) the virus has put at risk the progress made in 2019 and before, despite much talk of a “green recovery”.

In the last three decades London has suffered and recovered from many shocks. Terrorism – including the tail end of the IRA campaign and Al Qaeda-inspired violence – sporadically rocked the capital. Londoners adapted. The banking crisis of 2007/08 looked, at times, like a mortal blow for the type of world London had come to typify: finance-driven, over-indebted, consumer-led. Yet London survived. In 2016 the UK voted to leave the EU, while London voted to remain. For many, this was another threat to the London “model” and a seismic shock. Then, with the long-term impact of Brexit still unclear, COVID-19 arrived in March 2020 and achieved something no other shock had: it shut down the city.

This report and its key questions

This report is the culmination of a phase of reflection on London’s recent history, guided by an unprecedented coalition of London organisations. It draws together complementary and sometimes intersecting perspectives on what has happened to London’s population, its economy, its institutions, its places and neighbourhoods, its position in the UK, and its reputation and position compared to cities across the world. It will outline the major forces that will likely shape the remainder of the 21st century throughout the globe, and what they might imply for London’s possible futures. It will also explore the values that produced modern London, while teasing out new ones by delving into age-old and emergent dilemmas. Economic growth at what cost? Is equality more important than climate change?

Specifically, it will tackle crucial questions of the present, and, gazing to the future, pose others:

- What makes a good city?
- What went right in London’s recent past?
- What wrong turns were taken? What can we learn?
- What are the major challenges facing London today?
- What values should drive London’s development?
- What futures might be possible?
- What kind of London should we steer towards over the next five, 10, or 30 years?

What makes a good city?

Cities may be, according to Harvard’s Professor Ed Glaeser, “mankind’s greatest invention”, yet cities vary greatly in what they offer.² Some look worth imitating and desirable to live in, others less so, and each individual will have a different blend of values that drive those views. There is a whole industry that attempts to compare cities, identify drivers of economic growth, and gauge quality of life, from the all-encompassing United Nations Sustainable Development Goals through to niche indices, like the Green Space Index, that focus on a narrow set of measures.

The broader the framework, the more tensions and trade-offs they highlight. Is more prosperity and growth a good goal in itself, or should we be more concerned about where that wealth goes, how it is spread, or how it is generated? What level of power, and in what form, should citizens hold to shape the destinies of their places? Is a dense city better than a sprawling

one? What priority should tackling climate change, or responding to changing migration patterns have?

Even our own views can be contradictory. All frameworks have their logical flaws. But they can help us understand and explore what really matters to us. To help us gauge the state of London today, and explore how the city can be improved, we have identified 10 key attributes of a good city as a starting point. These attributes provide a lens on city life and we think they will help guide the debate we want to elicit about London's future, even though some are in conflict or tension with others.

Table 1: 10 key attributes of good cities

Security and resilience	Core to our wellbeing, both physical and mental. Cities, clusters of people, owe their origins to the need for collective security. The ability to withstand adverse circumstances, e.g. terror attacks, epidemics, or extreme weather.
Health	Improvements like life expectancy, absence of disease, and child and maternal mortality are benchmarks for development. The role of mental health in our quality of life is also significant.
Democracy, governance and public services	Citizens should share in decision making. Contests for space and the proximity of people sharpen the need for good governance in cities. Public services matter too – from sewers and street lighting through to more complex services such as education.
Liberty	Acting without unreasonable constraint, and freedom from oppressive restrictions. Without liberty citizenship is undermined. Citizens need the ability to make choices that shape their lives and futures. Important too is freedom of expression – not only to hold the powerful to account, but also to create life-enriching culture.
Prosperity and jobs	Arguably the main goal of modern public policy. Prosperity generates capital, investment, jobs and future wealth. But untrammelled production can degrade the natural world, biodiversity, and our protective atmosphere; inequality can also have severe social costs.
Diversity and cohesion	The intermingling of cultures, values, languages and perspectives provides a wellspring for new ideas and innovation. Diversity can also generate friction, but where cohesion trumps division, it is a strength.
Connectivity and mobility	Being able to connect (both physically and digitally) increases potential customers, collaborators, cultural exchange, flow of ideas, innovation, and the labour pool.
Environmental sustainability	The defining challenge of the current century and a critical global responsibility, especially in the case of greenhouse gas emissions. Talent and capital now increasingly shun places and organisations that ignore global environmental responsibilities.
Quality of place and amenities	Most cities have a wide range in terms of quality of places. Some streets, squares, highways and thoroughfares are much loved and imitated. Others attract the opposite sentiment. The components of what makes for popular streets and neighbourhoods, or vibrant and successful business districts, is a still developing discipline.
Fairness	Has many aspects: justice; absence of discrimination; access to opportunity and social mobility; and more equal distribution of income, wealth and power.

Which future we choose should be driven by the value we place on different aspects of city life. How we resolve, or accept, the tensions and competitions across them, should shape the London we want to see, to live in, and the city we leave behind for future generations.

Part 1: London today

1. London's people



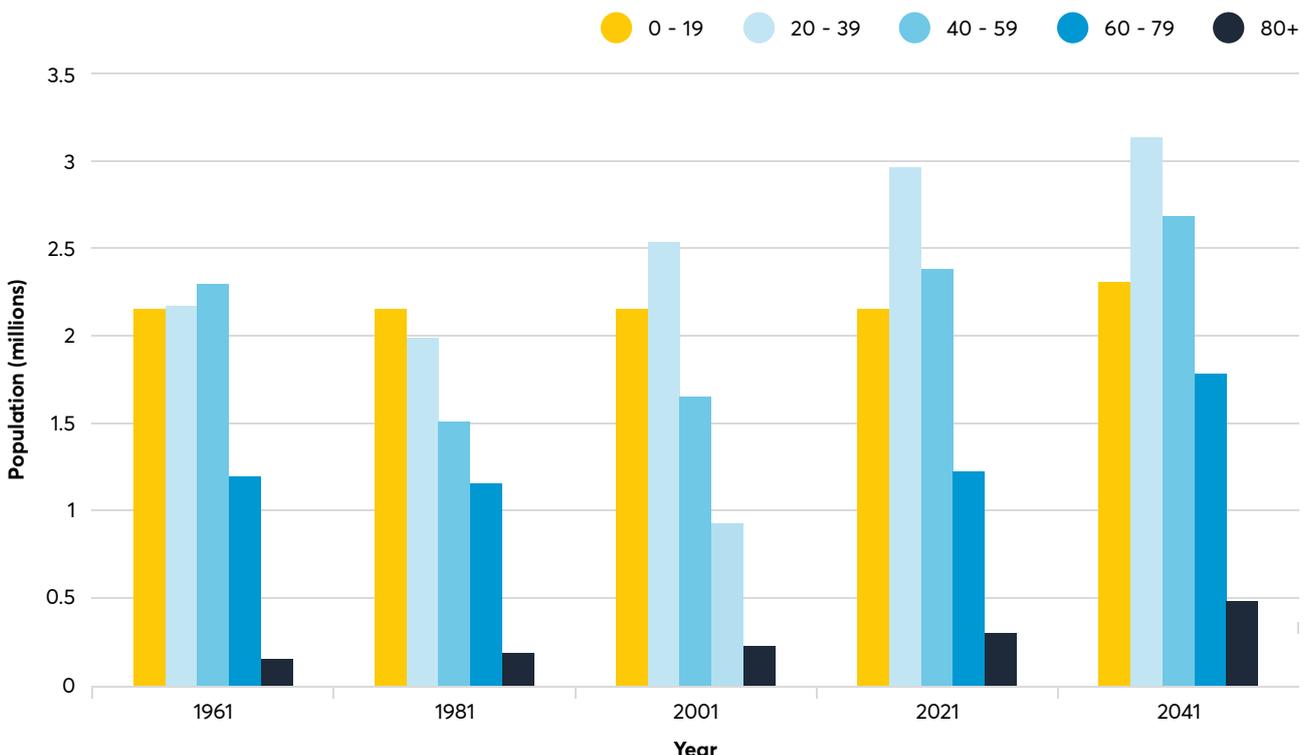
With a history that goes back 2000 years, and nine million residents today, the one thing we can confidently say about London's people is that their experiences have been – and remain – hugely varied. Throughout its entire recorded history, London has been the pre-eminent city in England, and later in the UK. It has always been home to people from different countries, speaking different languages, although where people migrate from has changed over the centuries and will continue to do so. For some people, it is home for life, while others move in and out from other parts of Britain and the world. And it seems that the city has always had extremes of poverty and wealth.

Population flows

London has long been the most populous city in the UK, but its population has fluctuated over the last two centuries. The 1801 Census (the first ever), revealed a population of just over a million, meaning that about 10 per cent of all residents of England, Scotland and Wales lived in London.³ Today, the population of London is just under nine million, accounting for 14 per cent of all residents of England, Scotland and Wales.⁴ From 1801 to 1939, the population grew fairly steadily, but from World War Two to the early 1990s it declined, with the sharpest declines in inner London – most inner London boroughs saw their population fall by at least a fifth. Around 30 years ago, however, this trend began to reverse: the population started to grow again, adding around two million inhabitants to date, although only recently matching the peak levels seen in 1939.⁵

Trends in the very recent past are hard to discern accurately, but there does seem to have been some outflow of EU citizens since the Brexit vote of 2016. In the next 30 years, London's population has been projected to grow by 22 per cent – about two million more people. This change is unlikely to be uniform: the number of Londoners aged over 65 is projected to grow more than three times faster than the number of Londoners under 16.⁶ This is a significant change, and the capital will need to respond to it: in particular, it will need much more specialist housing as residents' physical needs change.

Figure 1: London's population by age, 1961 to 2041 (estimates for 2021 and 2041)



Source: 1961 to 2001: UK Census, accessed from <https://data.london.gov.uk/census/themes/demography/>, "historic data tables". 2021 and 2041: GLA trend-based population projections

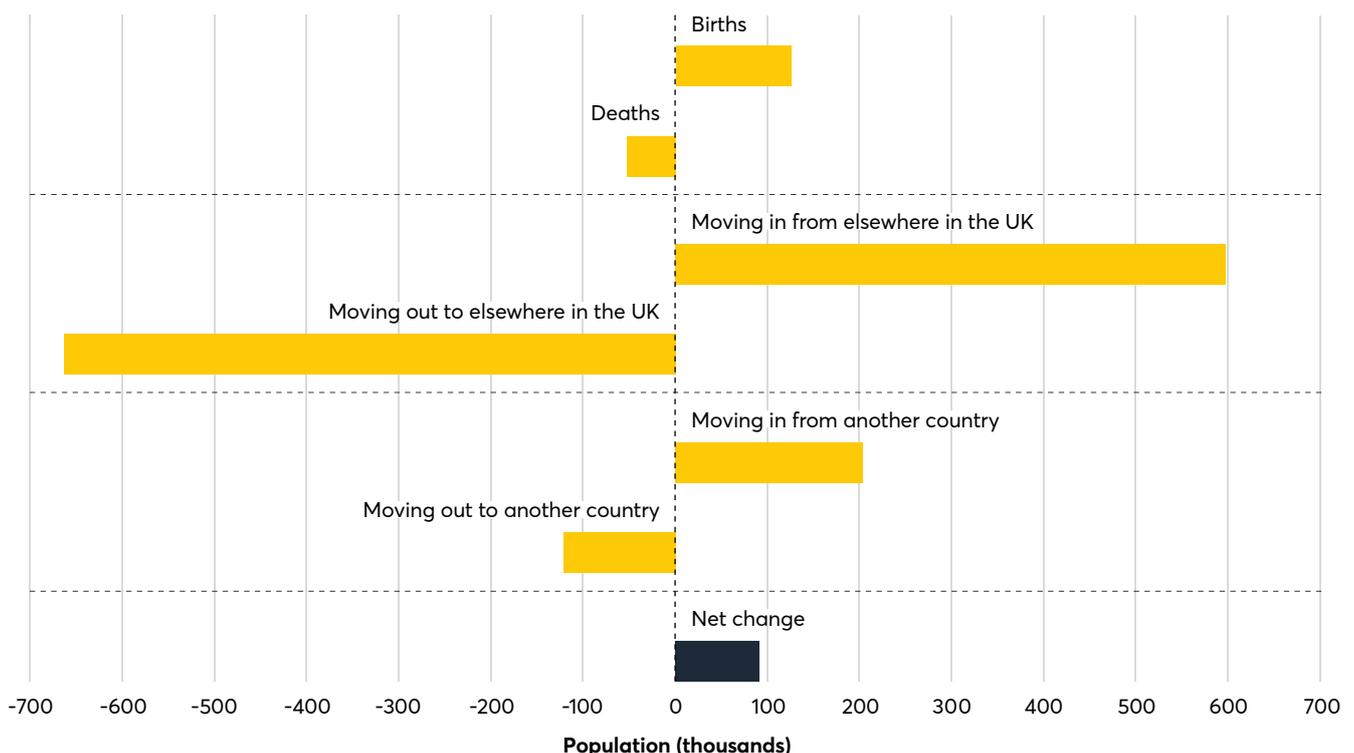
Like most global cities, London’s population growth has been driven in large part by migration, both from other parts of the UK and overseas. Population movement in and out of the capital is fairly high – about eight per cent of the population move in or out every year, and many more move within the city, particularly as new areas of housing are developed.⁷ These changes can be dramatic locally, especially when large brownfield sites are developed in outer London – for instance, the population of Colindale, in Barnet, is projected to double between 2011 and 2021.⁸ The impact of these local population changes is discussed in more detail below.

People often move to London for work, and the proportion of Londoners aged 25 to 44 is significantly higher than for the rest of England.⁹ Moving to London, and moving out of it, are both fairly common in this age group. Within this age range, the peak age for leaving London is 31, which may be related to a desire to move to a larger home in a cheaper area.¹⁰ Perhaps related to this, the city’s birth rate is now falling after a period of sustained growth, and demand for primary school places is projected to fall over the next decade as a result¹¹ – some inner London authorities are already reporting sharp reductions in the number of infant school children, suggesting that the dynamics of population growth may be changing.

Diverse city

London has been a migrant, polyglot city for all of its recorded history: the Romans who founded Londinium had origins across Africa and Europe.¹² Since World War Two, many people from other countries have arrived to fill jobs in London’s growing economy – the Empire Windrush bringing some of the first to Tilbury, just east of London. Others have arrived as refugees of conflict – from the partition of India in the late 1940s to the war in Syria more recently. Groups of new Londoners have often – though not always – started their London lives in fairly distinct parts of the inner city and then moved outwards.¹³ Inner London has the largest proportion of Black, Asian and Minority Ethnic (BAME) residents – 68 per cent in Newham compared to 16 per cent in Havering.¹⁴

Figure 2: Components of population change in London, 2019



Source: GLA Central Trend based population projections, components of change

London is sometimes held up as a beacon of tolerance and inclusion. There is some truth in this. Perceptions of community cohesion are fairly high, gaps in educational achievement between ethnic groups are lower than elsewhere in England, and there has been an increase in the visibility of business and political figures from BAME backgrounds over the last decade or so.^{15,16} Lesbian, gay, bisexual, transgender and queer or questioning (LGBTQ) people living in London are more likely to say they feel comfortable than those living outside London – and it seems that many LGBTQ people move here because they see it as a safer and happier place to be.¹⁷ London’s public transport network and street infrastructure need more work to make them accessible for people with disabilities, but they are better than many other cities, and continue to improve.¹⁸

Nonetheless, marked inequalities remain in education, employment, safety and health – made starkly visible in the higher COVID-19 death rates for BAME Londoners.¹⁹ London households that are home to a person with a disability are one and a half times more likely to be in poverty than households where no one has a disability.²⁰ LGBTQ Londoners still feel less safe in the city than people who are not LGBTQ.²¹ For the last few decades there have been high employment rates in the city overall, but mothers in London are less likely to be in paid work than their counterparts elsewhere in England, and in many cases high childcare and travel costs make work unaffordable.²² Despite being more likely to live close to people of different ethnicities, Londoners are no more or less racist than other British people,²³ and there are disturbing indications that racist and religious hate crime has been increasing over the last four years.²⁴

Inequality, wealth and poverty

Big cities are often held to be more dangerous than rural areas and smaller towns: perceptions of London as unsafe go back hundreds of years, and are still held by some people from other parts of the UK today.²⁵ Some types of crime certainly happen more in the city: for the last few decades London, and particularly its transit system, has been a comparatively frequent target of terrorist attacks (both actual and threatened). The murder rate in London is about 50 per cent higher than the England and Wales average²⁶ and has been rising for the last five years. However, it remains lower than that of international comparator cities such as New York and Paris.²⁷ Young Black men are the demographic most likely to be murdered in London.²⁸ For less serious offences, the difference between London and other parts of the country is less stark: for instance, 40 per cent of adults in England and Wales report that anti-social behaviour is a problem in their area compared to 45 per cent of Londoners. Confidence levels in the police are very similar to those throughout the rest of the UK, but, these vary considerably by ethnicity: Black Caribbean people are much less happy with policing than people from other ethnic groups.²⁹

London is the wealthiest part of the UK in terms of Gross Domestic Product (GDP), and is also home to some of the wealthiest people in the world, with more billionaires than any other global city.³⁰ Earnings are above the British average, and in some boroughs very far above: the median full-time UK worker earns £479 a week, whereas the equivalent for London is £589, and for Kensington and Chelsea £772. These differences are longstanding, but earnings inequality between London and the rest of the UK has slightly reduced over the last few decades: London wages have risen slower than wages in every other English region.³¹

Despite the presence of some extremely wealthy people in the city, average personal wealth is lower than elsewhere in southern England – houses are worth more, but fewer people own them. London does nonetheless have the highest pension wealth in the country, a legacy of historically high incomes.³² Alongside great wealth there is also great poverty: a higher proportion of Londoners live in poverty than in any other part of the UK.³³

The difference is particularly stark for people at the beginning and towards the end of their lives, and for those workers on low incomes. The capital city “wage premium” for Londoners with fewer qualifications is far less than for their higher-educated counterparts,³⁴ but housing is much more expensive for everyone, resulting in high levels of poverty if measured as disposable income after housing and other essential costs.³⁵ Using the Social Metrics Commission definition of poverty, 43 per cent of London children live in poverty (compared to 33 per cent in England) and 18 per cent of London pensioners live in poverty (compared to 11 per cent in England). Restrictions on the housing element of benefits and caps on the total amount of benefits available have worsened the situation for some Londoners.

Poverty in London is compounded and complicated by other forms of inequality. As we have seen, children are the group most likely to live in poverty – although the disadvantages of being poor as a child in London are somewhat mitigated by the quality of the education system and the range of cultural and leisure activities on offer (in comparison to some other parts of the UK). BAME people in London are almost twice as likely to live in poverty as White people³⁶ – they tend to earn less because of racism in education³⁷ and employment³⁸ and, in some cases, because of the employment disadvantages brought about by immigration (particularly when people have come to the country unable to speak much English). Over time, these inequalities of income compound into inequalities of wealth and assets. London’s high house prices and the large deposits required for a mortgage mean that home ownership is very difficult for those whose families cannot help them with cash: three in five White British Londoners are homeowners, compared to only one in three Londoners from other ethnic groups.³⁹

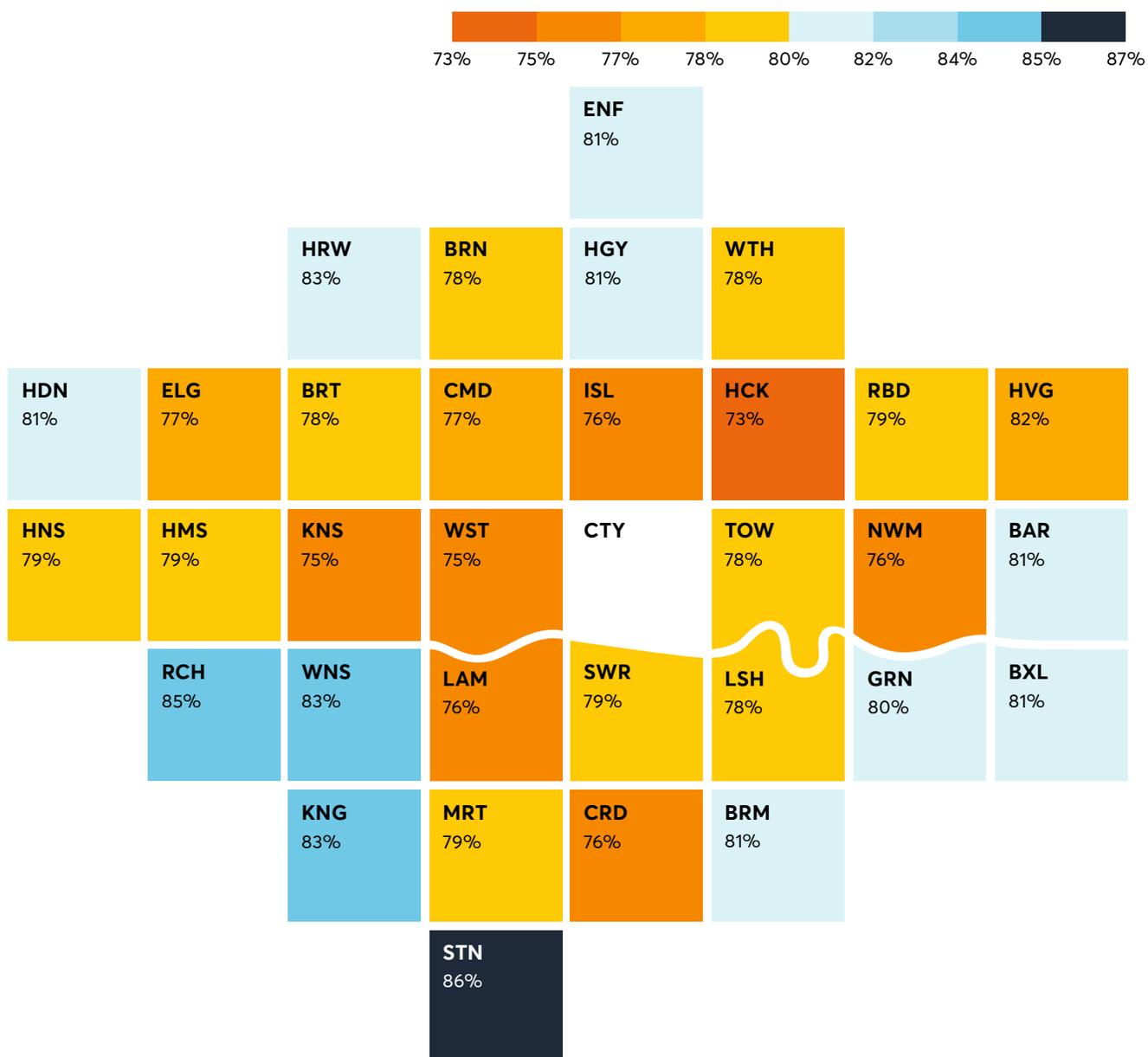
London’s economic inequality drives inequalities in health. Overall, London has a higher life expectancy than the rest of the UK – which may in part be driven by lower rates of dangerous alcohol use⁴⁰ and of physical inactivity.⁴¹ But within the city, people living in poorer areas live shorter lives, and spend a higher proportion of them in ill-health. Men in Newham enjoy 13 fewer years of healthy life than their counterparts in Richmond upon Thames.⁴² This difference worsens economic inequality still further as people are pushed out of the workforce by their own ill-health or because they need to care for a relative. Physical inactivity levels among adults in the city are comparatively low – possibly because people make less use of cars to get around⁴³ – but, paradoxically, levels of child obesity are the highest in the country, with poorer boroughs faring worse.⁴⁴ This may be because many London children live in small flats with limited access to safe outside space, and cheap fast food is often more accessible than fresh fruit and vegetables.⁴⁵

Wellbeing and the future

As we might expect for a large and diverse city, reported levels of wellbeing in London vary widely. Overall, self-reported life satisfaction in London is a little lower than in the rest of the UK, although it has been rising for the last few years.⁴⁶ While poverty is generally associated with lower life satisfaction, this association is not strong for London boroughs: the two reporting the lowest life satisfaction are Lambeth, which has a comparatively low average income, and Kensington and Chelsea, which has a very high one.⁴⁷ Variation within boroughs – particularly by age – may be more significant than variation between them.

So what’s next for London’s nine million people? Predicting population change is notoriously difficult, especially for a high-migration city which is hugely influenced by economic and social forces. But it seems likely that, despite COVID-19, the population of London will grow over the next 30 years, even if that growth is bumpy. Many will have moved to the city from elsewhere in the UK or from other countries, and many current Londoners will move out. Housing and employment will continue to have huge impacts on people’s lives, and people’s day-to-day experiences will depend a great deal on how many new homes are built and what jobs are created.

Figure 3: Proportion of life spent in good health - men, by borough, three year average 2015 to 2017 (%)



Source: Office for National Statistics. NOTE: Excluding City of London due to low response rate.

Map design: After the Flood

These issues are covered more fully in the following chapters of this report, but the questions we will continue to explore throughout the London Futures review include:

- Do we want London's population to continue growing?
- What does an ageing population mean for London?
- How can we best provide good homes and neighbourhoods for older Londoners?
- What is the nature and impact of discrimination and racism in London, and how might we tackle it?
- Should we treat obesity in London as an epidemic?
- Which aspects of inequality matter most, and what might we do to reduce them?

2. London's economy and business



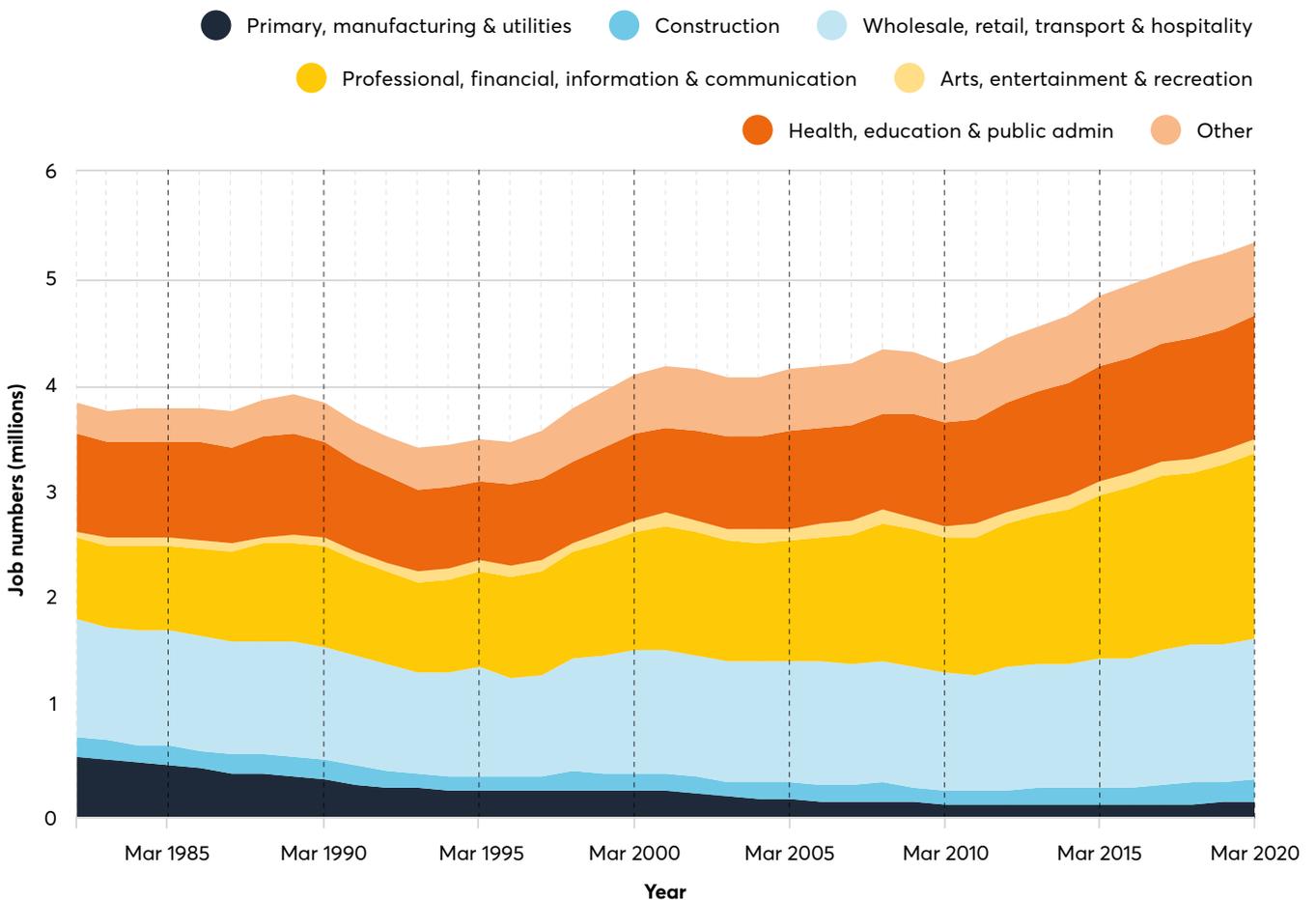
London's economy powers the UK. With 13 per cent of the UK's population, the capital accounts for 24 per cent of the UK's economic output, as measured by Gross Value Added (GVA).⁴⁸ Since the 1990s, economic activity in London has seen both specialisation and internationalisation, with close links between these two trends. This chapter reviews how these trends have affected London and examines some of the long-term challenges that have built up over that period.

Growth, resilience and specialisation

The total number of employee jobs in London has grown from 3.8 to 5.3 million since 1990, with a further one million self-employed workers. Within that growth, as Figure 4 indicates, there has been a shift from manufacturing and primary sectors to service sectors. The latter range from high-value-added professional services, such as law, finance and consultancy, to public and private services that support the rest of the economy and its rapidly growing population (such as education and retail).

Against many expectations, London proved relatively resilient to the financial crisis of 2008 and the recession that followed. Between 2008 and 2012, job numbers fell slightly in financial services, and more sharply in construction and retail, but continued to grow quickly in health, hospitality, real estate and professional services. The reasons for this resilience have been debated, not least given the roots of the crisis in the financial services sector. Suggestions for explanatory factors have included the 2012 Olympics, London's "plutonomy" population of wealthy individuals, and the role of quantitative easing in channelling investment into equity markets and property.⁴⁹

Figure 4: Sectoral shift in employee job numbers 1982-2020



Source: ONS, Workforce jobs by industry, NOMIS July 2020⁵⁰

Looking at a more detailed breakdown of the fastest growing sectors – those that added at least 50,000 jobs between 1998 and 2016 – the characteristics of growth sectors become clearer (see Table 2). Growth has been particularly fast in head office services, tech, architecture, advertising, TV production and legal services, but also among security guards, care workers, hotel and restaurant staff, retail staff, and gym workers – the public and private sector workers who make a global city function. In some sectors, such as health and education, employment growth is driven by both population change and London’s increasing global reach – for example, the growing reputation of London’s universities.

Table 2: London’s fastest growing sectors 1998-2016

Sectors	Employment 1998	Employment 2016	Growth 1998-2016	% growth 1998-2016
Activities of head offices; management consultancy	77,200	231,200	154,000	199%
Computer programming, consultancy and related	71,000	196,500	125,500	177%
Sports activities and amusement and recreation	26,800	59,400	32,600	122%
Real estate activities	58,300	128,300	70,000	120%
Security and investigation activities	29,900	60,300	30,400	102%
Activities auxiliary to financial and insurance	78,800	155,600	76,800	97%
Architectural and engineering; technical testing	52,800	98,600	45,800	87%
Social work activities without accommodation	75,600	141,100	65,500	87%
Human health activities	177,400	321,800	144,400	81%
Advertising and market research	50,600	86,600	36,000	71%
Education	231,000	363,000	132,000	57%
Food and beverage service activities	195,700	306,700	111,000	57%
Services to buildings and landscape activities	96,900	145,500	48,600	50%
Movie, video and TV production, sound and music	41,600	61,100	19,500	47%
Accommodation	45,800	65,800	20,000	44%
Office administrative, office support etc	69,200	96,400	27,200	39%
Other professional, scientific and technical activities	45,300	62,800	17,500	39%
Legal and accounting activities	127,400	171,100	43,700	34%
Employment activities	147,600	196,700	49,100	33%
Retail trade, except of motor vehicles and motorcycles	353,000	433,000	80,000	23%

Source: GLA Economics, more detailed jobs series, July 2018 update⁵¹

The “big bang” financial service reforms of the late 1980s may have been instrumental in London’s economic revival, and in building the iconic towers of the City of London and Canary Wharf. However, growth has also been seen across a much wider range of industry sectors. These include converging fields such as fintech – which combines London’s traditional financial services strength with its newer reputation as a tech hub – as well as a number of other cultural and creative enterprises.

These new sectors have changed the once-rigid business geography of London, bringing finance to the West End and South Bank, tech to the City and Canary Wharf, and creative industries to the studios of Dalston and Dagenham. London’s mix – of access to capital, international communications, a lively cultural scene, a stable regulatory environment, and a broad and deep talent pool – has proved attractive to startups and growing businesses as well as multinational corporations seeking a European base.

Global trade and talent

London’s economy has also internationalised over this period. The city has become more prominent as a destination for international investment, particularly through corporate property acquisition and head office openings. Between 1990 and 2011, the proportion of non-UK investment in London’s commercial real estate rose from 21 to 52 per cent,⁵² and from 2003 to 2018 London attracted 15 per cent of foreign head office investments in Europe.⁵³ The city also acts as a safe haven for the world’s rich: London is second only to New York in Knight Frank’s 2020 City Wealth Index.⁵⁴ These financial flows have fuelled everything from London’s booming commercial and residential property markets to the hospitality industry, galleries and art sales.

London is also a growing exporter of services throughout Europe and the world. Exports can be hard to measure, but London made around £117 billion in service sector exports in 2016 – 46 per cent of the UK total. Of these exports, £72 billion came from information and communications, financial services and professional services, while “travel” (i.e. spending by overseas tourists, students and other visitors) accounted for £19 billion.⁵⁵

Finally, and perhaps most significantly, London has a hugely internationalised workforce. Around 26 per cent of London’s workers are non-UK nationals, compared to 12 per cent across the UK (see Figure 5). Of these workers, 16 per cent come from other European countries, and 10 per cent from the rest of the world. The number of foreign workers has grown by around 50 per cent since 2008: most of that growth has been in the European workforce, though this may change after the proposed “level playing field” post-Brexit immigration regime.⁵⁶

The migration of highly educated workers from overseas and other parts of the UK has given London a workforce twice as qualified as the rest of the UK in many sectors. This is a boon to London’s employers, and to the city’s productivity, but it is also a potential barrier to career progression for Londoners with fewer qualifications. London can act as an “opportunity engine”, boosting the careers of highly educated young people, but this opportunity is not open to all.

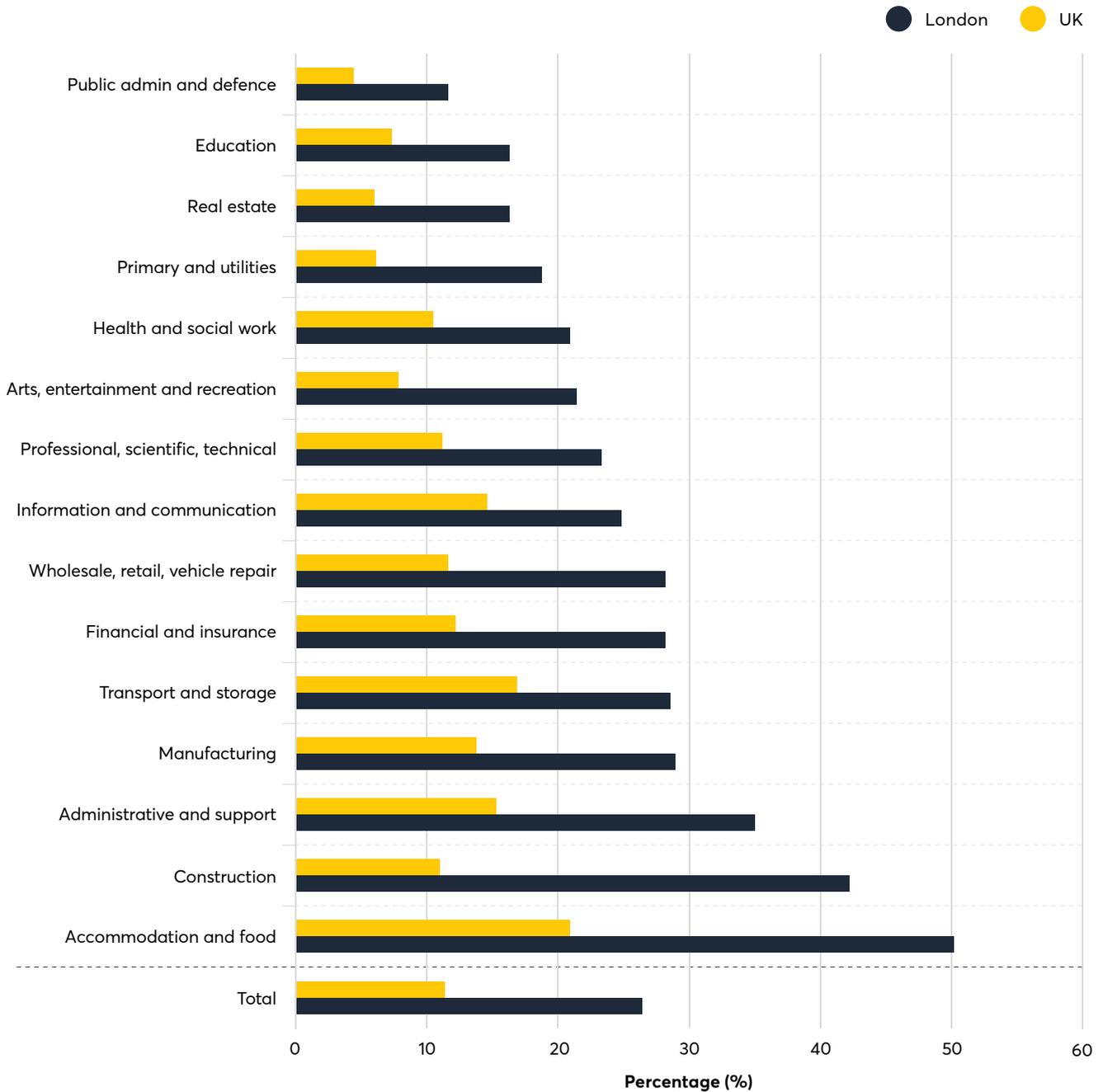
Challenges: stalled productivity, poor pay and global slowdown

While London’s economy has achieved impressive growth over the last thirty years, it has also faced significant challenges. One of these is London’s stagnating productivity. Until the financial crisis of 2008, London’s economy was growing faster than the rest of the UK’s – and faster than the size of its workforce – because of improvements in productivity.

Since then productivity growth in the capital has stalled, only tracking the UK as a whole – although London remains one of the most productive European regions. This slowdown in productivity growth has affected most sectors, but is more concentrated in firms operating in east and outer London

than those in central and inner west London. Explanations for the slowdown have ranged from firms preferring to hire more workers for low wages rather than investing in automation, to a slowdown in global trade.⁵⁷

Figure 5: Proportion of foreign national workers in London and the UK, 2019

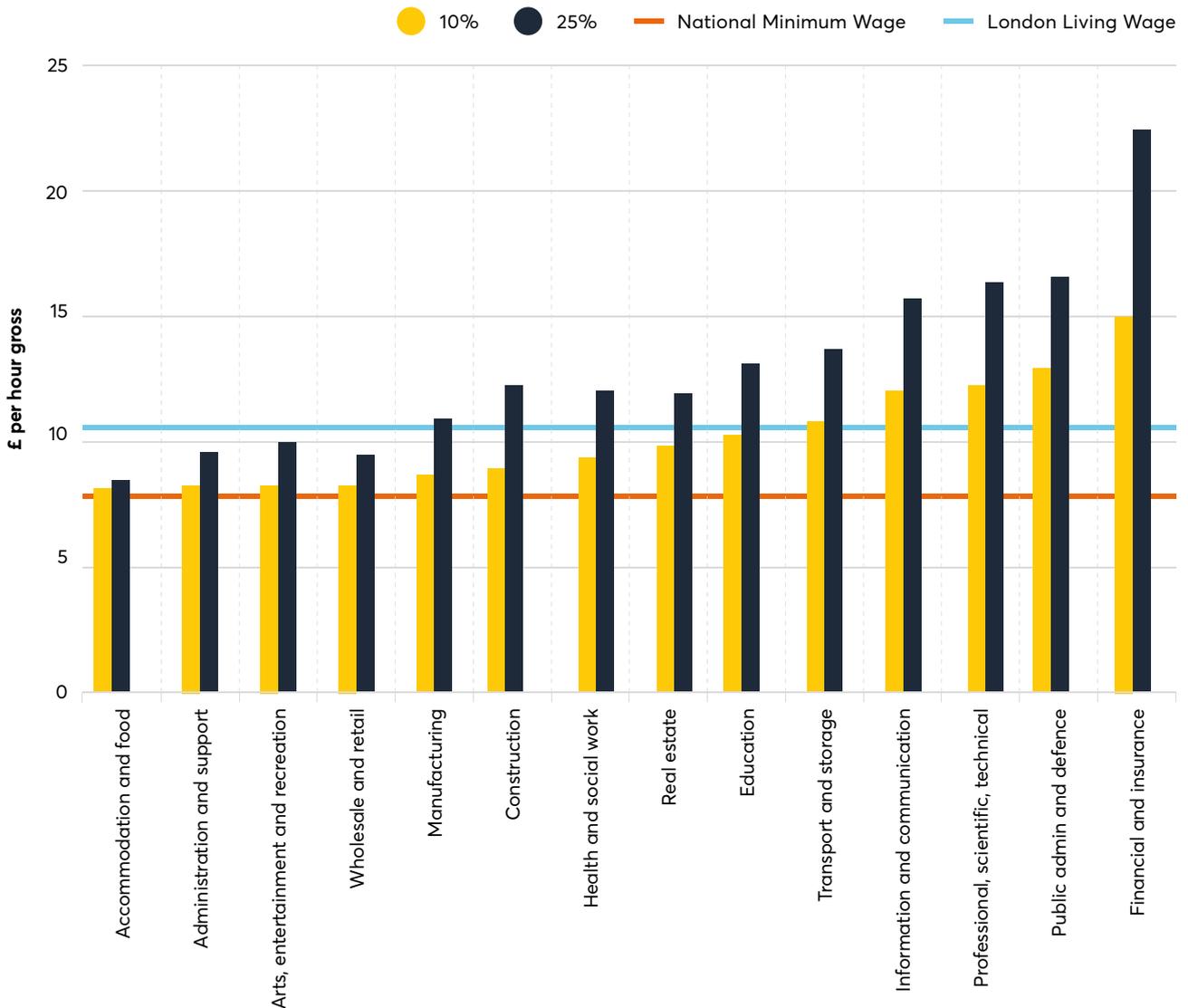


Source: ONS, Annual Population Survey, 2020

A second challenge is connected to this. In many sectors, London's wages are simply too low, with the result that poverty levels have remained stubbornly high. Unemployment levels had plummeted before the coronavirus crisis, falling from over 14 per cent in 1994 to around four per cent in 2019, even though rates remain much higher for some groups (for example disabled people, young people and some ethnic minority groups). Despite the rise in employment, however, poverty levels have remained broadly unchanged, barely falling at all between 1996/97 and 2017/18 (see Chapter 1 for more discussion of this issue).

Figure 6 shows wages for the 10th and 25th percentile of workers (i.e. the highest pay earned by people in the lowest 10 and 25 per cent of workers in a specific sector). In sectors such as retail, accommodation and food, the bottom 10 per cent of workers are only just paid at the level of the National Living Wage (which applies to workers aged 25 and over), despite much higher living costs in London. In reality many are paid below this level, due to weak enforcement, the growth in zero-hour contracts, and freelancing. In these and several other sectors, nobody in the lowest 25 per cent of earners is paid more than the London Living Wage, which is designed to reflect the cost of living in London more fully and has been endorsed by successive Mayors of London.

Figure 6: London's sector pay, and national benchmarks



Source: ONS, Annual Survey of Hours and Earnings, 2019⁵⁸

A third challenge is the obverse of London's international profile and the success the city has enjoyed in an era of rapid globalisation. London is a city that thrives on global trade and accessibility – but the short-term impact of COVID-19, the medium-term impact of Brexit, and longer-term shifts in global power are creating uncertainty in patterns of global trade and migration. Any reversing of globalisation may impact negatively on everything from London's workforce, to its property prices, to the specialisms that have propelled success to date.

By conventional metrics, London's economy in recent decades has been a world leader, but increasingly experts doubt whether the blunt metrics of economic output successfully measure welfare or prosperity as most would understand it. Some have advocated different approaches – not only to live within environmental limits, but also to offer better and fairer living conditions to citizens.⁵⁹

These debates are not easily resolved, but it is clear that London's economic growth has not remedied the problems of poverty and disadvantage in the capital, nor those of environmental damage. As London looks to the future, seeking to respond to a fast-changing global and technological context, it will need to consider what form of economic development will best meet its needs without undermining sustainability or increasing societal tensions. The questions we must continue to discuss include:

- What should London's economic goal, or goals, be?
- What should be the priorities for revitalising London's economy in the longer term as it recovers from COVID-19, and how should these be balanced with the need for environmental sustainability?
- What are likely to be the key industries in London's longer-term future?
- How might we enable Londoners to compete more effectively for the jobs that the capital is likely to offer in the future?
- How might London take advantage of the opportunities of Brexit, and mitigate any negative impact?
- What measures should be taken to increase London's economic dynamism?

3. London's places and environment



The photographs of London inside the covers of the 1991 *London: World City* report are recognisably of the same city we live and work in today: Tower Bridge, the Tower of London, HMS Belfast and St Paul's are all there. But in other ways the city has changed dramatically: City Hall sits on what was once wasteland, apartment blocks have sprung up everywhere, and the Square Mile now boasts a cospicuous of tall buildings.

These changes are the result of one of London's big success stories over the past 30 years – its absorption of a dramatic increase in both population and job numbers. A city cannot grow at speed without changing its form: this chapter will consider the policies and economic factors that have enabled London to grow within its city limits, but it will also look at some of the downsides and tensions that have accompanied this growth, including on the environment.

The return of the city

London's expansion has been part of a broader urban bounce-back in the developed world. After a global drift towards suburban office parks, employers rediscovered cities and the benefits they could reap from "agglomeration" – in essence, proximity and clustering. Agglomeration helps tap into a broader and deeper talent pool, creates spillovers of knowledge, and encourages efficient use of space – all of which are enabled by high-capacity public transport systems. As a result, London saw a boom in city centre employment. Nearly 60 per cent of the 1.5 million jobs added in the capital between 2000 and 2018 were in five central boroughs (Camden, Southwark, Tower Hamlets, and the cities of London and Westminster), while outer London boroughs saw much slower growth or even a decline⁶⁰.

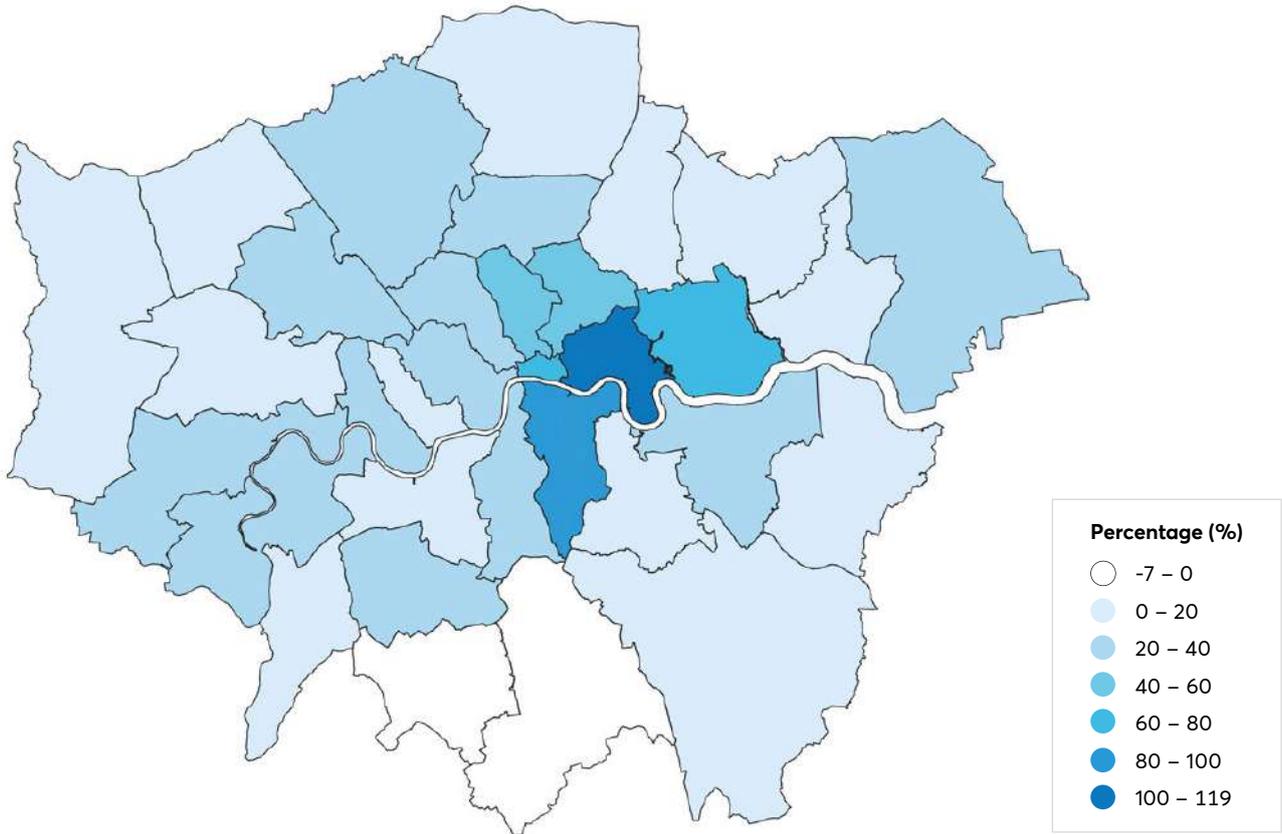
The growth in central London jobs has been accommodated in the towers built in the City and Canary Wharf, as well as the increasingly intensive use of space in other boroughs. Data from the British Council of Offices show that the average space allowed per office worker has fallen by 20 per cent in the last 10 years alone – though new precautions in response to the coronavirus pandemic may reverse this trend.⁶¹ Figure 7 shows the rate of job growth in different boroughs.

Uneven densification

London has also seen steady but patchy growth in residential densities. From the mid-1990s, politicians and planners started to notice the environmental and social damage from the growth in car-based commuting and out-of-town retail, and began to plan for closer links between public transport and urban density.⁶² This approach was also adopted as planning policy: in the Mayor's London Plan, a "density matrix" linked permitted density ranges to public transport accessibility and limited private car parking accordingly.

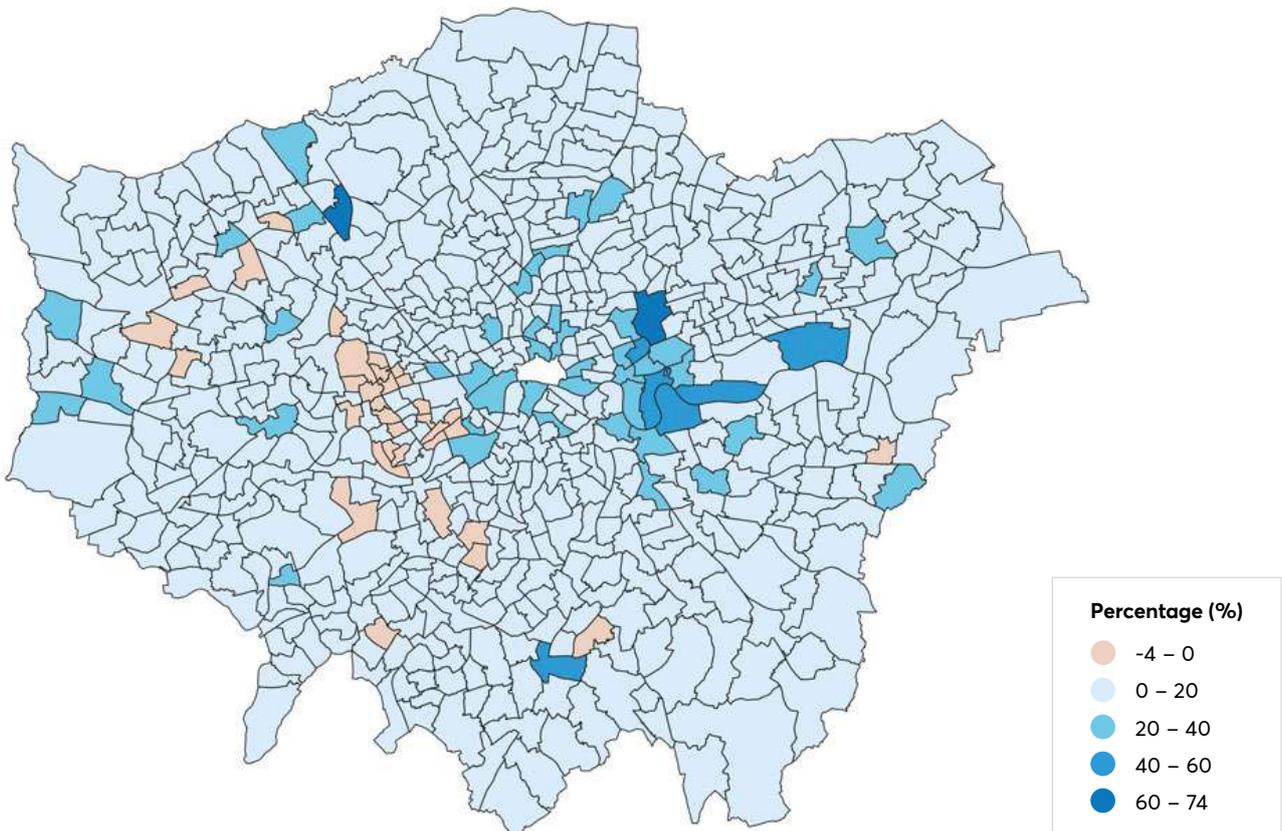
In reality, the upper limit of these ranges were regularly reached or exceeded, as developers – and in many cases planners – sought to maximise the number of homes built on particular sites.⁶³ For their part, office developers vied to build taller and more distinctive towers. This has given London a somewhat "lumpy" urban form: alongside central skyscrapers, rapid proliferation of apartment blocks on former industrial land, and on smaller sites around urban centres, has created very high densities in some areas of boroughs such as Tower Hamlets (see Figure 8). Meanwhile, London's miles of privately owned Victorian terraces and interwar semi-detached houses, protected by planning policy and owner occupation, have remained largely untouched. However, as discussed further below, even high-density development has not kept up with population growth, contributing to increased crowding and soaring prices.

Figure 7: Rates of job growth in London, 2000-18



Source: ONS, Jobs and job density, NOMIS Feb 2020

Figure 8: Change in population density (people per square kilometre), 2011-18



Source: GLA, 2016-based population projections (housing-led model), March 2018

Go East

London's reorientation eastward has supported both residential and employment growth. In 1980, east London was still recovering from the closure of the docks and decline of related industrial activities. A development corporation had been established in 1981, and commercial development in Canary Wharf was taking shape by the end of that decade. Subsequent investments in east London included the Jubilee Line extension to Stratford, the East London Line extension (since absorbed into London Overground), the Millennium Dome (now The O2) and associated infrastructure in North Greenwich, and the London 2012 and legacy developments around Stratford. A new rubric, the "Thames Gateway", was hatched to frame the broader development ambitions for east London. While formal Thames Gateway delivery structures foundered, these investments unlocked previously disused land, particularly in inner east London. Perceptions began to shift, with the area's potential and desirability eclipsing its high poverty rate – though this remained intense across east London. River and dockside living along the Thames flourished in this period as Londoners re-embraced their waterways for recreation, leisure and, at the reinvigorated South Bank, culture.

Transport investment

Transport investment has not only transformed east London: it has also helped London as a whole to accommodate its economic and population growth. London's Underground and bus services have seen substantial investment over the last two decades, including into creating the orbital London Overground service out of disparate disconnected services, and the congestion charging scheme introduced in 2003 has helped to constrain private car use. Measures such as low-traffic neighbourhoods, lower speed limits and reallocation of road space to cyclists and pedestrians sought to reduce private car use further. Since 2000, public transport volumes have grown by more than 50 per cent (see Figure 10), while private vehicle use has fallen by around 10 per cent (against population growth of around 25 per cent). Cycling trips have doubled, though from a low base, and walking has grown by around a fifth.⁶⁴ Passenger transport on the Thames grew too, with services resuming in 1999: by 2015 their use had risen to 10 million annual trips.

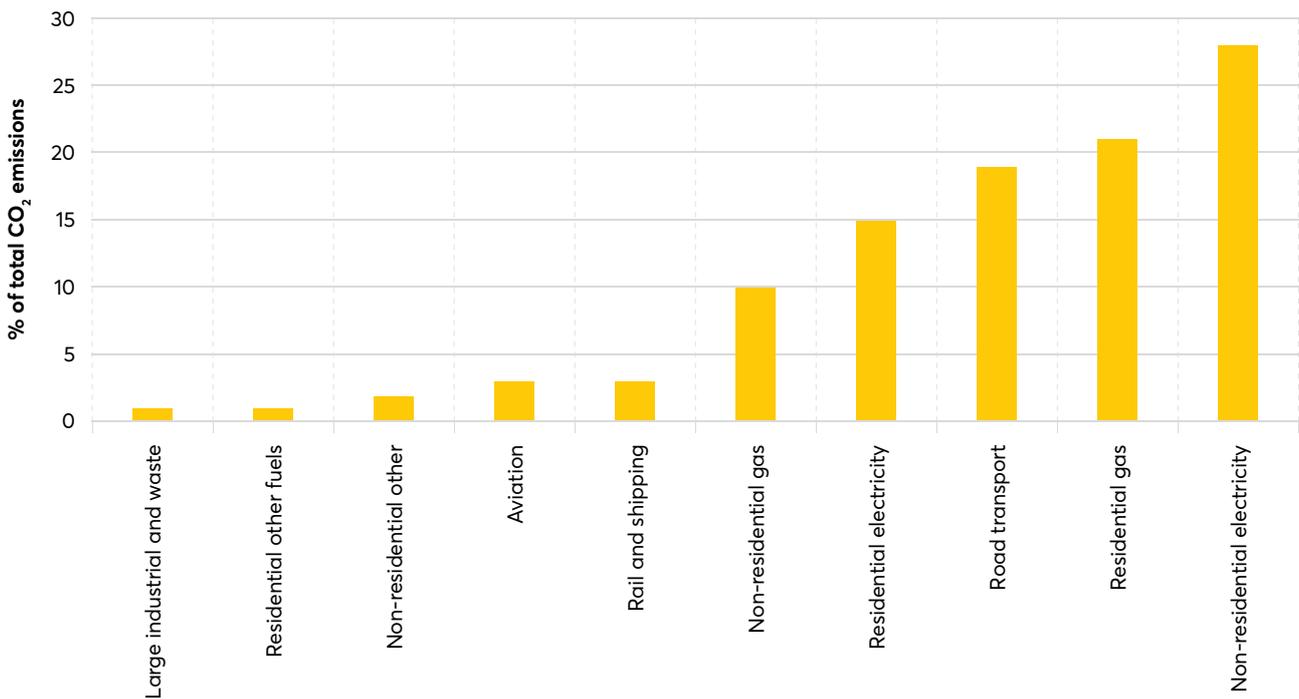
Regional transport connections have also been enhanced, with renovated stations at Paddington, King's Cross, St Pancras and London Bridge; the completion of the High Speed 1 rail link between St Pancras International, Paris and other European cities; the Thameslink 2000 upgrade programme completed in 2018; and Crossrail ("the Elizabeth Line"), expected to be completed in 2022. These links and upgrades have also enabled commuting into London to increase in line with job numbers: around one million workers commuted into the capital in 2018, an increasing proportion from far-flung regions.⁶⁵

Environmental challenges

The concerted, and effective, resistance in London to the rising tide of car use helped reduce the damage to London's natural environment. Elsewhere there have been other improvements. The river Thames, which by the 1960s had become infamously polluted and lifeless, was brought back to better health through sewage treatment improvements. Today over 120 species of fish swim in the Thames Estuary.

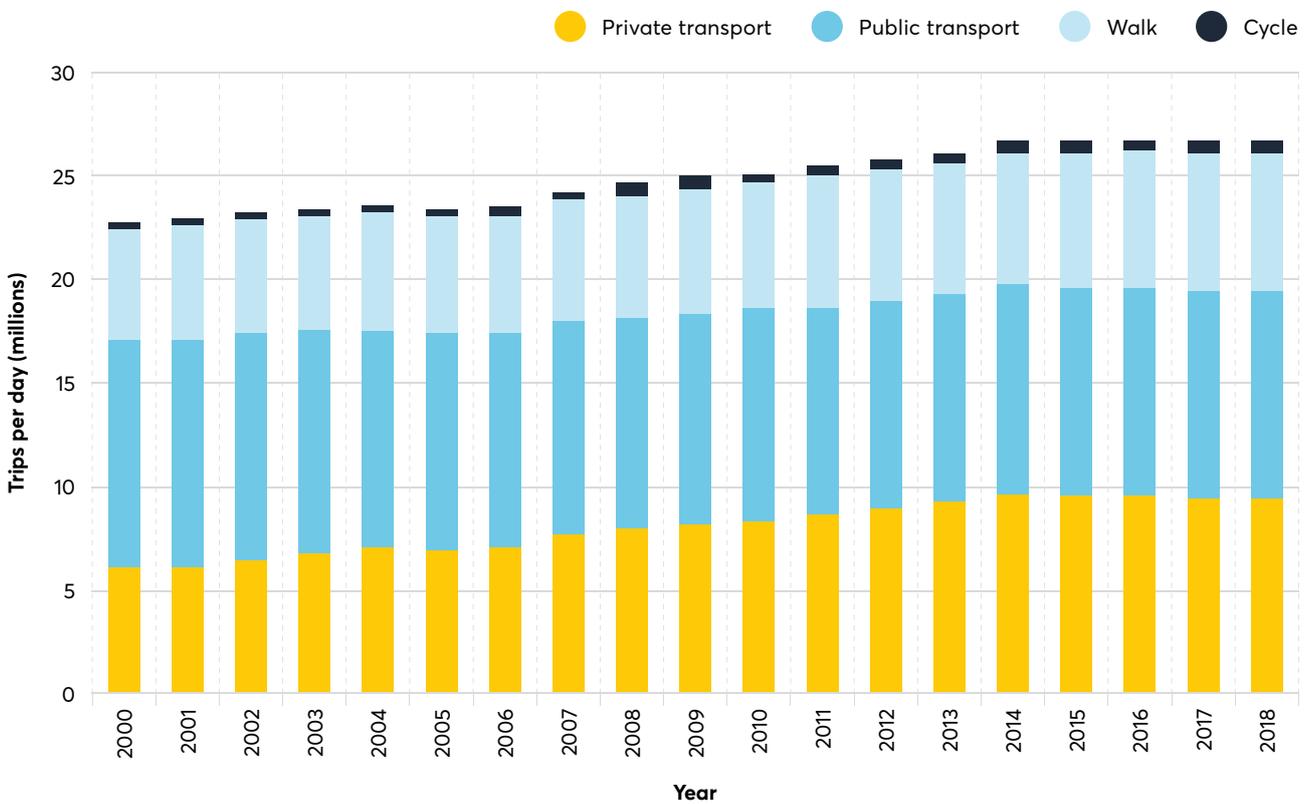
London's poor air quality, from pollution spewed by vehicle engines and boilers, degrading tyres and brakes, construction, and other sources is estimated to shorten the lives of thousands of Londoners. As it became better understood, it also became the focus of considerable political attention. Policies addressing pollution from road vehicles, such as TfL's Low Emission

Figure 9: CO₂ emissions by source in London, 2015



Source: Mayor of London, London Environment Strategy, 2018

Figure 10: Transport usage shift since 2000



Source: TfL, Travel in London Report 12, 2019

Zone, started to bite and appear to have helped arrest, and then reverse, the worsening air.

The same can not be said about London's role in the other major environmental challenge of our age, our warming climate. With less direct local consequences it has proved difficult in London to assemble the same political energy to address climate change that poor air quality has attracted. Yes, London's overall carbon emissions are on a downward trajectory, and have been broadly since 2000, but the rate of decline and current plans to speed up the transition away from fossil fuels appear to be some way short of what is required to meet headline ambitions to achieve net-zero carbon emission by either 2050 (the target for the UK), or 2030 (the current Mayor of London's goal).

Nationwide there have been major successes. Emissions from electricity production have dropped dramatically. As an electricity 'importer' London benefits here. But major components of London's emissions remain stubbornly high, echoing challenges in the UK as a whole. Road transport alone contributes almost one-fifth of the city's greenhouse gas emissions (see Figure 9) and are static. And London's buildings remain largely heated by gas, accounting for one-third of London's total emissions.

Air travel grew, with passenger numbers almost trebling from 1991 to 2018 in spite of concerns about climate change.⁶⁶ As a result, London's airports expanded and multiplied. Heathrow opened a fifth terminal, while Gatwick, Stansted, Luton and City airports all added capacity; all evolved into significant retail businesses. Aeroplanes carried tourists and helped bring millions of visitors to London. They also enabled international business and so helped drive London's economic growth.

Nonetheless, by the mid-2010s, further expansion of Heathrow in the form of a third runway was meeting fierce resistance from an alliance of local and environmental activists. A cross-party consensus battling this resistance crystallised into a full "go ahead" decision in 2018, only for it to be ruled illegal by the Supreme Court in 2020 as contrary to climate change commitments.

Regeneration and its discontents

London's urban form has also been reshaped by successive waves of "regeneration" policy. In the 1990s, funding came from national government in the form of the City Challenge, the Single Regeneration Budgets and the Millennium Commission. These transformed major attractions such as the British Museum, built new ones like the Millennium Bridge, and funded smaller improvements in inner city areas like Brixton and Stratford. During the 2000s, the focus of public policy shifted to estate redevelopment (discussed further below), while urban improvements were seen as matters for the private sector – whether through the creation of public spaces by developers in locations such as King's Cross, More London and Paternoster Square, or through smaller-scale enhancements sponsored by Business Improvement Districts. Green spaces have also been upgraded and installed, though more commonly through public investment: Mile End Park, Barrier Park in the Royal Docks and Queen Elizabeth Olympic Park between Stratford and Hackney Wick have all helped to redress the historic imbalance between east and west London in access to green space.

Private investments into public space have been controversial, with some critics viewing them as "privatisation" of the public realm,⁶⁷ and they have in any case been concentrated in the city centre. While central London's streets and squares have enjoyed a revival, many outer London town centres have struggled, with shops under pressure from online retail, stalled productivity in remaining businesses, and poverty levels nearing those of historically poorer inner London.⁶⁸ Again, recovery from the coronavirus pandemic may offer new ways to check or reverse these trends.

Housing, affordability and gentrification

30 years of growth have thereby created a denser London, particularly in and around its centres, with employment growth focused by agglomerative forces into the central boroughs. This tightly bounded growth has not been painless, however. The most prominent growing pain, and one which underpins the capital's persistent poverty, has been the rising cost of housing in London.

In London's private rented sector – which has almost doubled in size over the past 20 years – the index of private rents rose by more than 40 per cent between 2005 and 2018, while median earnings rose by 28 per cent. Londoners renting from private landlords now spend 38 per cent of household income on rent (median), compared to 30 per cent in 2010.⁶⁹ Concerns about the quality of rented housing and the behaviour of landlords are commonplace – “no fault” end-of-tenancy evictions are now one of the biggest single causes of homelessness in England.⁷⁰

House prices have risen faster than rents: median prices are now 13 times higher than median earnings.⁷¹ Owner-occupiers pay a lot less than renters each month (around 19 per cent of household income). But the proportion of owner-occupiers fell from 60 to 50 per cent between 2000 and 2017⁷² – as rising prices, and therefore rising deposit requirements, excluded more and more from ownership.

Both rents and house prices have stabilised in the past few years, but London remains scarred by its housing affordability crisis. Its causes are much debated, but likely include both an explosion of investment in rent-generating assets driven by historically low interest rates, and supply that has persistently lagged behind demand. The net result is that housing costs have pushed many Londoners into poverty: in 2017/18, 15 per cent of Londoners were in poverty before housing costs (a similar level to the rest of England), whereas 28 per cent were in poverty after housing costs (compared to 21 per cent in the rest of England).⁷³ Overcrowding has also grown in recent years – mainly in the private rented sector – while under-occupation has grown in owner-occupied homes.⁷⁴

The housing shortage and affordability crisis also underpins persistent tension about gentrification and displacement in the city. The term “gentrification” was originally used to describe the movement of middle-class people back into city centre locations in cities like London and New York. This has certainly been a feature of London's population movements in recent years, with boroughs such as Hackney seeing particularly rapid growth in the number of residents working in higher-status professions.⁷⁵

“Gentrification” has also been used to describe the displacement of working-class people that results from these processes, or from intentional redevelopment plans – particularly of social housing. As London has sought to step up housebuilding in recent years against a backdrop of falling government grants, many local authorities have redeveloped housing estates, generally replacing social housing with a mixture of social rented (or equivalent), intermediate and market housing. As well as rising prices for private rentals, these projects have been held responsible for the displacement of working-class communities, though there is some evidence that such communities have been diluted by newcomers as much as they have been displaced.⁷⁶

Alongside protests against such redevelopment plans, London's increasing housing density has also sparked protests from owner-occupiers concerned about changes to their neighbourhoods. These have been particularly intense in suburban London, as developers' focus has turned from large post-industrial sites to infill and redevelopment in more settled suburban areas. Trust in both developers and borough planning departments is low.⁷⁷ Some of these disputes have been mediated through the rise of neighbourhood planning forums, but both neighbourhood planning and other local structures such as parish councils have had limited adoption in London.⁷⁸

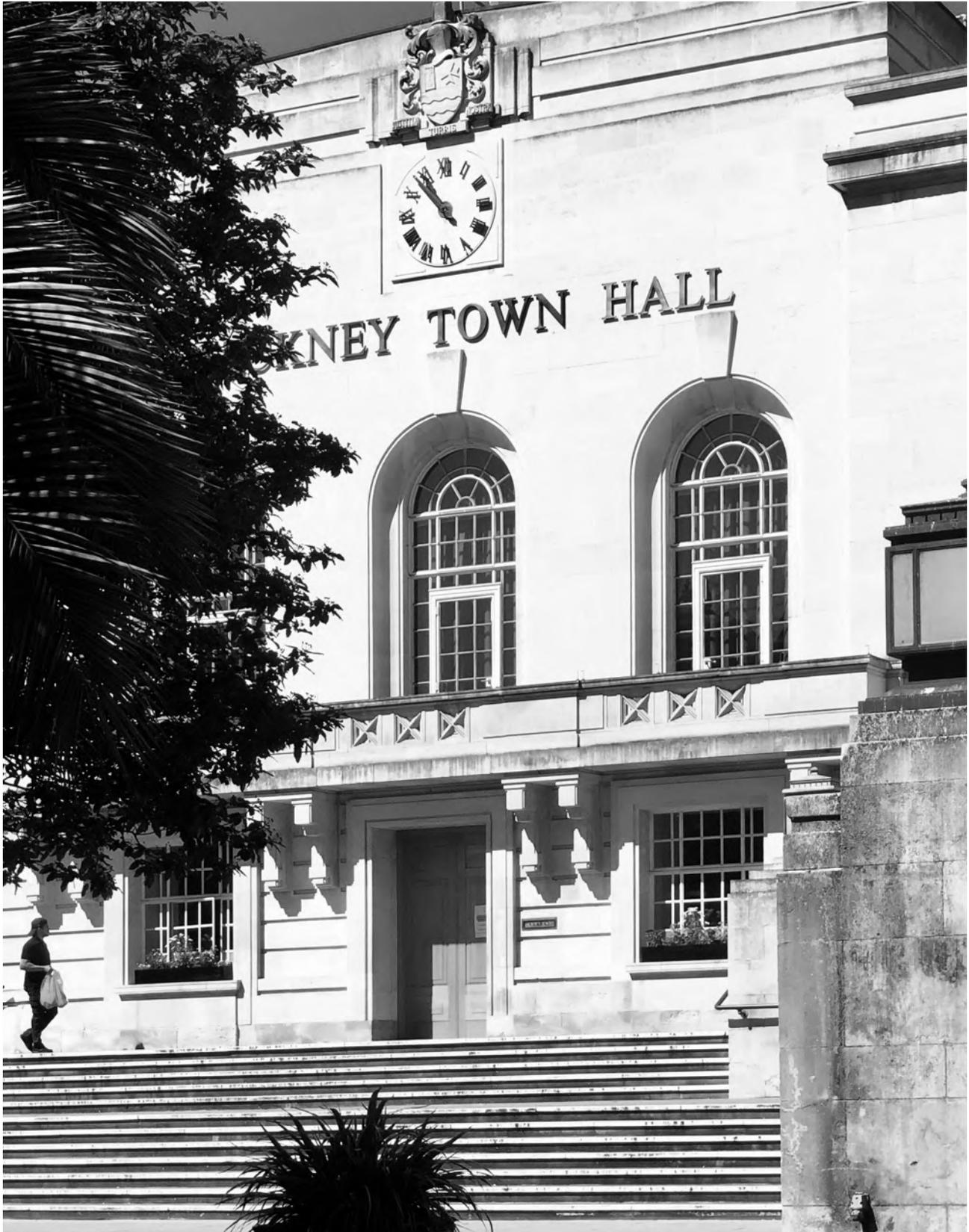
Accommodating an uncertain future

Like many large cities, London is increasingly caught between the pressure of a growing population and the need to avoid sprawl and its corrosive effects. It remains to be seen whether the current pandemic will lead to a dramatic and long-term slowdown in London's population growth, or whether those leaving will be quickly balanced by new flows of migrants arriving.

One possibility is that the coronavirus crisis may trigger or accelerate change in how people live, work and travel around the city. People may commute in for fewer days over longer distances, or split their time between the suburbs and the centre. There may be more focus on space standards and access to outdoor space, and less on location. Discussions about the green belt and regional planning may become unavoidable. Questions that we should consider when looking to the future include:

- Should London's growth be contained within the current Greater London boundary, or should we revisit green belt and other protected designations?
- How could housing be made more affordable to Londoners on lower incomes, and with less access to inherited wealth?
- Should we tackle under-occupation of privately owned homes? What could work?
- How might London's transport needs change in the future? How can we keep moving, yet also reach net-zero emissions?
- What should London do about air travel, given the climate emergency and its pivotal role in the London economy?
- How should we shift to lower-carbon buildings and homes in London?

4. London's institutions



Institutions, especially public sector ones, have always been crucial in London's development. The City of London originally prospered, in part, because its businesses and citizens formed bodies tasked with public works and services. Bridges were built and maintained, city walls were constructed, and eventually the services that we recognise today – the fire brigade, hospitals, schools and police – came into being. Here our assessment of London as it is today turns its critical eye towards London's institutions, from governance via the media to sport, charities and many other fields.

Evolving civic government

All large cities have complicated governance arrangements, each with their own peculiar history and culture. London is no exception, with one of its hallmarks being a high degree of instability. The founding feature of the city, the Thames, is managed by the Port of London Authority, founded in 1909, with a remit that stretches beyond the city boundary to the wider estuary. The City of London Corporation – governing the “square mile” but also a voice for financial and professional services – goes back much further, in fact for many centuries. Yet the wider capital only got a semblance of its own government in 1855 (the Metropolitan Board of Works) and its first elected government in 1889 (the London County Council), with a reformed system of 28 urban parishes below it created in 1900. This was replaced by the Greater London Council (GLC) in 1965, covering the whole urban area within the Green Belt (itself a creation of the 1940s Abercrombie plans), with a new arrangement of 32 boroughs plus the City of London Corporation underneath it. The GLC, however, was in turn abolished in 1986 by the Thatcher government as a wasteful and left-leaning bureaucracy. In the 1990s, in the interregnum between its abolition and the establishment of the Greater London Authority, intricate diagrams were plotted to show the overlapping and intertwined jurisdictions of different tiers of government, agencies and authorities.

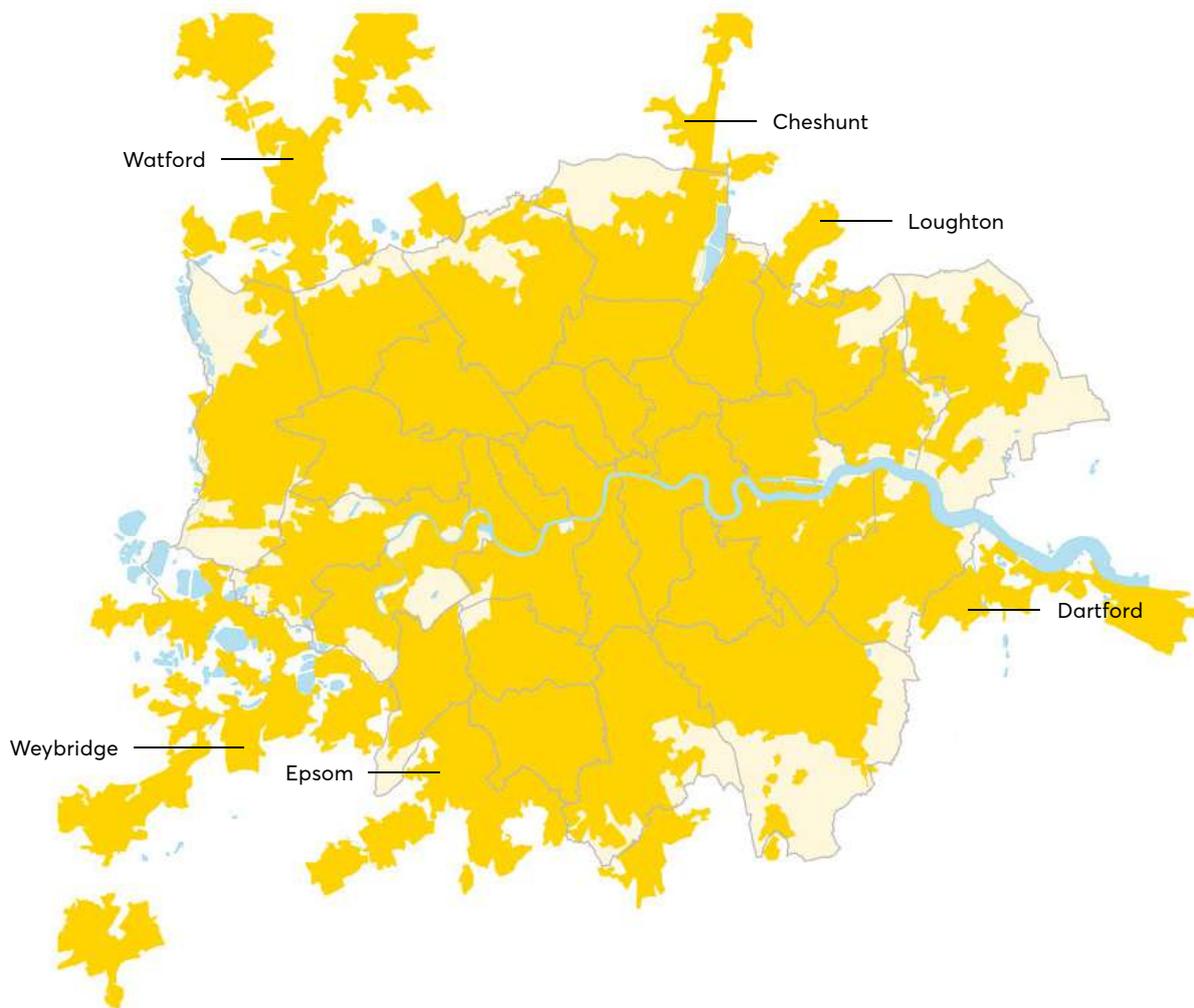
In this period, the absence of citywide government allowed a wide range of new partnerships and structures to form, many encouraged by government ministers and supported by structures such as the London Research Centre, London Ecology Unit and London Planning Advisory Committee – joint bodies that were formed when the GLC was abolished. Businesses came together to form London First, with a focus on promoting the capital and its interests, alongside membership bodies such as the London Chamber of Commerce and Industry and national groups such as the Confederation of British Industry.

Local authorities formed two London-wide groupings that were subsequently merged to form the Association of London Government in 1994 (now London Councils). They also formed local and sub-regional partnerships to argue for infrastructure, develop strategies and bid for funding. London's borough councils often struggled with efficiency and political disputes in the 1980s. Over time, however, they became more collaborative, and some even became exemplars in delivering effective services.⁷⁹ Partnerships such as London Pride at the metropolitan level, sub-regional bodies such as Central London Partnership and Cross River Partnership and local partnerships such as business improvement districts, also cemented stronger ties between public and private sectors.

A mayor and assembly for London

The establishment of the GLA in 2000 was explicitly designed to supplement rather than supplant existing institutional structures. The elected Mayor and Assembly have powers that are overlaid onto those overseen by London's 1,958 councillors and (now) four directly elected borough mayors. The Greater London boundary from 1965 was retained, despite increasing urbanisation on its fringe.

Figure 11: Greater London and surrounding built up areas



Source: Rob984, via Wikimedia Common, CityMetric.

The GLA's remit in relation to housing and planning policy has been extended over time, most notably in the Mayor's power to establish mayoral development corporations that can take over planning in specified local areas. Transport for London as a mayoral agency has relationships with boroughs that touch on everything from local transport infrastructure funding and street management to bus routing and property development. While the Mayor's office has lost its economic development arm, the London Development Agency, the Mayor continues to chair the London Economic Action Partnership (one of 38 English local enterprise partnerships responsible for local growth strategies). The Mayor also funds London and Partners, the city's international promotion arm. As Mayor, Ken Livingstone set up a London Sustainable Development Commission, which has since advised on issues of sustainability in the capital. The London Assembly, comprising 25 elected members, has held the Mayor to account since the post was created, and approves the GLA budget annually.

In relation to policing, there is an overlap with Whitehall. While the Mayor sets the budget and strategy for the Metropolitan Police, the Met retains a national role in areas such as diplomatic protection and counter-terrorism, and significant powers (including the power to appoint and dismiss the Commissioner) are shared with central government.

Public services beyond city halls

Many of London's key public amenities and institutions are not controlled by the GLA or by local authorities, but by separate institutions. For example, many of London's parks are controlled by The Royal Parks, a charity established in 2017 as part of an effort to transform quangos into charities. In a similar fashion, the Canal and River Trust was created in 2012 to manage the capital's waterways (other than the Thames). The National Health Service, which employs around 200,000 people in London, is managed through 32 clinical commissioning groups and nearly 40 acute, mental health and other trusts⁸⁰ – though formal collaborative arrangements such as the Healthy London Partnership and the London Health Board are also in place. Boroughs' formal role in health has grown in recent years, and in 2013 they were given responsibility for improving health and some healthcare services.

London's universities employ a further 94,000 staff,⁸¹ and are formally independent entities, although 17 are grouped as the University of London, and nearly 50 are members of London Higher. Even London's schools, the large majority of which were run by the boroughs only 20 years ago, now have highly disparate governance arrangements. As of January 2017, the capital had 1,855 schools managed by local authorities, 738 academies and free schools funded and overseen directly by central government, and 549 fee-paying independent schools.⁸²

London also has a large and diverse "third sector" of voluntary and community organisations. Some of these – such as the housing associations that build around 12,000 homes in London each year – are big businesses. Others are national or international organisations that have their base in London. Many, however, are much smaller and often firmly rooted to the needs and interests of a specific London neighbourhood or community – frequently supporting those who have trouble accessing public services due to local issues or legal exclusion.

Third sector, sport and culture

Alongside these are myriad sporting institutions, from London's world-leading football teams to the diverse clubs serving every diaspora sport from Gaelic football to Kabaddi. Cultural institutions range from the Royal Opera House and Notting Hill Carnival Trust to small local festivals. A few large funders (including Trust for London and City Bridge Trust) collaborate to specifically support London's third sector, but charities based in London are more numerous than those focused on London causes.⁸³

London has also been the proving ground for social movements that have grown over time. One example is Citizens UK, which had its roots in The East London Citizens Organisation (TELCO). This alliance of trade unions, faith groups, charities and other organisations played a leading role in campaigning for local benefits from the London 2012 Olympic and Paralympic Games. Faith groups of all sorts are active, reflecting the diversity of the population, while the city has a higher level of religious observance – and a lower proportion of children born to unmarried parents – than the UK as a whole.⁸⁴

Some of the largest third sector institutions in London are museums, galleries and theatres. Including the national institutions based in the capital (such as the National Gallery), London's cultural institutions employ more than 60,000 people and are a major draw for tourism, business visits and inward investment. They also frequently cross-fertilise with the capital's broader creative sector.

London is a global and national centre of TV, film, broadcasting, publishing and journalism. The BBC and Channel 4 have relocated broadcast operations from London, but most national newspapers and broadcasters are based in the city. However, London has only one regional daily newspaper and a declining number of local papers; attempts to sustain a dedicated TV news channel have foundered.

Complexity and challenge

Directing a city as complex, democratic and diverse as London can never be a simple exercise in command and control. In fact, London's recent successes have been brought about by the development of networks and alliances, when the city's vast range of interest groups and agencies have come together behind shared objectives.

London also faces a particular set of challenges in 2020. A government that came to power pledging to "level up" the UK economy, and shift economic and political power out of the UK capital, has talked more of devolution outside London than in it. Many are concerned about the longer-term implications of clashes over transport funding and planning policy. While national government has promised further devolution to cities, many in London government may be pleased if the city manages to hold onto the powers it has, rather than lose more to central government. That London has become an increasingly Labour-voting city over the last few decades, while the rest of England has tended to vote Conservative, does not help.

To some extent, these issues are typical of the tensions between capital cities and their governments across the world, though they do also reflect growing differences between London and the rest of the UK in terms of politics, demographics, economy and cultures. These tensions, and the political blowback that they create, also challenge London's ability to chart a course that will be successful for both capital and country in years to come. To succeed throughout the coming decades, London's institutions will need to show the shared resolve to tackle common problems that has characterised its moments of success since the 1990s.

Looking to the future, London and its leaders may need to consider the following questions:

- Will London's institutions be fit for purpose during the rest of the 21st century? If not, where are changes or reforms most needed?
- Which public services in London work well, and which are most in need of improvement?
- More specifically, does London government work well? Where are the major institutional pressures?
- Should London be made more democratic, and if so, how?
- What should the government prioritise next in devolution for London?

5. London in the UK



London has gradually become the centre of much of life in the UK. As the nation formed and transformed around it, London gradually accumulated more and more functions. The City of Westminster, the home of national governance, was named as a counterpart to the City of London, a centre of global trade and finance. It was home first to religion, then royalty, then politicians and civil servants. A legal cluster emerged to serve the two cities off the connecting “Strand”, joined later by a newspaper cluster on Fleet Street. More recently, modern London has acquired national sports stadiums, cultural venues, new business clusters and international tourist attractions.

London as capital

By the 19th century, London was not only the capital of England and the UK, but arguably the capital of Europe. Around 1840, it became the largest city the world had ever seen, at the centre of an empire that spanned the globe. Its numerous functions boosted its prosperity, and whilst it has risen and fallen in relation to its nation state, its dominant position in the UK economy and national life has never really been threatened.

Other prosperous countries have separate political capitals – Washington, D.C. or Berlin, for example – and financial capitals – New York or Frankfurt. But these nations tend to be federal states. London, at the heart of a heavily centralised UK, is more comparable to Paris or Tokyo.

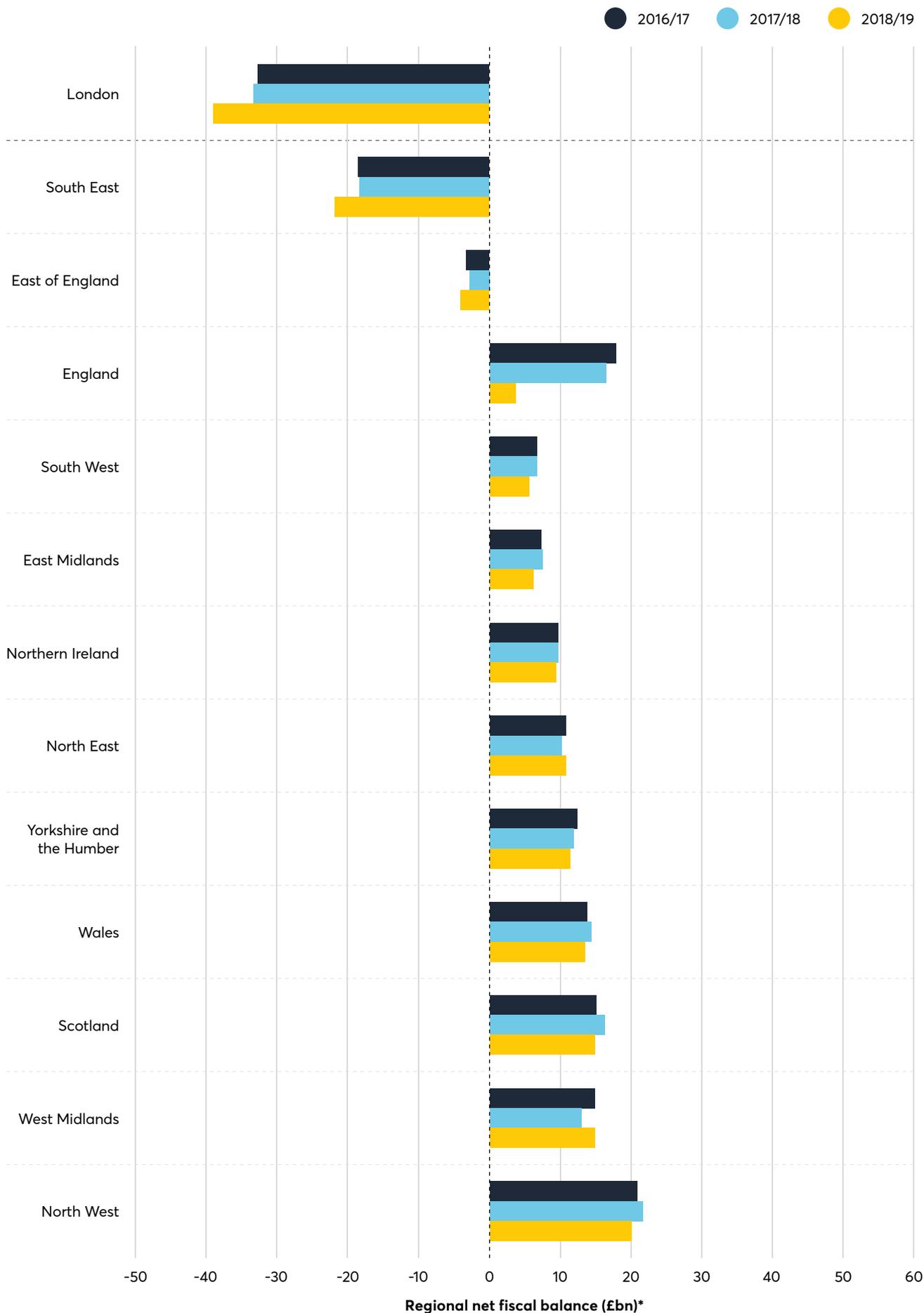
Like the latter cities, however, London has suffered as well as benefited from this status. London’s value to the nation has been huge, but as we have seen, its success also brings challenges – the cost of living, congestion, pollution, and growing resentment from across the rest of the country.⁸⁵ The city is perceived by many as politically, economically and culturally dominant, with a gravitational pull that damages the rest of the country. Polling shows that Brits view the city as “expensive”, “crowded” and inaccessible; Londoners as “arrogant” and “insular”. British pride in the UK’s capital diminishes according to geographical distance from it, and appears to be falling over time.⁸⁶ And in recent times, London’s perceived dominance has become a prominent national political issue once more.

Economy

As at the start of the 20th century, the first decades of the 21st have seen London’s economy race ahead of the rest of the country.⁸⁷ London’s success brings national benefits. The “Wider South East”, consisting of Greater London and the economically related East of England and South East regions, are the only parts of the UK that pay more in taxation than they receive in public spending. The majority of this comes from within London itself, as Figure 12 illustrates. London and the South East alone raise over a third of all UK tax revenue,⁸⁸ and London’s success helps to fund the rest of the country.

London derives much of its wealth from its “world city” functions: in this regard, it competes with other world cities, not UK cities or regions (see Chapter 6 for more on this). There is also a great deal of interdependence with the rest of UK due to supply chains, inter-regional trade,⁹⁰ and “spin-off” investments elsewhere in the country that arise from an initial investment in London.⁹¹ The economic benefits of London’s role within the UK therefore extend beyond its sizeable fiscal contribution to the Exchequer.

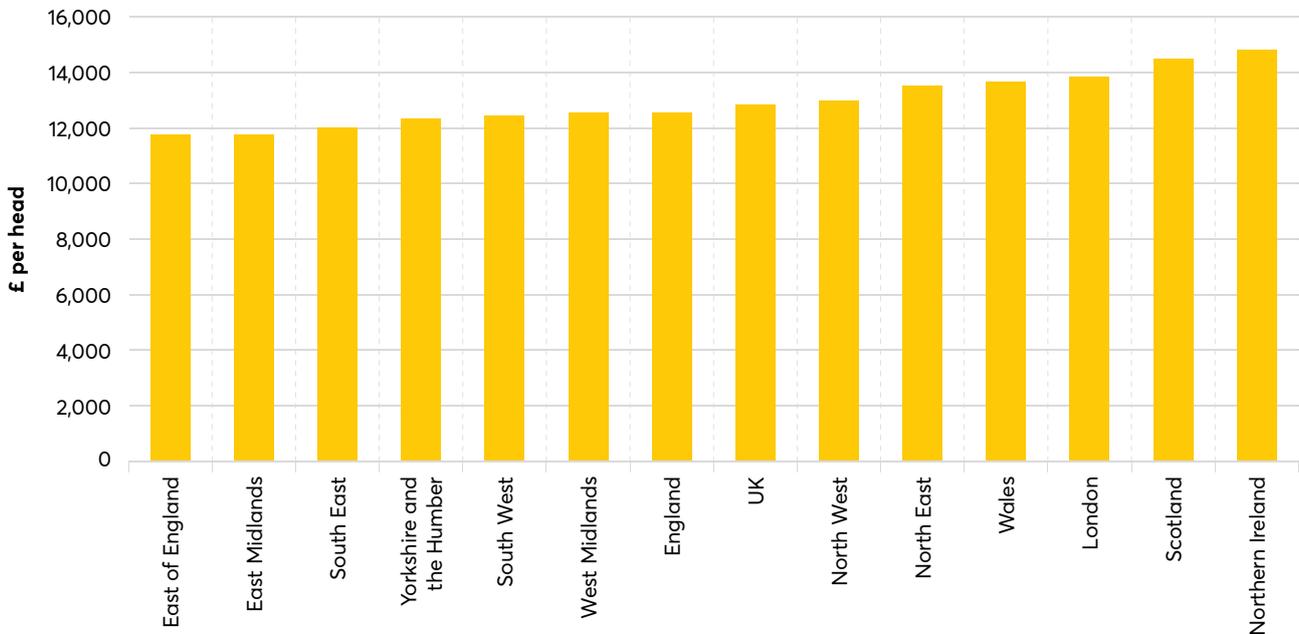
Figure 12: Regional net fiscal balance



Source: Office for National Statistics (2020). Country and regional public sector finances supplementary tables, December 2019⁸⁹

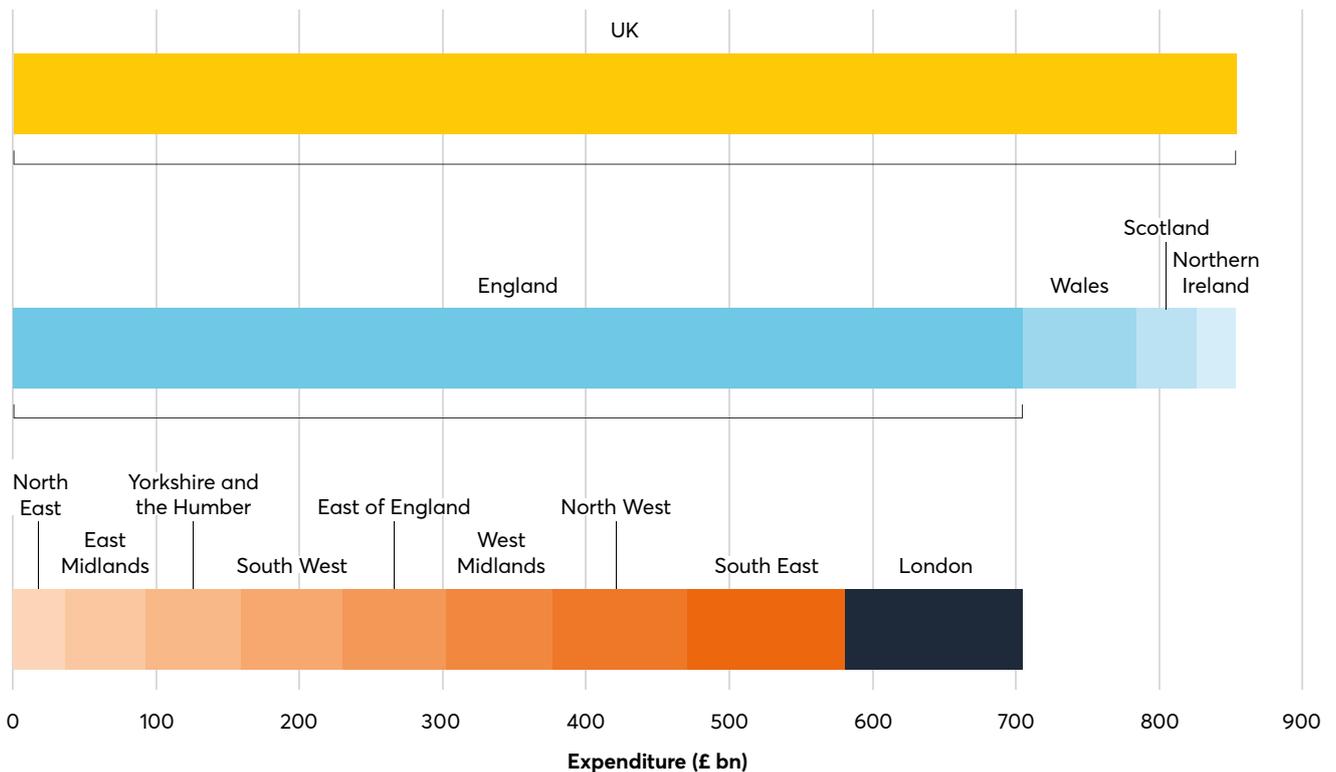
However, there are two important caveats. First, whilst London “pays in” considerably more than it receives from the public purse, both figures are high. London gets the third-highest share of overall public expenditure of any UK region, as Figures 13 and 14 show. HM Treasury may receive a better return on investment in the capital than anywhere else – but London’s highly visible and expensive new infrastructure, from Crossrail to the Olympic Park, also breeds resentment.

Figure 13: Public sector expenditure per head, by country and region, 2018/19



Source: Office for National Statistics (2020). Country and regional public sector finances supplementary tables, December 2019

Figure 14: Total managed public expenditure, £bn, 2018/19



Source: Office for National Statistics (2020). Country and regional public sector finances supplementary tables, December 2019⁹²

Second, it is crucial to remember that while Greater London as a “region” generates huge tax revenues, this is highly concentrated in just a few postcodes. Public investment in the Greater London region is often focused on facilitating economic activity – investment in public transport, for example – rather than on assisting its deprived communities. As we have seen, prosperity for many, and extreme wealth for some, too often obscures widespread poverty.

One final factor further complicates this picture. Whilst London receives a sizeable share of public expenditure in return for its (much larger) tax take, its citywide government has little say over how this is spent. Table 3 demonstrates how reliant London is on central government grant (“intergovernmental transfers”) compared to its international competitors – a consequence of London government’s limited tax-raising powers.

Table 3: Own-source revenues, shared taxes, intergovernmental transfers

	Own-source revenues (%)	Shared taxes (%)	Intergovernmental transfers (%)
London (2015)	31.2		68.8
Berlin (2014)	30.3	36.5	33.2
Frankfurt (2015)	71.1	15.7	13.2
Madrid (2015)	48.3	5.7	46.0
New York (2015)	74.0		26.0
Paris (2015)	83.7		16.3
Tokyo (2015)	81.9	12.5	5.6

Source: Slack E, International comparison of global city financing, GLA 2016⁹³

Culture

The concentration of national functions in London, and the strength of the capital’s economy, can also lead to the sense that it has undue influence over political, economic and cultural decision making. 60 per cent of Brits think that London gets more than its fair share of public spending.⁹⁴ And in 2014, just over 60 per cent said that the location of Westminster and Whitehall meant political decisions were too focused on London.⁹⁵

Of London’s many national roles, being home to parliament and national government is the one that most often springs to mind for British people.⁹⁶ Repeated usage of “London” to mean “central government” in the national media reinforces this sense that the capital and UK national decision making are synonymous.⁹⁷

That the capital is home to so many institutions of national significance can lead to a feeling that a London “elite” not only makes all the political decisions, but also shapes national culture with values that are not necessarily shared by the rest of the country. Many national cultural attractions and organisations are based in the capital – and national media are also perceived to be London-centric, with an implicit focus on the city that flows from the overwhelming and longstanding concentration of national media outlets in London.⁹⁸

Table 4: National institutions physically based in London

Political	House of Commons; House of Lords; Government Departments; Parliament Square; National Archives
Cultural	The British Museum; National Portrait Gallery; The British Library
Monarchy	Buckingham Palace; Clarence House
Sporting	Wembley Stadium; Marylebone Cricket Club; the Football Association; Olympic Park; Wimbledon
Media	BBC (in part); Sky; Channel 4 (in part); Telegraph Media Group; Guardian Media Group; News International
Legal	Supreme Court of the United Kingdom; Royal Courts of Justice
Educational and academic	The Royal Society; The British Academy; The Francis Crick Institute
Economic	Confederation of British Industry and other employers' groups; trade unions

The 2016 EU Referendum – in which London, Northern Ireland and Scotland were the only parts of the UK that voted to Remain – has fuelled the argument that London is culturally “different” to the rest of the country. So too has the fact that Londoners are notably more likely to vote for the Labour party than voters in the rest of England – a phenomenon observable over decades, but increasing in recent years.⁹⁹ Nevertheless, Londoners have so far elected the Labour party candidate to the modern mayoralty only twice in five elections.¹⁰⁰

London’s national role also makes it the centre of significant moments of both national celebration and protest. It can seem that living in (or travelling to) London is essential to having one’s voice heard.

One potential solution to the perceived London-centrism of the UK could be moving some, or elements, of the UK’s national institutions out of the capital. The majority of British civil servants are already based outside the capital, but London still remains the region with the largest number of civil servants in the UK. Overt policy in this direction has led to significant numbers of civil service and public service broadcast jobs being moved out of the capital,¹⁰¹ and there are plans to move more.¹⁰²

Nonetheless, polling by Centre for London in 2019 suggested that there was surprisingly little appetite amongst the British public for moving national institutions out of the capital to make Britain “fairer”.¹⁰³ Devolution of power may be a more effective solution to the challenge of over-centralisation, and recent decades have seen large transfers of power to the “devolved nations”, London, and other “city-regions” such as Greater Manchester. To date, however, devolution to London has been limited by international standards, and appears to have stalled.¹⁰⁴

Where next?

The UK has a long history of “regional policy” that has attempted to address the capital’s dominance – whether by incentivising growth and investment elsewhere or discouraging development in London. Following the 2008 crash, anti-London rhetoric seems to have become an increasing part of the national political debate. The idea gained traction that an out-of-touch “liberal metropolitan elite”¹⁰⁵ or, slightly later, “Islingtonian Remainers”¹⁰⁶ were in charge of the country. London’s multicultural population and highly globalised economy do not sit easily alongside nationalist or populist ideas.

Alongside the political arguments about London's "elite", there is also an economic reality. Across the UK, people are not feeling the benefit of the London region's economic might: whilst over three-quarters of Brits feel that London contributes "a lot" or "a fair amount" to the UK economy, just 16 per cent feel it contributes to their local economy. This "perception gap" has grown over the last five years.¹⁰⁷ In other words, at a time when London's economic contribution to the nation's finances is growing year on year, fewer and fewer people across the country feel this benefits them.

The aim of regionally "levelling up" the national economy may be a laudable one – and could help London too. But the way many commentators talk about London – often treating it as a homogenous, rich region – is inaccurate. When the current Prime Minister's chief adviser told representatives of the national media, "You guys should get out of London. Go and talk to people who are not rich Remainers",¹⁰⁸ he perhaps forgot London's high poverty rate, and that it is home to 1.5 million Leave voters (twice as many as the North East). In reality, the vast majority of Londoners have no more influence over national decision making than their counterparts elsewhere in the UK.

This over-simplification can lead to less-affluent Londoners being neglected in the national discourse and in policymaking, actively harming the capital. London has borne a disproportionate 30 per cent of all government cuts over a decade of austerity.¹⁰⁹ The Stronger Towns Fund, announced to help "left-behind areas", excluded the capital's less affluent neighbourhoods entirely.¹¹⁰ It appears that the recipients of these funds were not all chosen on strict economic criteria.¹¹¹

Arguments over whether the capital gets more than its fair share of transport investment have surely played a part in London being expected to finance more and more of its own infrastructure. Transport for London has become "the only transport authority in the Western world" to receive no central government grant towards its operating costs – a situation that has left it critically exposed during the current pandemic.¹¹²

Investment across the towns, cities and regions of the UK is welcome: yet if it comes at the expense of growth-generating investment in the capital, the nation may have to find an alternative means of financing its public services. With central London's agglomeration-driven economy coming to a standstill with the advent of COVID-19, "levelling down" rather than up threatens to be an unintended outcome of the current situation.

In thinking about the future of London – and its relation to the UK as a whole – Londoners and policymakers might consider the following questions:

- Is there a London "problem" in UK politics? If so, what is the solution?
- How could the "levelling up" agenda be used to tackle London's challenges?
- What other issues are there in London's relationship with the UK?
- What might be the implications for London of constitutional changes to the rest of the UK – for example, Scottish independence?
- What could London learn, or emulate, from other parts of the UK?

6. London and the world



In the preceding chapters we have seen that London has been a global city for many centuries. Perhaps more than most cities, it has been open to and enriched by the many encounters that have resulted. This layering and co-existence of people, ideas and cultures is the essence of London today – and is reflected across its architecture, language, and identity.

The city's early success as a trade hub, as well as the seat of royal and subsequently state power, drove its growth. The Industrial Revolution and Britain's domination by force of other peoples and lands provided the fuel for London's confirmation as a global financial centre. But its genius sprang from the mingling of people of all stripes and nationalities in London's streets and coffee shops. It was here that new industries, particularly service industries such as insurance capital markets, were born. Powered by this innovative melting pot, London had become, by the middle of the 19th century, the pre-eminent city on the planet. But two world wars and the dismantling of the British Empire reduced the power and influence of both the UK and London. Between 1945 and 1991 London declined in both population and relative global importance.

In the 1990s, however, the end of the Cold War, the expansion and deepening of the European Union, and liberal reforms elsewhere led to period of rapid acceleration in trade and openness. Aided by domestic business deregulation, London rode this wave of globalisation and re-established itself as a global centre for capital and culture. London was reborn and rebadged as a “world city”.

London today is more integrated with the rest of the world than at any point in the past. New influences emerge and seep in faster than ever – and the ideas and creations of Londoners, in their turn, flow outwards and help shape the world of tomorrow.

What can city benchmarks tell us?

There are over 600 comparative city benchmark studies around the world, spanning objective performance indicators, composite analyses, and surveys. More ways to measure and compare cities exist than ever before, led by intergovernmental organisations, global companies, think tanks and new data providers. Benchmarks can do more than just provide an international perspective on how London is doing. They shape the intuitions and decisions of businesses and investors, and their public visibility means they inform the choices of a mobile workforce, as well as the appetites of global travellers and entrepreneurs. They also help to monitor comparative rates of progress, spot gaps, and check how the city brands fare against the “product”.

City benchmarking is an established practice but not an exact or agreed science. The coverage and robustness of existing city benchmarks varies greatly. Each has specific motives, methodological strengths and shortcomings. There are still gaps in terms of the transparency of data, and many benchmarks have been weighted more towards the priorities of mobile and high-income populations than of long-term residents. But benchmarks have become more balanced in recent years. They now offer more coverage of the needs of residents, entrepreneurs and small business – and they are more eager to compare the “real” metropolitan city rather than just the high-profile activity inside city centres.

London's global standing today

Overall, and despite Brexit and COVID-19, London is still the world's number one city across the full set of performance and perception measures used to compare cities. London is open to talent, attractive to investors, rich in high-growth and high-value businesses, improving its infrastructure, staging inspiring global events and wielding its “soft power” across the globe.¹¹⁴

Since 2016, London's accumulated advantages mean it is still in the top tier of established world cities. But competition is growing from more places, and in more ways. London's global standing has been pulled down by doubts about the city's future business environment, affordability, resilience, and the strength of the "social contract" between citizens, business and government.

COVID-19 also appears to be altering the equation of what the world looks for in a successful city, and how cities are appraised and compared. There is renewed attention on the leading cities' public health systems, their economic and fiscal agility, and the competence and consistency of national government support. London's enduring fundamentals and mature specialisations continue to shine through in the global benchmarks, but new strategies and interventions may be needed to re-establish momentum in London's competitive performance, and to improve perceptions at home and abroad.

London's competition

The competition London faces from other cities is growing over time. While few cities can easily acquire the range of assets of London, New York or Tokyo, many are proving capable of competing with London in specific areas.

In 2020, London faces international competition from many types of city (see Figure 15), including:

- **Strongly established global cities** which compete with London across the spectrum (e.g. New York, Paris, Singapore).
- **Capitals of emerging economies**, which compete with London in certain traded sectors that rely on infrastructure as well as favourable tax and regulation conditions (e.g. Guangzhou, Istanbul, Mexico City).
- **Newly globalising or re-globalising** medium-sized cities that possess high-quality systems and services, innovation and brand advantages; that compete on quality of life, public health standards, or niche specialisation in advanced industries (e.g. Austin, Melbourne, Zurich).

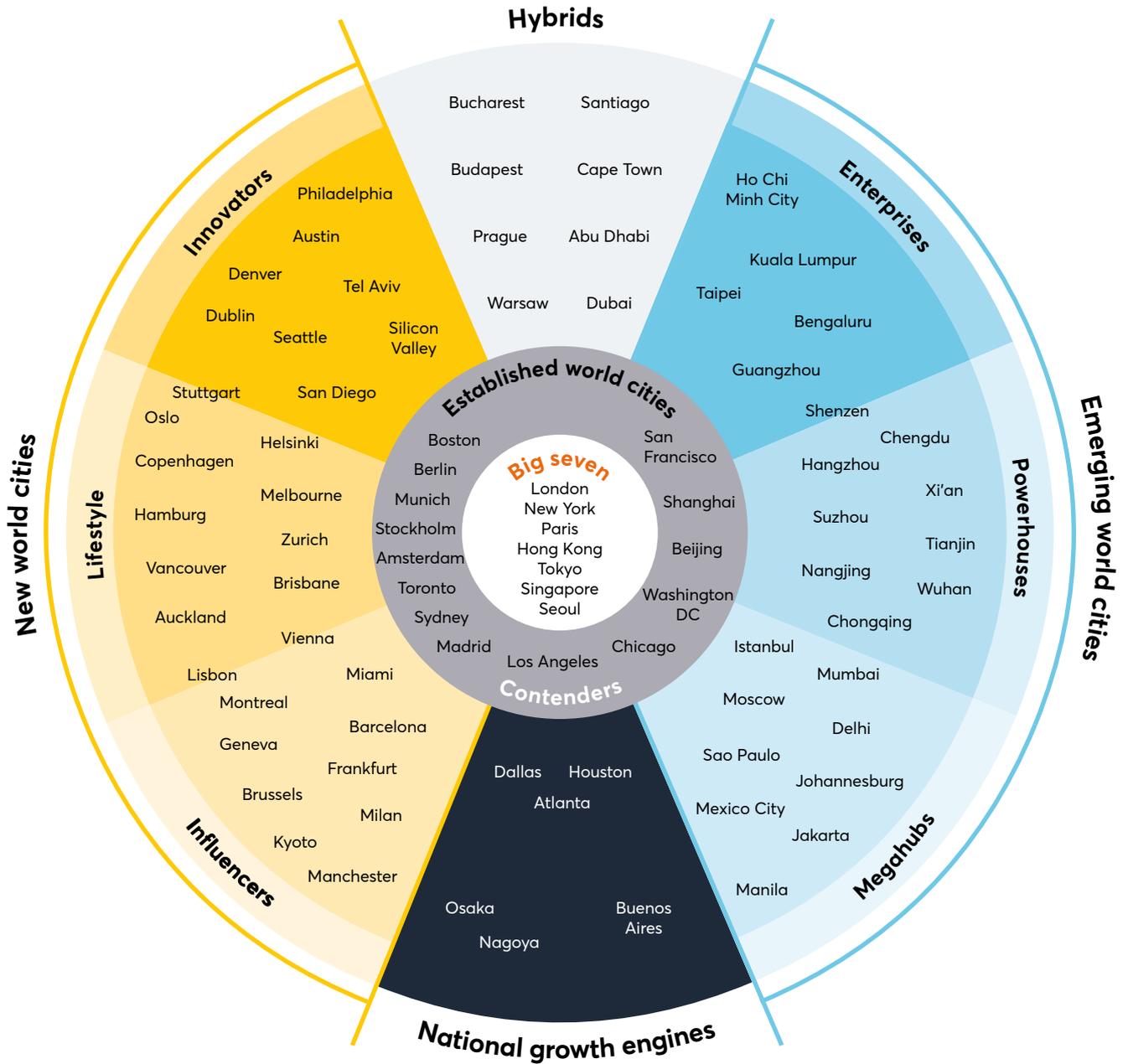
How has London's competition changed in the last 10 years?

- In 2008, London was one of 19 highly globalised (Alpha) world cities with a critical mass of globally networked companies in advanced knowledge services. Today, there are 33 such cities.¹¹⁵
- 10 years ago, London was one of just four global financial centres with the assets to gain an aggregate rating of over 700 points in the major measure of sentiment among financial specialists. Today it is one of 28 such centres.¹¹⁶
- In 2005-07, London was one of just five cities outside the U.S. to absorb more than \$300 million of venture capital investment annually into its growth firms. In the same period ten years later, it was one of 35 such cities.¹¹⁷

London's performance in depth

Across the major benchmarks and throughout the first half of 2020, London has been ahead of its competitors for investment attraction, cultural vibrancy, visitor appeal, talent base, and innovation (see Figure 16). The city has consistently attracted the highest number of new job-creating investments,¹¹⁸ and continues to rank in the top two financial centres globally by overall performance and perception. It has pulled away from other European rivals for its start-up ecosystem value and success rates,¹¹⁹ and is reliably rated the top choice of European start-up founders.¹²⁰ London's appeal to international students remains highly resilient,¹²¹ and on softer measures such as the transparency of its real estate sector, the city's regulatory, legal and governance regime is still viewed as a major advantage to the agility and sustainability of key markets.¹²²

Figure 15: A global typology of cities' competitive position in 2020, based on global benchmark performance



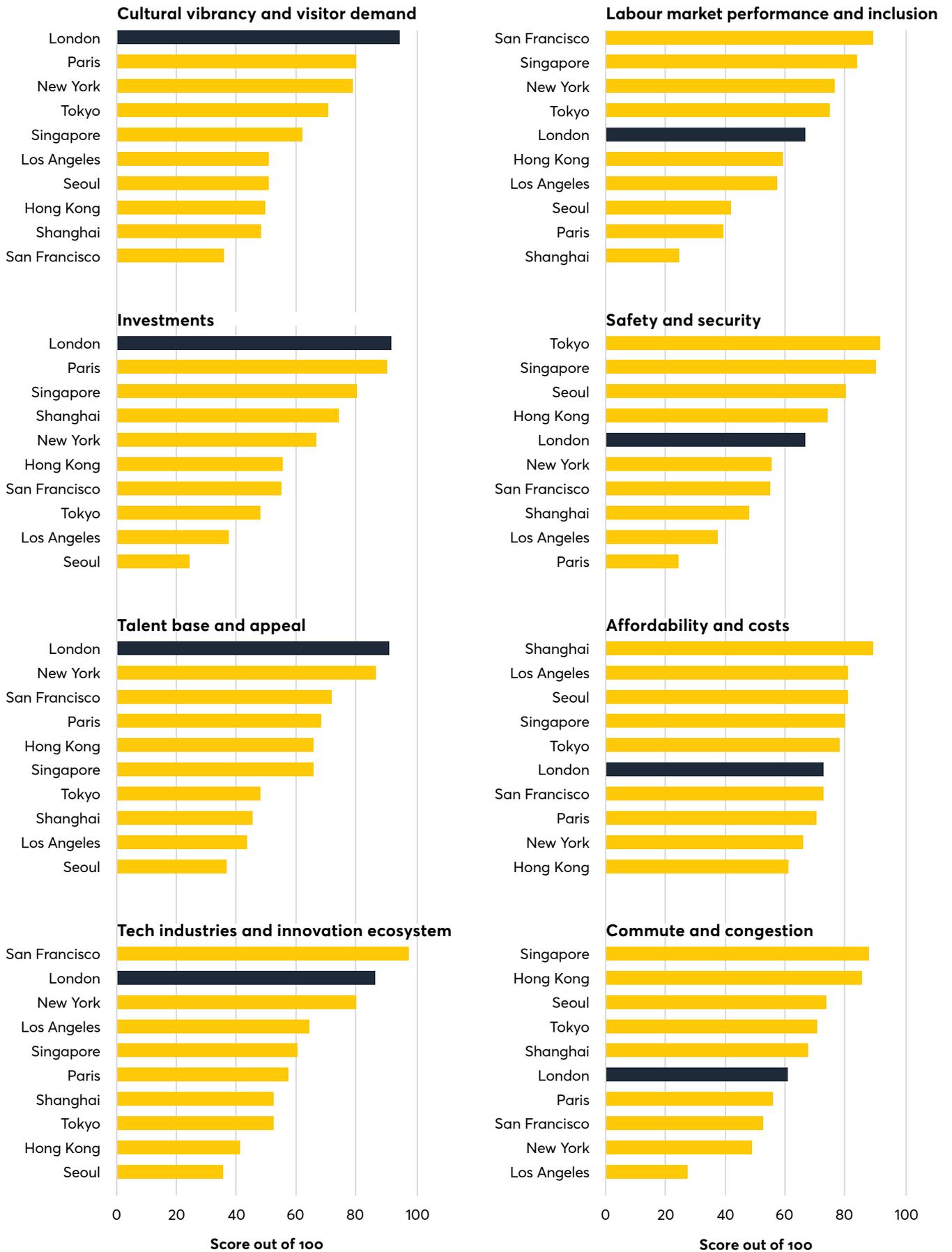
Source: JLL and The Business of Cities, 2019

These business and industry advantages also extend to other segments; the latest figures suggest that up until the coronavirus pandemic it was the third most popular visitor destination globally,¹²³ and the world's most highly rated cultural, culinary and entertainment scene. For the first time in seven years, London came top of the largest survey of global citizens on which city they most admired and trusted.¹²⁴

Brand success liveability and sustainability gaps

Nonetheless, London has simultaneously been falling behind the world's top cities for liveability fundamentals (see Table 5 and Figure 16). Among its peer group of global top 10 cities by overall performance, and assessing all major measures, London now places only fifth for unemployment and labour market participation (pre-COVID-19), fifth for safety and security, sixth for all-round affordability, and sixth for commuting and congestion.

Figure 16: London's strengths and weaknesses relative to the global top 10, across all benchmarks



Source: The Business of Cities Research (based on Elo algorithm that computes cities' scores across all benchmarks). For sources and measures imputed in each theme, see Appendix.

Table 5: London's scores in recent influential benchmarks, relative to other established world cities

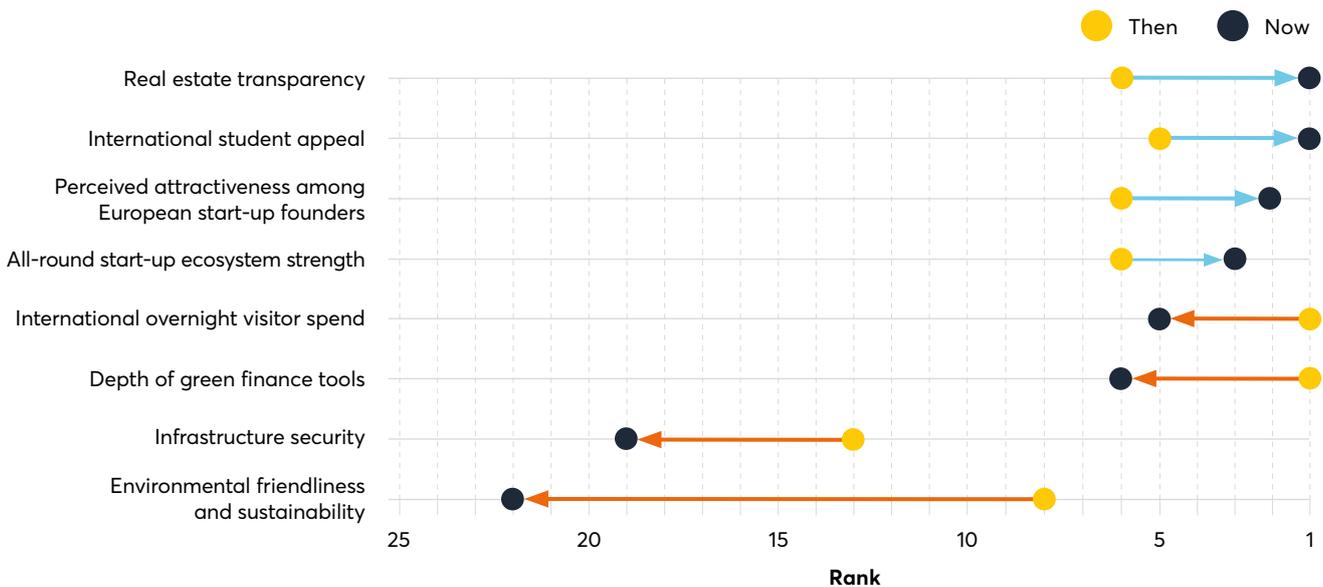
 Top performing city  Bottom performing city

Theme	Finance & investment		Innovation & economy		Brand & appeal		Liveability & affordability		Sustainability & environment	
Focus	Perception and performance of financial sector	Real estate investment volume, diversity or investor base and no. of Forbes 2000 HQs	Size, scale and growth trajectory of start-up ecosystem	FDI investment in high-tech industries attraction of venture capital, R&D expenditure and no. of patent applications	No. of international overnight tourist arrivals	Cities' share of total online mentions relating to cities	Cost of living for a basket of goods for ordinary residents	Citizens' reported levels of happiness 2014-2018	Average annual exposure to air pollution (1 st = lowest)	Green coverage, green space distribution and vegetation health
Last updated	Mar - 20	Mar - 20	Jun - 20	Aug - 19	Dec - 19	Dec - 19	Nov - 19	Mar - 20	May - 20	Sep - 20
# of cities assessed	102	174	900+	109	100	250	105	186	500	98
London	2	2	3	5	3	3	72	36	80	42
New York	1	1	2	8	8	2	104	30	125	80
Paris	15	3	12	7	6	4	95	43	54	84
Singapore	5	10	26	3	5	18	50	49	239	51
Tokyo	3	37	16	2	17	1	80	79	260	82
Seoul	33	-	21	10	24	9	46	83	441	64
Hong Kong	6	5	36	94	1	13	55	114	330	18
San Francisco	8	10	1	1	72	28	91	-	80	85
Los Angeles	10	16	5	12	29	15	98	31	188	90
Shanghai	4	4	10	11	30	23	42	84	430	26
Toronto	23	26	24	17	53	22	90	13	54	33
Chicago	16	9	13	26	>100	14	92	25	141	74
Beijing	7	6	6	4	58	19	35	134	472	4
Berlin	-	-	8	18	41	17	49	-	141	23
Amsterdam	27	25	20	19	25	30	71	-	54	57
Sydney	20	8	31	16	55	36	102	20	108	77
Munich	37	-	38	13	56	57	60	-	108	-
Madrid	43	12	35	40	47	5	58	48	125	66
Boston	25	16	4	9	>100	26	68	23	141	65
Washington DC	24	7	30	33	>100	82	88	18	160	24
Stockholm	28	-	29	20	88	79	63	9	160	25
Study	Z-Yen Global Financial Centres Index	Knight Frank Wealth Report City Wealth Index (Investment)	StartupBling Cities Ranking	JLL Innovation Geographies 2019: Innovation Hubs	Euromonitor Top City Destination Rankings	ING Media Top Cities for Digital Rankings	Lee Kuan Yew School Cost of Living for Ordinary Residents	UN World Happiness Cities Ranking	Plume Labs Annual Average Air Quality Index	Husqvarna Satellite Image Urban Green Space Index

Results from individual benchmarks illustrate some of London’s weaknesses and show that some are becoming more of a concern over time. Among its 10-city peer group, individual data points show that London:

- Has been overtaken by others (19th, down from 13th in 2017)¹²⁵ in the safety and security of its “infrastructure platform” (including road safety, pedestrian friendliness and disaster management).
- Is among the 15 per cent most congested cities among 417 cities globally, and now higher than the average among top global peers.¹²⁶
- Has fallen from 8th to 22nd since 2016 for environmental credentials, as more attention shifts globally to climate change progress and air pollution.¹²⁷
- Has been overtaken by others for availability and deployment of green finance tools (6th, down from 1st in 2018).¹²⁸
- Is 98th among 121 cities for student affordability, more expensive than other top global cities,¹²⁹ and currently has the highest construction costs (100th of 100 cities globally).¹³⁰
- Is 9th among the top 10 global cities for perceived safety (268th among 374 cities globally).¹³¹

Figure 17: Change in London’s scores in a sample of benchmarks in recent years



Sources (from top to bottom): JLL (2016, 2018), QS (2015, 2019), Startup Heatmap Europe (2016, 2019), Startup Genome (2015, 2020), Mastercard (2014, 2019), Z/Yen (2018, 2020), Economist Intelligence Unit (2017, 2019), Mori Memorial Foundation (2016, 2019). (See appendix for full definitions of measures imputed).

These findings highlight two trends. First, that several other leading cities have been more successful recently in visibly tackling environmental challenges. Second, London’s rate of progress on affordability, congestion, air quality and inclusive labour markets has been weak. Lack of progress in these areas damages London’s appeal.

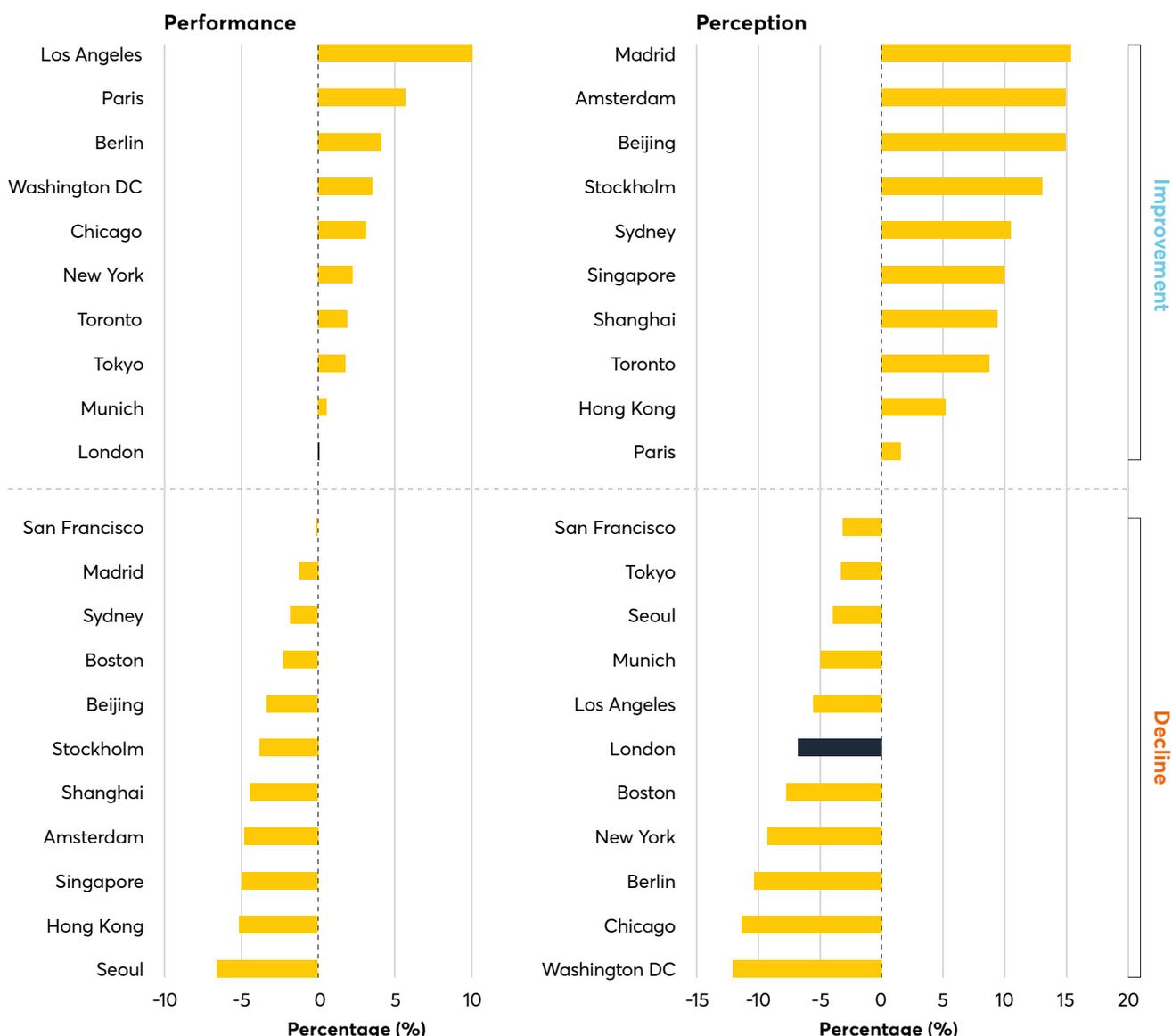
Perceptions and confidence

The last five years have seen perceptions of London become more changeable and start to diverge by audience type. Since 2016, among the wider group of 20 Established World Cities, London's aggregate perception score declined by around seven per cent – while other cities such as Beijing, Amsterdam, Singapore and Stockholm all saw relative perception improvements (see Figure 18).

Across all studies of citizen and global audience perceptions, London has declined from being the most highly regarded Established World City five years ago to the 5th most highly regarded in 2019-20. This is because there is now more attention placed upon cities':

- Family friendliness (on which London is ranked 105th out of 150 cities globally).¹³²
- Happiness and wellbeing (where London is ranked 36th out of 186).¹³³
- Neighbourhood child safety (ranked 30th out of 150).¹³⁴

Figure 18: Change in London's aggregate score across a selection of the most robust performance benchmarks and perception studies relative to other 'Established World Cities', 2014-15 to 2019-20

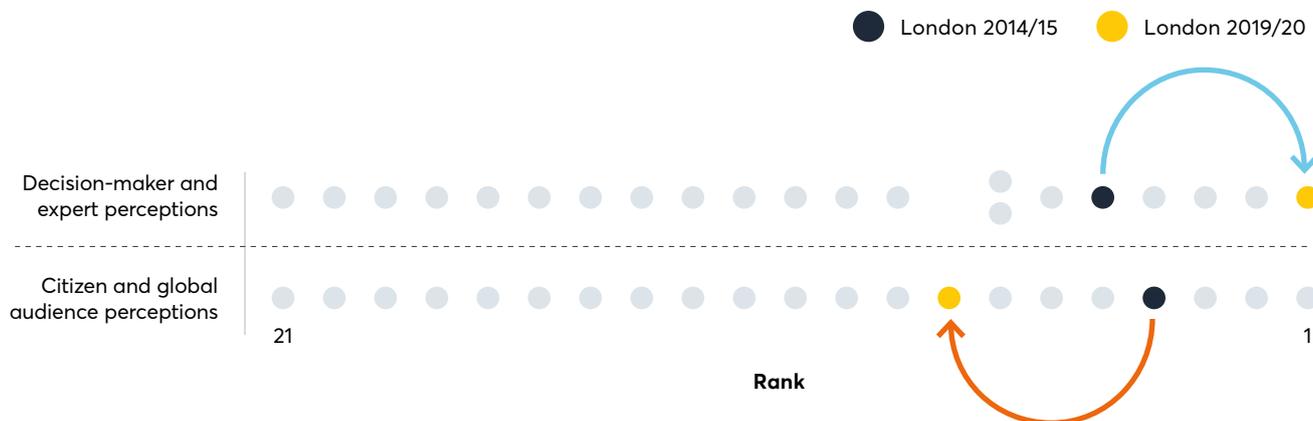


Source: The Business of Cities. Based on an Elo algorithm which computes cities' aggregate score (relative to 100%), across all benchmarks. See appendix for full explanation of the algorithm.¹³⁵

At the same time, however, perceptions of London among decision makers, executives, founders and international commentators have improved. Across studies polling these audiences, London has emerged as the top-rated city on aggregate amongst the 20 Established World Cities (see Figure 19).¹³⁶

For local residents, workers and occasional visitors, however, expectations of London have risen and experiences have fallen short.

Figure 19: London's aggregate position among the 'Established World Cities' across all studies of decision-maker and expert perceptions and perceptions of citizens and the general global public, 2014/15 and 2019/20



Source: The Business of Cities Research (based on Elo algorithm that computes cities' aggregate scores across all benchmarks). See Appendix for list of measures imputed.

Looking ahead: The competitive landscape after COVID-19

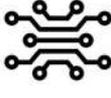
COVID-19 is bound to alter how cities are judged and compared. Studies are already starting to place more weight on remote working flexibility, public health, decarbonisation, social inclusion and integration, mobility options, future skills and advanced technology platforms.

London shows promise in terms of measures that track the growth of the green economy (where London is 1st among the global top 10), ingredients for accommodating remote working (1st), and specialisation and adoption of new technologies (3rd).

On the other hand, COVID-19 is also focusing attention on how well cities are making tangible steps towards inclusive growth, fairer gender outcomes, citizen engagement, cybersecurity, privacy protection, and confidence in healthcare provision. These are areas where London is viewed as falling behind many of the leading global cities (see Table 6), and where smaller cities are making headway – which may give them an advantage if industries and talent begin to look at a wider range of location options in future.

Overall, even as benchmarks evolve to respond to the reframing required by COVID-19, it seems likely that London will remain in the global top tier, because the combination of assets it possesses are not easy to replicate. These include super-agglomeration, deep talent pools, institutional functions and relationships, established leadership in finance, media and higher education, diversified technology strengths, and a record of openness to ideas and population.

Table 6: Areas likely to become more important in shaping how cities are judged as a result of Covid-19, and London's aggregate position across the benchmarks, relative to the global top 10

Opportunities	 Track record of decarbonisation	 Appetite and ingredients for remote working	 Brand and visibility	 Appetite to integrate next generation technology
Aggregate position among top 10 Aggregate score (max = 100)	1 st 98	1 st 93	2 nd 90	3 rd 87
Threats	 Inclusive growth and gender equality	 Citizen participation and engagement	 Health security and healthcare satisfaction	 Data analytics, cybersecurity and privacy
Aggregate position among top 10 Aggregate score (max = 100)	=5 th 75	6 th 72	6 th 57	9 th 52

Source: The Business of Cities Research (based on Elo algorithm that computes cities' aggregate scores across all benchmarks). For measures imputed, see Appendix 1.

It is also clear, however, that there are now many more “doubts” about London reflected in these studies. These include new sources of competition, the implementation of Brexit and future trade dynamics, exposed cultural assets and lifestyle propositions due to COVID-19, and intensified concerns around unaffordability, social polarisation and isolation. There are also a range of questions that we need to consider for the future, such as:

- What more could be done to improve London's reputation globally?
- How important, relative to other priorities, is London being open to the world in terms of labour, capital and ideas?
- Is the global elite's view of London more important than that held by regular citizens across the world? If so, why?
- How might we capitalise on Brexit for London, and reduce its downsides?
- Is liveability, decarbonisation or something else the most important thing for London's leaders to prioritise in the competition for global talent?



A superblock in Poblenou, Barcelona

A cyclist in Paris



Case studies

Case study 1: Barcelona: A city of superblocks

Like many cities, Barcelona has been faced with issues relating to pollution, congestion, and lack of green space. In response, the city has launched several innovative initiatives.

Since 2016, Barcelona has developed the “superblock” concept – three by three zones in the street grid within which traffic is reduced close to zero. A single lane is designated for cars at the perimeter of the blocks, while the rest of the space (formerly designated to cars) is allocated to pedestrians, giving them precedence on the city’s streets. The first superblock was introduced in 2016 in Poblenou, in the north of the city, and superblocks have now been rolled out in six locations.

Although only a handful of superblocks have been set up, there is scope for expansion. There were 503 potential superblocks outlined in the initial plan, and a recent study by the Barcelona Institute for Global Health suggests that if superblocks were created in all 503 locations, ambient levels of nitrogen dioxide could be reduced by 24 per cent, life expectancies could be increased, and premature deaths could be reduced by around 660 a year.¹³⁷

However, there is opposition to superblocks in the city. There are concerns about the impact on car owners and businesses, and about access for emergency services vehicles, as well as the risk of gentrification in superblock areas. However, in areas like Poblenou, which have experienced the benefits of the scheme, opposition has largely faded away. Expansion may be taking place slowly and cautiously, but superblocks have great potential to improve wellbeing and quality of life. While the designers acknowledge that Barcelona’s pre-existing grid system is an advantage, they argue that this concept is still replicable in cities without this design.

Case study 2: Paris: A green manifesto for the city

Paris Mayor Ann Hidalgo was re-elected for a second term in office after running on a green manifesto that placed ecology at the heart of city policy and put forward several policies to boost environmental and social sustainability. These policies include barring diesel vehicles from Paris’ beltway by 2024, cutting the city’s parking spaces in half,¹³⁸ and creating what Mayor Hidalgo calls a “15-minute city” – something that has garnered international interest from both urbanists and policymakers.

As part of the 15-minute city concept, all Parisians should be able to meet their essential needs – like shopping, health, work and culture – within a short walk or bicycle ride. This would create a series of more self-sufficient neighbourhoods and mark a departure from the postwar dominance of the car in planning and policy. To make this leap, the city will have to use a type of “anti-zoning” planning system that focuses on mixing as many functions as possible in one space.

While this idea of a hyper-local development model is not new (there are similar models in cities like Melbourne, Copenhagen and Utrecht), it would be a groundbreaking step in a city the size of Paris – the centre of which is home to 2.2 million people.¹³⁹ As a dense city which already has substantial amounts of mixed use, Paris does have a head start – but there is certainly scope for other global cities to take note and learn.

Part 2: London futures

In the preceding chapters we have described the key features of London’s evolution over the last three decades, including:

- London’s population changes and demographic dynamics;
- The key trends in the economy of the capital;
- Changes in London’s places and environment;
- The key institutions serving London;
- The main features of London’s relationship with the rest of the UK;
- How London is seen internationally, and what it might mean for London’s future.

Our survey of London’s recent past highlighted a number of areas in which real progress has been made, as well as some where fundamental problems have not been addressed. Before we look to the potential futures of London, the two tables below summarise in a broad sweep the various achievements and areas for improvement we have surveyed.

Figure 20: London since 1991—what went well

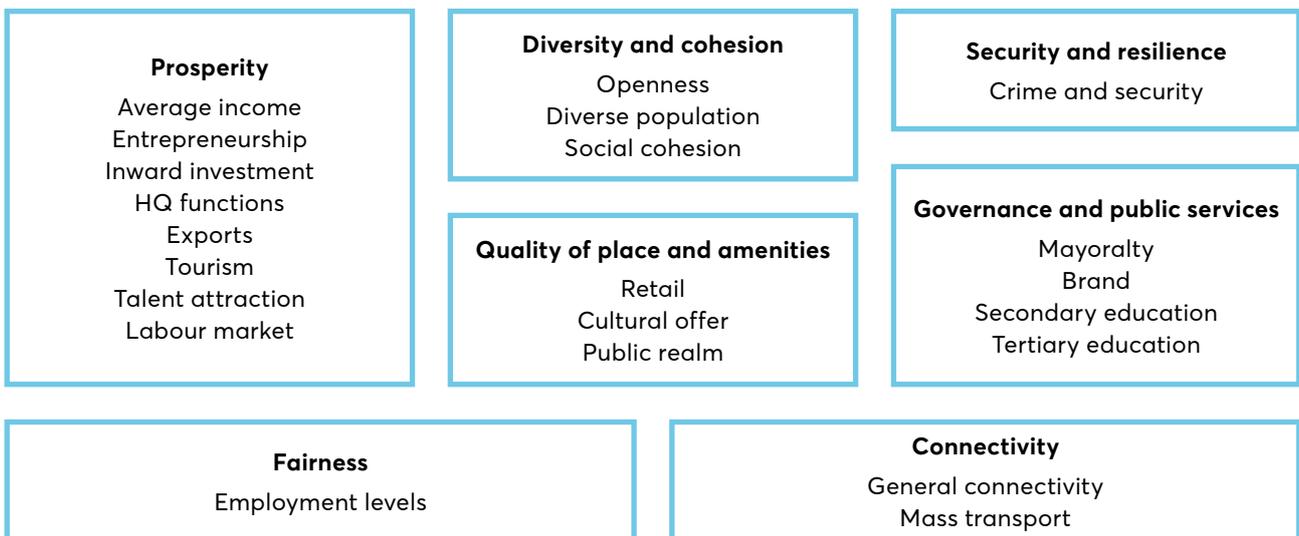
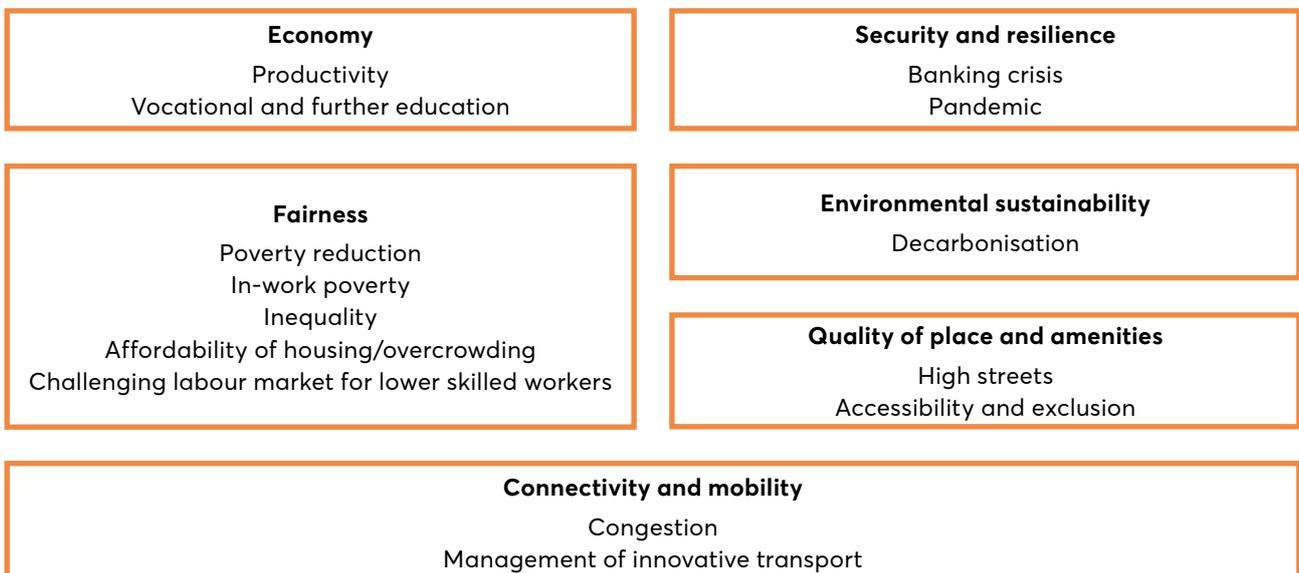


Figure 21: London since 1991—what went less well



In Part 2 we look towards the future. We explore some major forces shaping the world and consider their impact on our city. We also highlight some tensions and possible trade-offs amongst priorities for London. Finally, we consider some possible scenarios for the next phase of London's development – to foster debate and help us achieve a glimpse of what the future might look like.

7. Major forces shaping our world



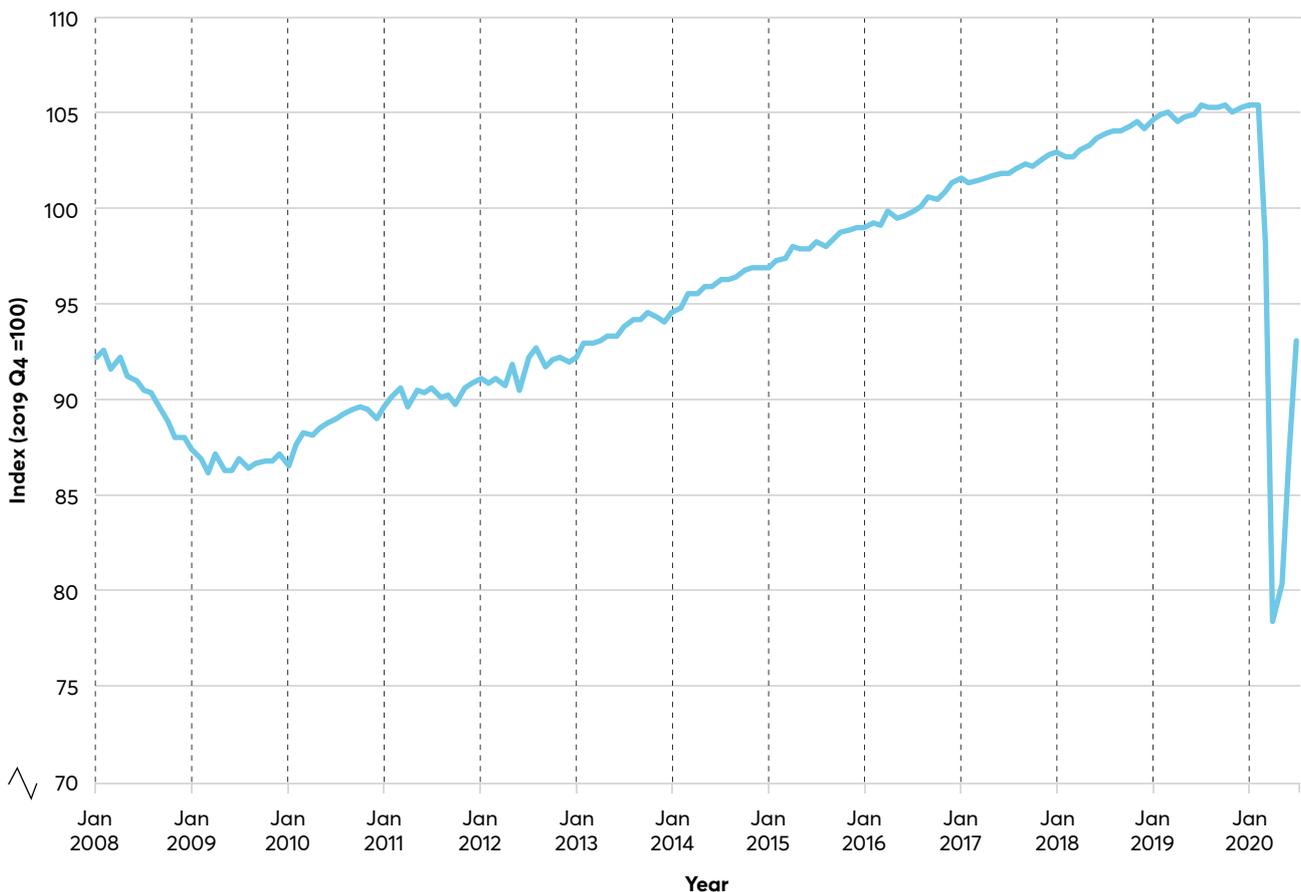
Today's world is changing, perhaps faster than ever. Global warming, urbanisation, digitalisation, pandemic: many forces extrinsic to London and the UK will combine to profoundly influence London's future. In this chapter we explore six of the biggest factors shaping our world – all of which intersect in ways that are as yet little understood.

The recovery from COVID-19

At the time of writing, August 2020, global deaths from COVID-19 stand at over 780,000. No fully tested vaccines or effective therapies yet exist. Until they do, the virus will continue to affect the daily lives of billions of people whilst governments, businesses and families struggle to manage the impact of the worst contagion for a century. How the world will recover, and how fast it will do so, is still difficult to judge. But it looks probable that the impact on our lives and the economy will be felt for years. It will mark, and perhaps scar, a generation.

Our closest (or at least most recent) reference point is the chaos and stagnation caused by the financial crisis of 2007/08, from which in some respects (for example ultra-low interest rates) we have yet to fully emerge. This suggests the timeframe for full recovery could be five or perhaps ten years.

Figure 22: UK GDP growth, Q1 (Jan - Mar 2005) to Q2 (Apr - June 2020)



Source: ONS

Beyond the immediate health crisis, profound impacts of the pandemic are already being felt. Many sectors of the UK economy have entered freefall. Some, such as hospitality and entertainment, should re-emerge fully once the deep-freeze effect of COVID-19 is finally banished. For others, however, the outlook is graver. The airline industry has been dealt a blow from which it may never fully recover, as it now tries to manage the combined pressures

of viral infection, global economic crash, and climate change goals. Some aspects of the retail sector also risk being permanently altered.

The crisis has also accelerated more benign changes that could have lasting positive benefits. Many workers and employers have discovered that remote online working is both possible and productive. Similar accelerations of previously existing trends are happening in retail, food, education, entertainment and personal services. Online personal services, digital-only conferences, and remote healthcare have moved from the margins to the mainstream. Walking and leisure cycling have had a heyday, with increasing uptake of both. Community support groups have flourished and may leave a legacy of greater cohesion and civic responsibility.

Businesses and other organisations are now likely to invest more in preparing for future epidemics. Efficiencies and personal freedoms could be sacrificed in the name of resilience. “Just in time” supply chains – the dominant logistics ethos of recent decades – could change to a more “just in case” approach. So too the public sector and NGOs. Scaled up, this could damage productivity and stoke the fires of economic nationalism, with more industries designated “strategic”, and national capacity built to withstand future shocks.

Climate change goals

The second major force that will shape our future is climate change, and the goals the international community has set to tackle it. That human activity is warming our planet to dangerous levels is well beyond reasonable doubt. International agreements now provide the bedrock on which to build national and local efforts to decarbonise. The Paris Agreement of 2015 – to limit warming to within two degrees Celsius above pre-industrial levels – was reflected in the UK parliament’s decision to declare a climate emergency in 2019 and embed a net-zero target for 2050. These provided ample impetus for accelerating progress towards removing all but the most stubborn elements of greenhouse gas emissions from our daily lives.

Or so it seemed – before COVID-19 struck. The shutdown of much of normal life in response to the pandemic has led to a dramatic temporary reduction in greenhouse gas (GHG) emissions, projected to be eight per cent down year-on-year. By coincidence, this is about level of annual reductions in GHGs needed every year until 2030 to meet targets.¹⁴⁰ Having revealed the dramatic extent of the annual changes in GHGs required, the pandemic paradoxically now risks distracting us from those emissions reduction targets – as well as showing how challenging they would be to achieve simply through economic constraint. Positive, radical measures to decarbonise human activities are still needed urgently.

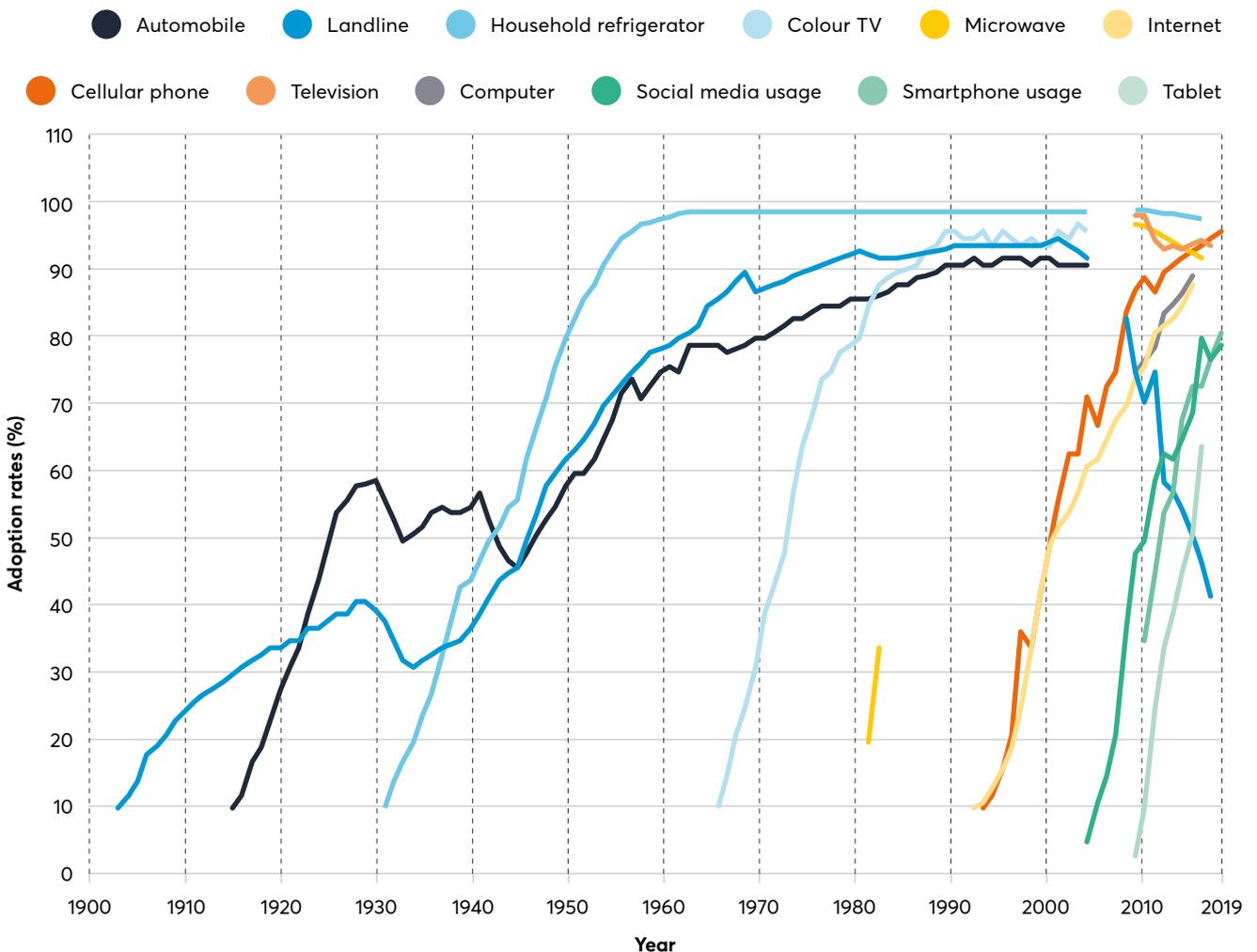
If this happens, major changes will occur in economies. Fossil fuel energy firms could be replaced by renewable energy companies. Hydrogen could become a viable part of the power mix. Consumer and regulatory pressure could put more focus on carbon emissions across whole product and service lifecycles. Firms that find ways of embracing circular economy principles, reducing emissions and waste, could thrive. Emissions control, permits, trading and accounting could flourish. In short, energy transition opportunities for governments and companies will proliferate, as will challenges for “legacy” companies tied to carbon-intensive technology. Financing the next green revolution will itself occupy much of the attention of governments as well as that of capital and debt markets, and, of course, will compete with other political and fiscal priorities.

Disruptive technologies and services

The third major force for change in the world is the accelerated pace of change and innovation in technologies and services. This matters in view of the potential level of disruption it can bring to previously settled economic,

social and political spheres. Only 20 years ago, the original dotcom boom (and subsequent crash) seemed to foreshadow a world where the promise of new technologies perpetually over-sold their benefits and transformative power, particularly in the case of internet-based products. Today that view looks quaint and myopic. Now, significant sectors of the economy are created and transacted exclusively online, from video games to banking. Many of the world's most valuable and influential companies are internet-era "natives" like Amazon, Facebook and Google. And across industries the rate of change stimulated by new technology looks to be quickening – although, as we have seen, links to economic output and productivity may be weak and the gains may not be spread widely. Some call this “the great acceleration”.¹⁴¹ Technology-led disruption as a phenomenon is becoming better understood too, and is increasingly targeted by startups, investors and even policymakers.

Figure 23: Technology adoption rates, measured as the percentage of households in the United States using a particular technology



Source: Comin and Hobijn (2004) and others.

Technology continues to promise extraordinary improvements in people's lives. Technological breakthroughs can upend relationships (for example, ride hailing apps), deliver a step change in costs (photovoltaic cells) and demand (smart phones), remove intermediaries (travel websites), or automate previously labour-intensive tasks (washing machines, tractors). Incumbents suffer, consumers can reap benefits, and power may be redistributed. Technological advances can also lead to even greater concentrations of market power.

Artificial intelligence (AI) and other advanced technologies could transform industries and society at large. Some worry that AI in particular will lead to a new wave of human redundancy as machines start to better people at tasks – especially in service industries that were previously considered far too complex for machines. Human ingenuity and adaption in the face of prior threats from “replacement” technologies from the plough onwards, however, might suggest otherwise – although any transition may have uneven impacts, be difficult for low-paid and low-status workers, and make a case for better training or improved welfare measures.

Regardless of how this argument resolves, cities cannot afford to be complacent, especially in an age of virally induced disruption. New products and services can help to improve cities; fast-moving cities may benefit more and thereby become cradles for tomorrow’s successful companies.

Nationalism and populism resurgent

Our fourth major force has many faces. Together, loosely connected, they represent a general shift against globalisation and a rise in populist sentiment. Open borders, especially for capital and tradeable goods and services, dominated and drove the decades of globalisation following the fall of the Berlin Wall, as well as the expansion and deepening of the European Union. Reforms in Asia too unlocked a new round of increasingly globally connected development. Flows of people were also significant, especially amongst the highly educated, as well as the poorest and most desperate. Within the EU, transnational freedom of movement was legally enshrined, and elsewhere, it often occurred despite the law. Opportunities drove migration amongst elites, while conflicts in West Asia and North Africa pushed people of humbler means beyond their frontiers in search of more secure lives. Many headed to central and western Europe.

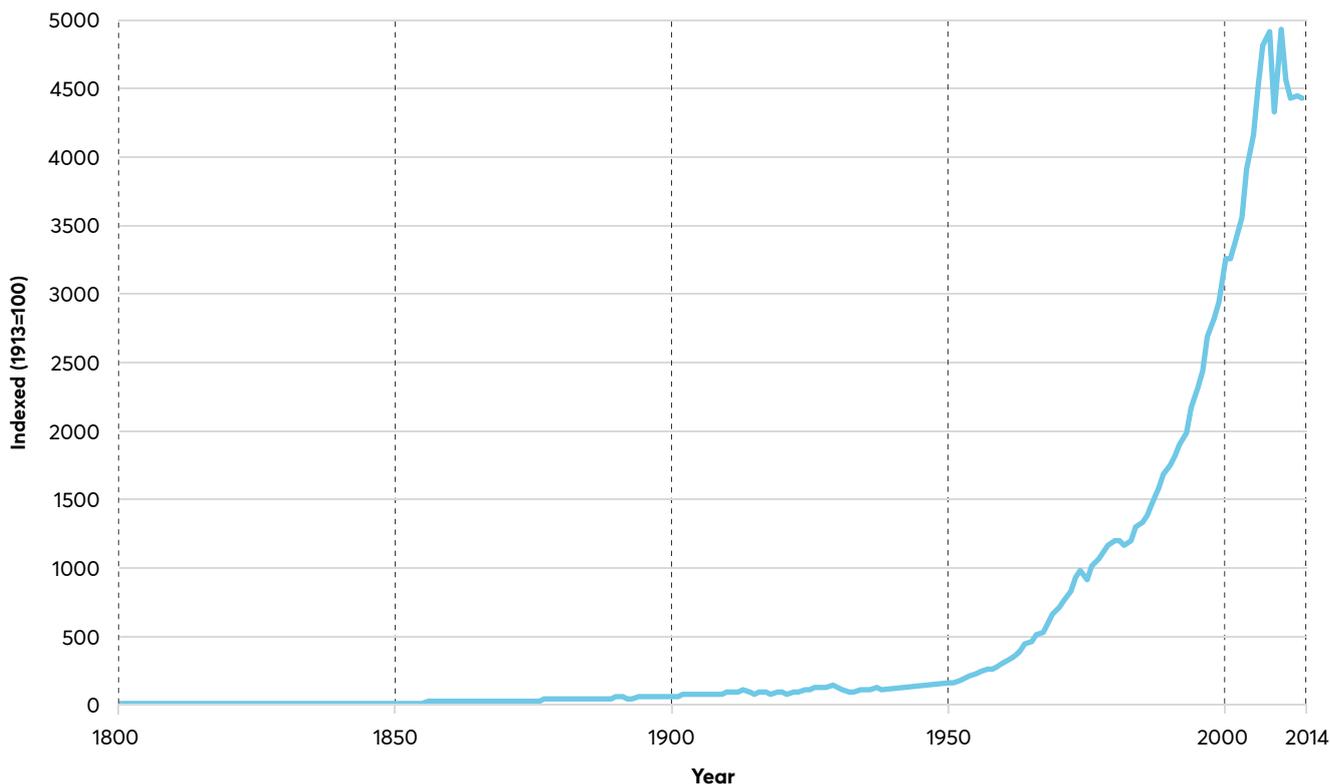
Within the EU territorial expansion went hand in hand with increasing integration. Both moved at pace, especially following the end of the Cold War. By 2013 there were 28 member states, more than double the number when the UK had joined the (then) European Economic Community in 1973. Integration took the form of a single market, the creation of a European currency and central bank, and a free travel area. The UK joined only the first of these, reluctant to relinquish sovereignty.

Globalisation, and far freer flows of capital across national boundaries, played a role in the greatest shock to the global economy in the 30 years leading up to 2020. The 2007/8 banking crisis, provoked by a credit boom and bust, evolved into a full-blown crisis of the global financial system. This, in turn, led to a decade of economic woes across much of the developed world. Contrary to many expectations, mass unemployment did not follow. Instead, companies and workers adapted, shortening hours or cutting take-home pay. Wages stagnated or declined in real terms for many over this period: the boom years were over. Stagnation led to a crisis in the eurozone, which played out in slow motion over years, with a focus on Greece.

Almost in split-screen, the migrant crisis came to a head. Images of desperate migrants arriving by boat to a continent seemingly locked in an existential crisis of its own making were hard to process and fully understand.

The seeds of a retreat from openness and globalisation were sown. The impact manifested differently across nations. Nationalist-leaning administrations took power in many major states, including the USA, India and Turkey. Trade disputes grew, and global trade stopped expanding for the first time since the 1970s. In the UK in 2016 a vote was held on EU membership, which was won by the “leavers” – and Brexit changed from fringe obsession to a destiny-altering national decision.

Figure 24: The value of global exports



Source: Federico, Giovanni and Antonio Tena-Junguito (2016 b). 'A tale of two globalizations: gains from trade and openness 1800-2010'. London, Centre for Economic Policy Research

The rise of Asia

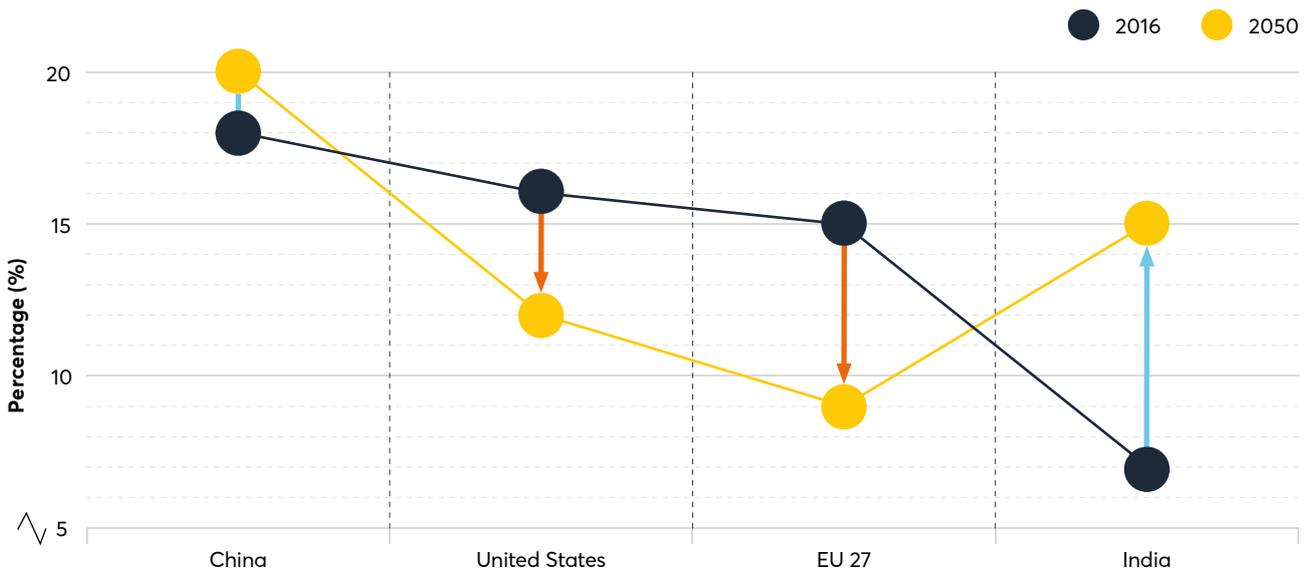
This leads us to the fifth major force shaping the world, the continued rise of Asia. The post-war world up to 1990 had witnessed some extraordinary national economic successes. The reconstruction of Germany and Japan was remarkable to the extent that, by the end of this period, they were the second and third largest economies in the world. The economies of some smaller Asian states or regions – South Korea, Taiwan, Singapore, Hong Kong – had also grown fast.

The next phase of global development, however, was dominated by the rise of two new economic superpowers – China and India. Together, they hold around a quarter of the world's population. Home to ancient civilisations, the Chinese and Indian economies had in recent centuries been relatively low-performing, but 30 years ago their economic output started to accelerate. In 1980 China accounted for less than two per cent of the global economy, but subsequent reforms turbocharged its growth. By 2050 it is projected that China will produce 20 per cent of world output. But openness in its economy, albeit with plenty of state-based strings attached, has not been reflected in liberalisation of its politics – and political tensions with the US and other western countries rose sharply in 2020.

In contrast, India's opening economically was delivered by democratic governments. Though smaller than China's at present, its economy looks likely to generate 15 per cent of global output by 2050. It is an extraordinary change, and one which has lifted hundreds of millions out of poverty. Recent shifts in India towards nationalism, however, could threaten its liberal democratic model. Looking at the developed and emerging Asian economies and their trajectories, many now speak of the 21st century as "the Asian century". And of the seven global megacities (see Chapter 6), four are Asian.

Today Asia's middle class totals two billion people, 54 per cent of the global total. By 2030 it will be 3.5 billion strong (65 per cent of the total).¹⁴² These changes are likely to have continuing and profound impacts on global consumption, production and supply chains, geopolitics, exchange rates, world culture, climate and far more besides.

Figure 25: Share of world GDP (Purchasing Power Parity) from 2016 to 2050



Source: IMF for 2016 estimates, PwC analysis for projections to 2050

Living longer

Our final megatrend is that we, as a species, are getting older. Today nine per cent of the global population is over 65. By 2050 that figure will have grown to 17 per cent. This is a trend that has been accelerating in recent decades.

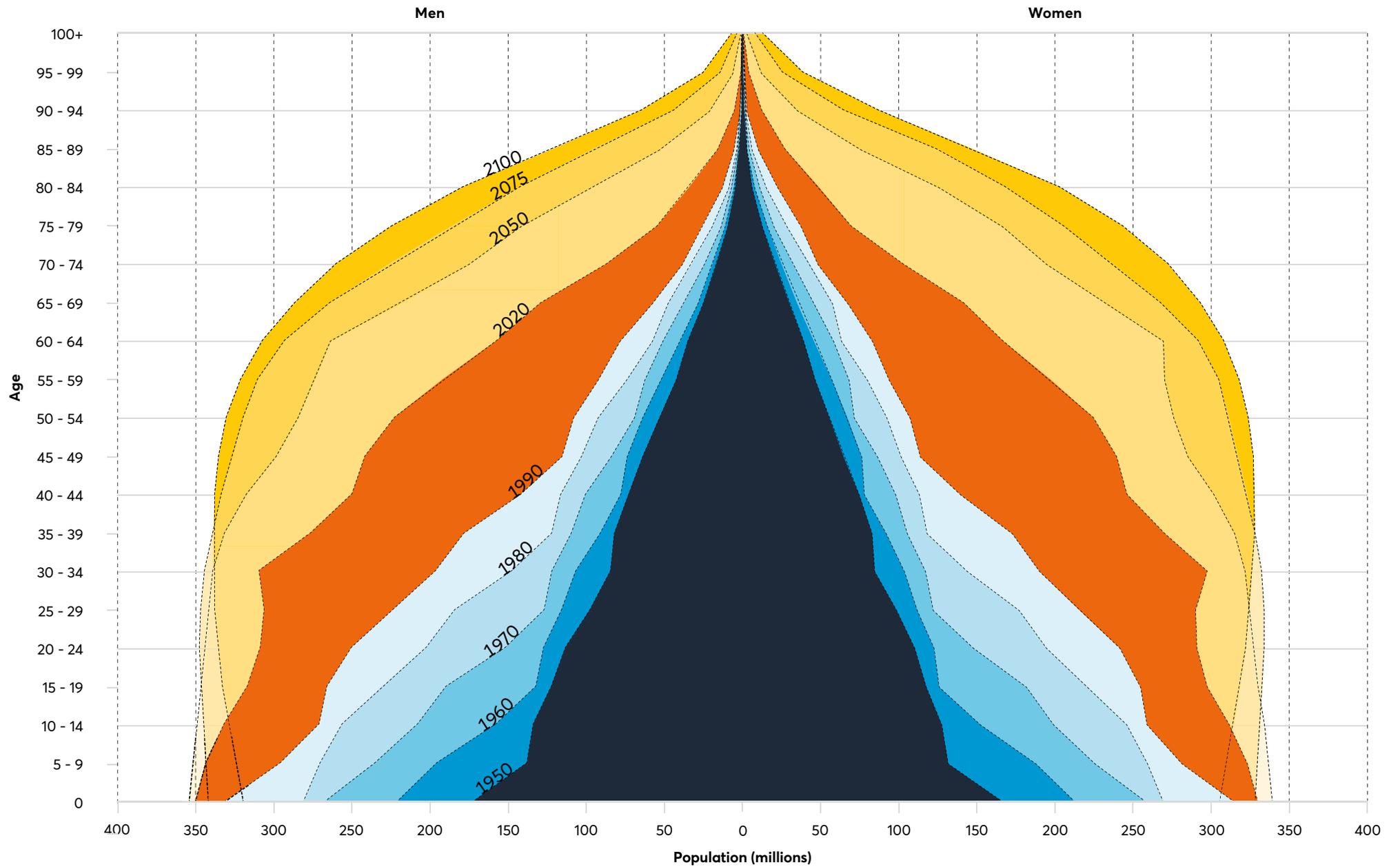
This change is driven by two principal factors – low (and declining) birth rates, and longer life expectancy. The rule of thumb replacement birth rate for a population is around 2.1 births per woman. Any lower than this and a population will shrink, unless the shortfall is made up in net inward migration. In Italy and Spain the birth rate stands at 1.34 today, and could drop further. In the UK it is 1.79.

Rising prosperity, advances in disease prevention and treatment, and other improvements in healthcare have led to life expectancies rising across the world (though with some notable exceptions in sub-Saharan Africa in the decade from 1988,¹⁴³ and more recently in the USA).¹⁴⁴ Combine these two broad trends, and the causes of acceleration in ageing across entire populations are clear. Though there is much to celebrate here for individuals, families and communities, the wider implications give pause for thought.

An older population will challenge the very fabric of our physical environment, as the demand for homes and public spaces adjusts. The world of work will adapt too. Older workers will expect more opportunities as well as safeguards – though the *quid pro quo* is likely to be later retirements. Demand for healthcare, and care in general, will grow as more people have prolonged final chapters of their lives. This will impact the labour market: it could create new and rewarding opportunities, or draw skills and resources from other sectors. New markets in products and services targeted at the elderly will emerge – from financial instruments such as equity release mortgages, to assisted mobility vehicles and technologies. Politics, already hugely shaped by generational interests (especially in the UK), could evolve to see specific representation for the retired or elderly. In cities, where the contest for space is already sharp, older people could become an influential and perhaps even dominant force. If – and it is a big if – they prove to be more socially conservative than younger voters, this could affect how social policy change and the use of space evolves.

Overall, the rising elderly population should be welcomed as a sign of improved life expectancies. But adapting to its consequences should be at the centre of our considerations about the future. Meeting the needs of older populations will have consequences for how we meet the interests of the young – for whom, it could be said, the future counts more.

Figure 26: The demography of the world population from 1950 to 2100



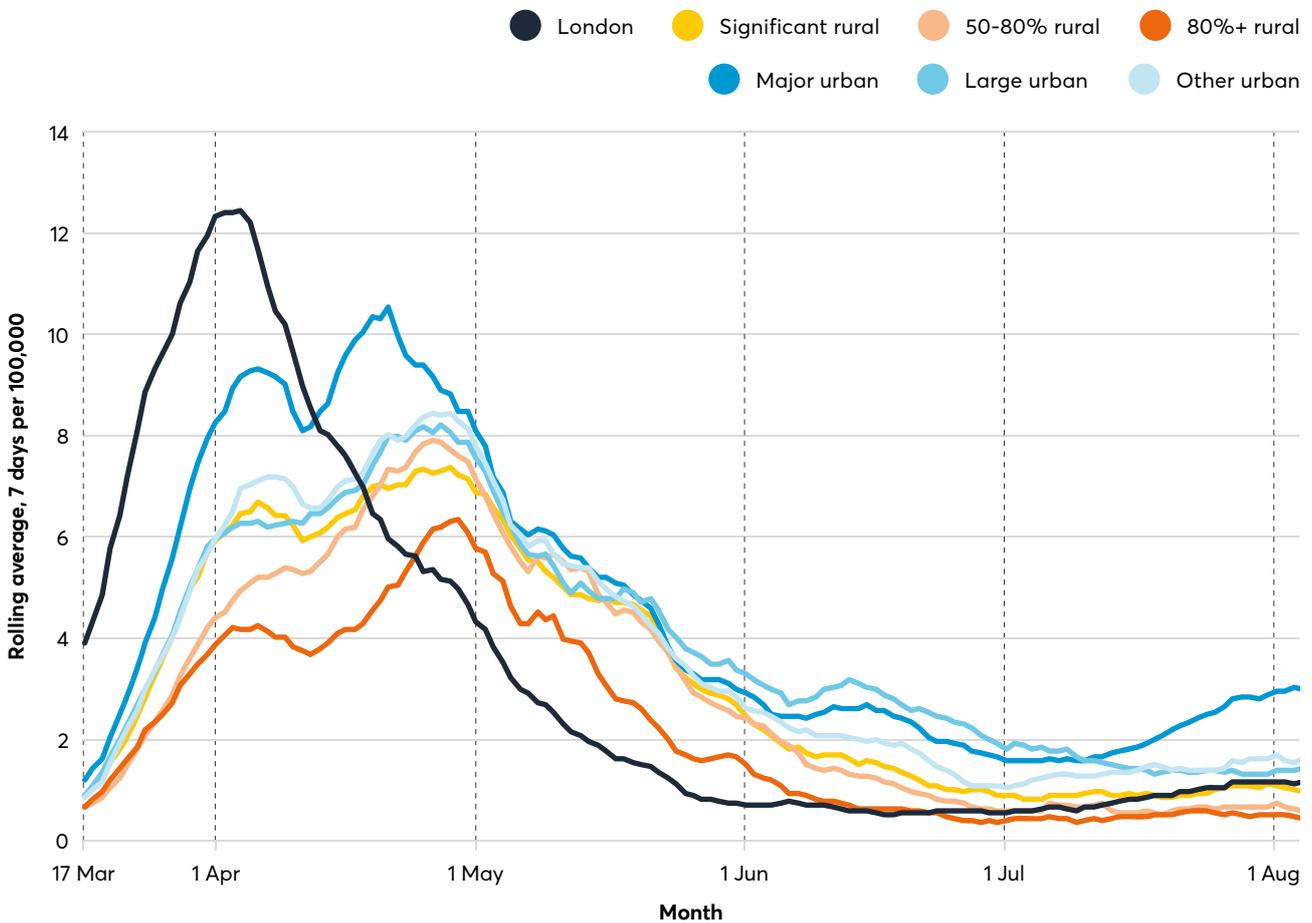
Source: United Nations, Department of Economic and Social Affairs, Population Division (2019). World Population Prospects 2019, custom data acquired via website.

The impact on London

Having surveyed the landscape of major global forces shaping tomorrow's world, here we start to consider their impact on London. With the possible exception of COVID-19, none of the factors identified have an unambiguously positive or negative effect, though several challenge any assumption that London can continue with "business as usual".

It looks likely that coronavirus crisis will amplify London's challenges, and so slow or reverse its development. In London, the virus arrived early, and hit hard. At the time of writing, over 7,000 Londoners have died. London has the highest proportion of deaths from COVID-19 (compared to other deaths) of all UK regions.¹⁴⁵ The London NHS could take years to return to a normal footing as it copes with its backlog. Yet the economic impact has been no less severe. London, in some ways, locked down harder than other areas, partly because of its high level of service economy jobs, and its extensive public transport network, from which all but essential workers were effectively barred. This, in turn, shut down swathes of London's economy.

Figure 27: New COVID-19 cases per 100,000 people, by metropolitan area in the UK



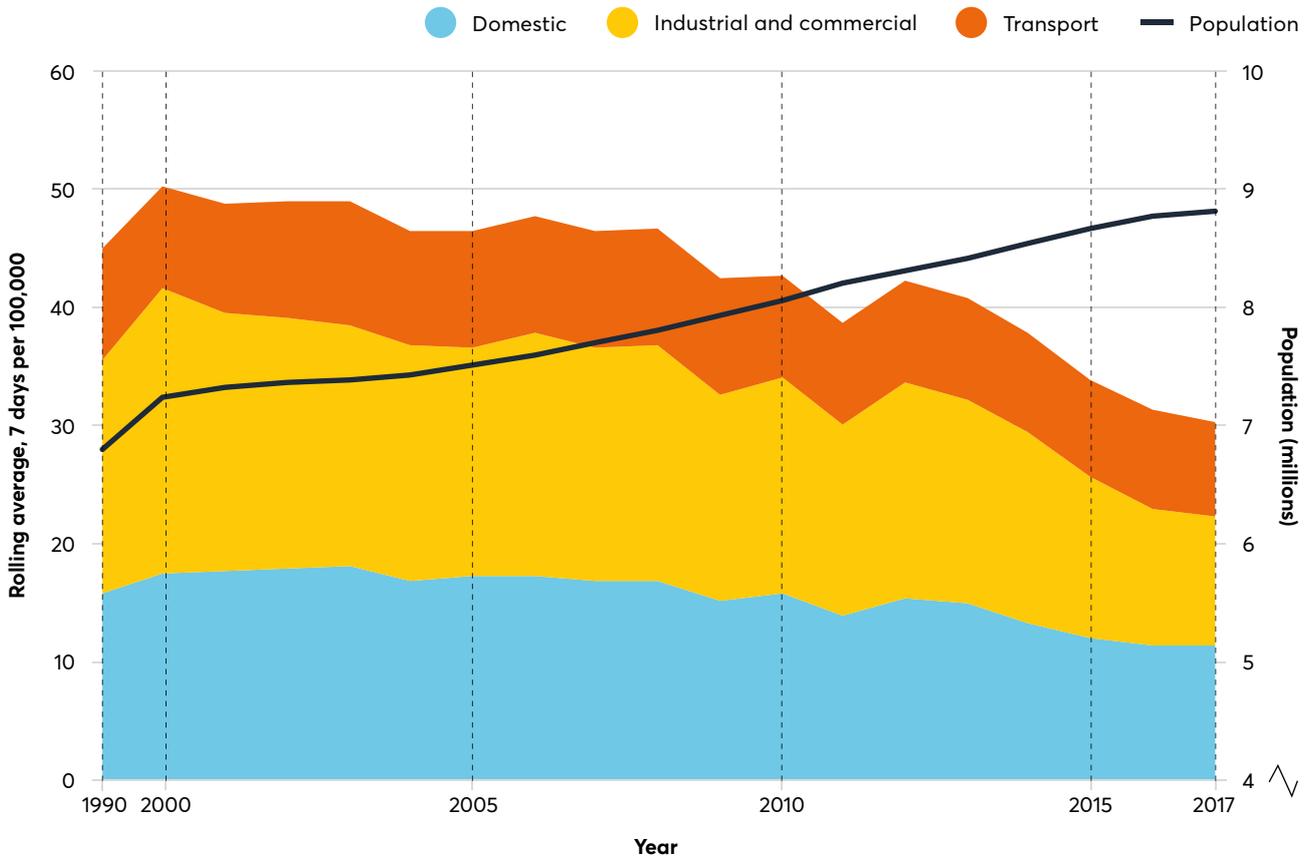
Source: Public Health England

Central London was particularly badly hit as domestic and international visitors all but disappeared. What sort of city will emerge from this trauma is hard to predict, but some of its contours are appearing. Rapid and massive government spending looks likely to have ameliorated the worst of the supply-side and demand-side impacts. Nevertheless, the UK economy looks likely to suffer amongst the worst contractions in the G7. Unemployment is still set to rise sharply as some business sectors continue to implode. Incomes may follow the pattern of the previous crisis and take a generation to recover. Some sectors are suffering severe convulsions, even complete collapse. The persistence of these disruptions sector by sector remains hard to discern. But those that depend on visitors, on nightlife, on air travel, or even on central London being busy could suffer the most.

The crisis has exacerbated human fragilities in London, laying bare and even heightening some social tensions. The political consequences of the pandemic look likely to be profound and far-reaching – on unemployment, on central London’s visitor economy, and on climate action. The disproportionate effect of the pandemic on BAME Londoners was one of many issues raised in London’s Black Lives Matter protests: other social movements may go on to make related points.

London has been resilient to other economic shocks, but the long-term impacts of COVID-19 – both as a trigger for and an accelerator of change – could strike deeper at the foundations of the city’s success. How will the global city model of economic development change in terms of international migration, travel and trade? And how will a highly globalised city like London adapt to a changing paradigm?

Figure 28: London GHG emissions trajectory to zero carbon



Source: London Environment Strategy, Greater London Authority, 2018

As we highlighted earlier, the overall level of GHG emissions in London today, and their current trajectory, are incompatible with declared targets (see Figure 28). Although the energy production sector, largely outside London yet serving it, has made great strides in decarbonisation, the same cannot be said of many other key components of the London economy. As we have seen, transport and heating are among the worst performing aspects of the city. London’s current mayor has committed London to a target of net-zero by 2030, and most boroughs have joined him in declaring a climate emergency. But to get anywhere close to net-zero by 2030, radical measures are rapidly needed.

Efforts to decarbonise can appear at odds with efforts to reflate the economy, at least in the short-to-medium term. But opportunities in the wider energy transition abound. While London strives to meet this extremely challenging schedule, the rest of the world will also be responding to climate

change. There are opportunities here for London and its businesses, from financial services to urban engineering and tech. London has an imperative not just to decarbonise, but also to facilitate and prosper from global efforts to transform in the teeth of the climate emergency.

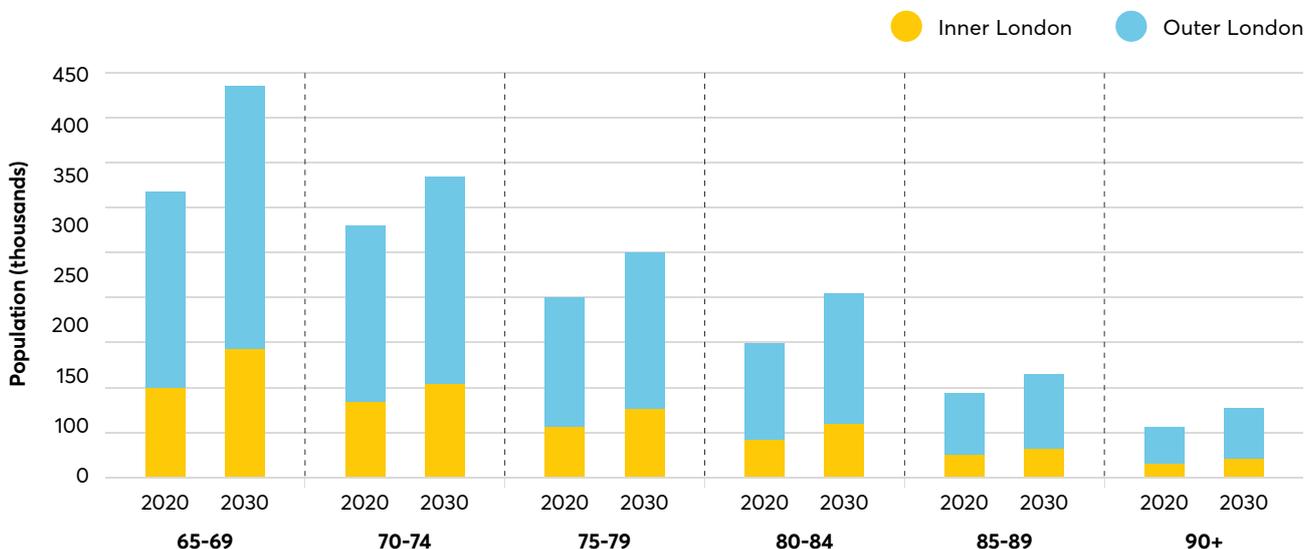
The impact of nationalism and populism on global prosperity, incomes and wellbeing may be negative. This is more likely in a globally connected city like London. It has been a pole of attraction, culturally liberal, with good universities, English-speaking, and free of the many constraints other countries place on incoming talent and wealth. Many migrants chose London as their target destination, despite the UK being outside the EU's Schengen free movement zone. Despite firmly rejecting leaving the EU itself, London now looks set to suffer a double economic hit¹⁴⁶ from the impacts of COVID-19 and a nationalism-inflected exit from the EU.

Conversely, the potential of disruptive technologies and services looks largely positive, despite the “techlash” that has grown in some quarters. Overall, new technologies and services continue to benefit London. A keen understanding of the risks and perils – alongside effective democratic structures – is helping keep at bay some of the less desirable innovations, such as public AI-driven facial recognition as seen in some Chinese cities. Even in a COVID-19-dampened environment, the competition for global talent remains vigorous: London needs to continue to attract the brightest and best, including the innovators themselves.

The upsides of Asia's rising prominence in world affairs and the global economy may well outweigh its threats. The potential benefits include a wide-ranging set of opportunities for new cultural links, trade, knowledge exchange and innovation, and a growing demand for some of the financial, business and leisure services that London offers. London, with its global reach, soft power, internationally respected legal frameworks and strategic location, could be well placed to take advantage – though global and national politics may complicate relationships.

Projections show that the proportion of over-65s in the UK will rise from less than one-fifth today to a quarter of the population by 2050.¹⁴⁷ Despite its youthful zest, London will not be immune to ageing: the number of Londoners aged 65 and over is forecast to rise by 30 per cent by 2030.¹⁴⁸ This growth of life experience and wisdom amongst the capital's citizens will have many positive features. But care must be taken to ensure sufficient and appropriate housing, make public spaces work, improve London's care and healthcare services, safeguard against growing generational gaps in wealth, and foster democratic engagement among Londoners of every age.

Figure 29: Population aged 65+ living in London 2020 and 2030 (projected)



Source: POPPI, data downloaded on 10/03/20 11:22 from poppi.org.uk, version 12.1

Case studies

Case study 3: Tokyo: Tackling housing shortages

Despite the housing crisis facing many cities, Japan has a strong record for delivering affordable housing, even in cities with high levels of economic growth.¹⁴⁹ But unlike many countries that are successfully delivering affordable housing, Japan does not have a large social housing sector. Indeed, fewer than five per cent of homes across Japan are social rented, compared to 17 per cent in the UK.¹⁵⁰

Instead, the supply of housing in Japanese cities is highly responsive to local demand. For instance, Tokyo has added roughly 62,000 homes a year since 2013, compared to 30-40,000 a year in London over the same period. While these homes tend to be smaller, new supply in Tokyo is responsive to higher demand for smaller one-bedroom flats for single people, meaning that per person, the average Tokyo resident is likely to have more space.¹⁵¹

Underpinning this responsive supply of affordable housing is a simple planning system that allows by-right development (rather than requiring planning permission for every individual site). There are 12 zones defined according to maximum nuisance level, and within these bounds nearly anything can be built: for instance, a hotel can be converted into housing quite easily.

However, the UK and Japan have some fundamental differences in how they think about the value and purpose of home ownership. Unlike the UK, property is not viewed as a store of wealth for the Japanese middle classes; Japanese homes tend to have a shorter shelf life (due to earthquake proofing)¹⁵² and most fall in value year by year.¹⁵³ This removes some of the opposition to housebuilding by those who own homes in a given area. While there are differences in the relationship between people and their homes, there are still lessons to be learned from the way that Japanese cities approach affordable housing.

Case study 4: Medellín: Leading the way in public ownership of utilities

Empresas Públicas de Medellín (EPM) is a Colombian utility provider (water, gas, electricity and telecommunications) operating in the Medellín and the Aburrá Valle.¹⁵⁴ What is notable about this company is that it is owned by the Municipality of Medellín. While this type of corporatisation (the conversion of government-operated utilities to arm's-length corporations of public or mixed public-private ownership) is often viewed as improving efficiency, there are debates about how far this model has a positive impact on access to (and quality of) services.

However, EPM has received wide recognition for its efficiency and quality of operations, with good financial results, high quality of services, a high credit rating and a commitment to improving quality of life for those it serves.¹⁵⁵ Established in 1955, EPM seeks to understand the local population and tailor its services to groups with different needs. For instance, there are programs to offer long-term credit at low rates for those with no access to it, as well as long-term repayment and reconnection plans for those who have had their contracts terminated.¹⁵⁶

Ultimately, the success of EPM has contributed to Medellín's renowned urban renewal, going from the world's murder capital in 1991 to what some now call a "model city".¹⁵⁷ This profitable energy company hands over some \$450 million a year for development projects,¹⁵⁸ which have (alongside other factors) helped improve quality of life for the very poorest Medellín. Of course, the city has not eradicated all its problems – but quality of life and access to essential services have been drastically improved for the most disadvantaged residents.

Case study 5: Wales: Wellbeing at the heart of policy

The Well-being of Future Generations (Wales) Act 2015 gives all public organisations in Wales the legal obligation to put sustainable development at the heart of policy. The aim is to ensure that all public organisations take into account the long-term effects of any decisions they make, enabling them to tackle the biggest issues (like poverty and air pollution) in a way that goes beyond party politics and electoral cycles.

Local authorities must now make a wellbeing plan and work towards the seven wellbeing goals laid out by the Welsh government: prosperity, resilience, greater equality, health, community cohesion, vibrant culture and language, and global responsibility. In practice this means that if, for example, a public body is working to attract a new company to an area, they must take into account how this will affect factors like health and the environment – not just job creation.

Despite these ambitions, there have been critiques of the Act's effectiveness. In a 2018 review of its progress, the Wales Audit Office (Audit Wales) noted that, although there were examples of public bodies working differently, there was a need to match enthusiasm with action and to ensure

that actions were being taken in a systematic way.¹⁵⁹ Others have also argued that the Act “lacks teeth”: for instance, the Future Generations Commissioner (who monitors this work) can review decisions made under the Act, but has no power to overturn them.¹⁶⁰

However, the Act has established some clear wins. For instance, controversial plans to build a new M4 Relief Road were rejected in 2019¹⁶¹ after the evidence on the economic and environmental impacts of the project demonstrated that it was at odds with the principles of the Act.



© National Assembly for Wales

Senedd Cymru in Cardiff, Wales

A one-bedroom apartment in Shibuya, Tokyo



© Joseph Albanese

8. Challenges, trade-offs and future scenarios



Figure 30: Key challenges for London



Tensions and trade-offs

Understanding where London is today helps us explore what futures might be possible. But future-gazing is difficult. Often aspects appear fixed that are not, or we fail to see constraints and challenges to come. Our foresight is flawed, at best.

As we have seen in our examination of London’s present and future, tensions abound, and Figure 30 shows many of the challenges ahead. There are no neat fixes available, nor easy equations to lean on to resolve these tensions. Choices will be needed to be made across competing priorities.

We have already seen how the urgency of the response to COVID-19 risks slowing action on other pressing challenges, not least the climate emergency and preparations for Brexit.

Such trade-offs are a necessary feature of politics. They may, as in the case of climate action or inequality, be softened, or even reversed over time. But in the short-to-medium term hard trade-offs are a political reality. Devoting more city space to buses takes it away from cars. More focus on neighbourhoods means less on the city centre. Reforms to institutions absorb valuable political and law-making time but may bear rich fruit in the future.

Not all areas are at odds, however, and there are huge potential complementarities across some aspects of city life. For instance, active modes of travel such as cycling can reduce car use and therefore also congestion, air pollution and the cost of transport (personal and public) – in addition to improving wellbeing. Few solutions have such wide benefits, but many address a number of the tensions and challenges set out here.

Future scenarios

To help us explore these trade-offs, tensions and complementarities – and therefore London's possible futures – we close our report with some illustrative scenarios. To be useful, scenarios need to provoke a debate yet also strike a balance between realism and challenge.¹⁶² Here we present five long-term scenarios, each broadly imaginable within 30 years or so. Each follows years of accumulated change pushing hard in a particular direction: none is perfect, and each is likely to entail what some will see as negative as well as positive consequences.

Given the very limited powers currently wielded by London government and local councils, some assumptions about additional enabling powers granted by the UK parliament have been made across each scenario. We have not painted the detail here of those powers. We have focused instead on what priorities for Londoners these scenarios reflect, as well as key policies and changes. In doing so, we hope to trace out where some of the complementarities and trade-offs might arise.

Each scenario prioritises two largely complementary attributes or values of city life as set out earlier. For example, we have combined security and resilience with health, and created a scenario that plausibly explores what London might be possible with a strong emphasis on these issues. Our aim is to bring to life some of the choices and tensions we have laid out in the preceding sections – while illustrating how profoundly some of the choices ahead might impact London.

Scenario 1: 15-minute London

Spurred by the home-working revolution of 2020, with its widespread revival of local shops, and the climate emergency, London's leaders back neighbourhoods and low-carbon living as the centrepiece of a green recovery. They commit to delivering net-zero greenhouse gas emissions a full 20 years ahead of national targets and plan accordingly. Bold targets are set for eliminating fossil fuels from London. The expected backlash fails to fully materialise as Londoners accept that the era of the combustion engine and the gas boiler is rapidly coming to an end. Energy efficiency measures are widely adopted too. Businesses and supply chains accelerate towards low-carbon alternatives. Air travel never recovers fully. Londoners give up their cars in droves, especially in inner London, as a London-wide road user charging scheme bites. They instead switch to the rehabilitated public transport network, bikes, e-bikes and a new generation of small, electric vehicles. Central London office life never returns to pre-coronavirus levels, and instead repopulates with residents. Across London, local groups increasingly take charge of housing homeless people, primary education, social care, and some aspects of healthcare.

Figure 31: How possible future London scenarios relate to the capital's challenges



Scenario 2: Londependence

Centuries of centralisation in UK government are reversed when a new cross-party consensus delivers unprecedented new powers to London as part of a new constitutional settlement. A new federal district helps to delineate national and London government more clearly. New tax powers are given to the GLA, as well as new responsibilities for health, housing, social care and even welfare. Boroughs flourish too as powers and revenue cascade down. A new Citizens' Assembly is established that advises and complements the formal London government bodies. Some government departments and functions exit the capital. Over time, new policies for London are trialled, tackling homelessness, housing affordability, inequality and competitiveness (including a fast-track London visa scheme for EU nationals). London takes full control on planning matters and fast-tracks new rules to allow development of new homes to London-specific standards.

Scenario 3: London MegaCapital

The “levelling up” agenda falls away and a new, muscular pro-London attitude emerges, driven by the need to raise tax revenues given the post-coronavirus fiscal strain. London reasserts its dominant position in the UK. Economic growth is pursued above other goals, with priority given to global connectivity. Air travel, despite carbon goals, is prioritised in the recovery. Business influence in running the capital's affairs grows, and new investments to foster innovation have some success. London's global business sectors build back strongly from the 2020 low point. “Brand London” is re-embraced as a core part of the post-EU “Global Britain” push for increased trade and tourism. London's startup scene also rebounds and becomes world-leading. Eventually Greater London's boundaries expand, taking in much of the remaining M25 territory. But some devolution is reversed: national government takes direct control of some areas and pushes the pace on housing development and other significant growth projects. Crossrail 2 is given the go-ahead to relieve congestion and overcrowding.

Scenario 4: Levelled Up London

The deep impacts of COVID-19 on London's most vulnerable citizens breed a new movement for a fairer capital. In 2023 London's Mayor, the boroughs and national government agree a new plan to make London fairer. New investments to protect London's most fragile people take shape. New laws create greater powers to requisition empty homes in order to house the most disadvantaged. Street homelessness is eliminated. A London Minimum Wage is launched. Public transport is made free to all, and radical schemes to address age-old inequalities are piloted, with the most successful scaled up. Parents, minorities, and the lower-skilled benefit. But new restrictions are placed on immigration into London, and business leaders' warnings of an exodus of commercial capital and talent go unheeded. Population growth reverses, and the economic output per capita grows only slowly. Nevertheless, Londoners become more equal in terms of income, wealth, rights and opportunities, and relative poverty drops abruptly, which is reflected in a new civic ethos across social groups.

Scenario 5: Safety First London

The “Great Pause” of 2020 and the subsequent recession leads to a new era of civic caution. Investment is switched towards public health, security and adapting to the warming climate. Epidemic control measures piloted during the first wave of COVID-19 develop into new and permanent features of city life. More is spent on ensuring a resilient economy and society. Security of food, medical supplies and biosecurity become paramount, alongside the control of citizens' movements and the monitoring of their health using new technologies. New “what-if” planning trumps efficiencies across the private and public sector. Economic output drops overall, but citizens' fears about new shocks are managed down successfully. London's flood defences and a new fund for cooling the city during heat spikes are the most popular policies of the 2032 mayoral election. A new 'moonshot' target to eradicate childhood obesity catches the imagination and shapes education, food policy and street design. Work starts on Thames Barrier II.

Figure 32: Key changes and impacts of possible future London scenarios

	15-minute London	Londependence	London MegaCapital	Levelled Up London	Safety First London
Priorities	Environmental sustainability Quality of place and amenities	Democracy Governance and public services Liberty	Prosperity Connectivity and mobility	Fairness Diversity and cohesion	Security and resilience Health
Key changes	Neighbourhoods and decarbonisation focus Burning fossil fuels banned by 2030 Car use restricted in inner London Road user charging expanded Community organisations coalesce into "parish" bodies, gaining power over planning, schools and more	London acquires major new powers to govern itself Some national government functions leave Could be part of federalised UK London government grows as national agencies are devolved e.g. NHS, welfare London Citizens' Assembly New London planning regime to deliver more London-appropriate homes	Maximising London's economic growth London's direct sphere of influence and power grows to wider south east Greater London boundary expands Capital retains and expands national and international power Pro-business deregulation Directed public investment stimulates innovation across key sectors, e.g. smarter, more efficient freight and logistics	Equality first Radical redistribution of wealth Empty homes requisitioned Income equalisation measures (e.g. London Minimum Wage, salary caps) Public services improved and free to all Public spaces opened up more and used by all	Security, health and resilience prioritised Primary healthcare and social care expanded Data-led policing and city management Mandatory citizen health monitoring Epidemic control measures Adaptation for warming and more extreme weather
Impact	Local amenities flourish Petrol/diesel cars and gas boilers eradicated Central business, shopping and entertainment district shrinks Traffic lower on main roads; journeys shorter, but more frequent Much less air travel and international trade	City Hall expanded Whitehall federal district / repurposed Increasingly tailored solutions to longstanding issues, e.g. homelessness, migration More London-specific taxes More affordable "London Standard" homes built	Incomes rise More concentration of economic activity in London Pressure on transport network Some devolution reversed Crossrail 2 goes ahead	Poverty reduced Inequalities between groups reduced Social mobility enhanced Street homelessness eradicated Business threatens exodus Population growth reverses	Limited aviation recovery Health improvements including dramatic drops in childhood obesity Future shocks mitigated Loss of privacy and liberty
Totemic project	Some airport capacity converted to solar energy farm	London visa scheme	London boundary expands, absorbing Epsom, Watford, Loughton and Dartford	Free public transport	Thames Barrier II
Net zero GHG by...	2030	2045	2075	2055	2050
Population by 2050	9 million	10 million	15 million	8 million	9 million
Role model cities	Oslo, Stockholm, Paris	New York, Sydney, Barcelona, Medellín	Beijing, Moscow, Singapore	Helsinki, Malmo, Trieste, Vienna, Luxembourg	Singapore, Beijing

Get involved



Improving a city is a slow, painstaking process. Political winds change, new crises emerge, and focus shifts. Policy areas compete for priority, for political capital, for bureaucratic energy, and for budgetary supremacy.

A consensus on London's strengths and weaknesses, and on the key challenges facing the city, is a good start. In this report, we have built on a decade of Centre for London expertise – and on the wisdom and advice of our partners – to lay out the best evidence we can. We have set out the challenges and opportunities we see and backed these with relevant evidence where available. But this is an ambitious task: the report is not exhaustive, and there will be data we have missed as well as perspectives left unrepresented. To close this gap, we will be commissioning further research, polling and other analysis over the next phase of the London Futures review.

To directly help us shape a new consensus for London's future we hope to hear from Londoners, especially young Londoners, as much as possible. We also need to hear your views – as well as those within your community or organisation. If you have insights, ideas, or just an opinion about the challenges facing London, we invite you to share these with us on social media using the hashtag #LDNFutures – and encourage others to get involved too.

Please visit centreforlondon.org/london-futures-views/ for all the latest on how to get involved.

Appendix:

Notes on the benchmarking metrics for Chapter 6

The Business of Cities' Elo algorithm computes the overall performance of each city relative to all other cities on aggregate across multiple benchmarks. The Elo algorithm rates cities or regions by comparing their performance in every possible permutation against a list of other cities/regions. The system produces the most accurate comparative assessment of city/region performance, as it accounts for the fact that some cities/regions appear in more benchmarks than others, and that each benchmark measures a different number of cities.

Notes to figures

Figure 16

Cultural vibrancy and visitor appeal

Sources: Resonance World's Best Cities Index (Programming, Product); Mori Memorial Foundation Global Power City Index (Cultural Interaction); NestPick Best Cities for Generation Z (Concerts); Euromonitor Top City Destination Rankings; European Commission Cultural and Creative Cities Monitor; Mastercard Destination Cities Index; TripAdvisor.

Range of measures imputed: Total overnight international visitor spend; number of overnight international tourist arrivals; number of high-quality museums and art galleries recommended by locals and visitors; number of high-quality cultural, nightlife and culinary experiences recommended by locals and visitors; concentration of museums, art galleries, cinemas, theatres and concert halls; museum and cinema attendance; satisfaction with cultural facilities; perceived attractiveness of shopping and dining facilities; perceived opportunities for cultural and historic interaction.

Investment

Sources: KPMG Global Cities Investment Monitor; fDi Magazine Tech Startup FDI Attraction Index; Knight Frank City Wealth Index; fDi Magazine Fintech Locations of the Future; IBM Global Location Trends; PwC/ULI Emerging Trends in Real Estate Europe; Savills Dynamic Cities Index (Investment).

Range of measures imputed: Number of new job-creating investments; number of FDI projects; attraction of FDI in tech startups and fintech firms; perceived future real estate prospects among global investors.

Talent base and attractiveness

Sources: Resonance World's Best Cities Index (People); JLL Innovation Geographies Report; Z/Yen Global Financial Centres Index (Human Capital); INSEAD Global City Talent Competitiveness Index (Attract).

Range of measures imputed: % of foreign-born residents; % of population with Bachelor's degree or higher; % of population aged 20-40; % employment in high tech industries; number of world top universities; HQ presence of Forbes Global 2000 companies.

Clustered specialisations and innovation ecosystem maturity

Sources: Hickey & Associates Global Innovation Hubs; Findexable Global Fintech Index; Crunchbase; WorkThere Global Fintech Report; Startup Genome Compass Global Startup Ecosystem Report; StartupBlink Cities Ranking; JLL Innovation Geographies Report; European

Startup Heatmap Survey

Range of measures imputed: Growth in millennial population; R&D expenditure; R&D employment growth; number of patent applications; VC funding; number of innovative firms specialising in AI; presence of fintech HQs; FDI investment in high-tech industries; number of startups; number of unicorns; growth in number of startups.

Unemployment and labour market inclusion

Sources: DELL Women Entrepreneur Index; local authorities and national offices of statistics; OECD.

Range of measures imputed: Employment rate; unemployment rate; youth unemployment rate; number of new job postings; women's labour force participation rate; % of company board members who are women.

Safety and security

Sources: Numbeo; Economist Intelligence Unit Safe Cities Index; local crime reports and national offices of statistics.

Range of measures imputed: Local crime rate; percentage of people feeling safe walking during the day/at night; murder rate; citizen awareness of digital threats; deaths from natural disasters and road traffic accidents; number of hospital beds and doctors per 10,000 people; frequency and severity of terror attacks.

Affordability and costs

Sources: Numbeo; InterNations Expat Insider Expat City Ranking; Mercer Cost of Living Survey; Arcadis International Construction Costs Report; UBS Global Real Estate Bubble Index.

Range of measures imputed: Cost of monthly transport pass; real estate costs; number of years a skilled service worker would need to work to afford a 1-bedroom flat in the city centre; purchasing power; cost of living (across a basket of goods & services); affordability of tuition fees and student accommodation; proportion of income spent on rent; housing affordability.

Commute and congestion

Sources: TomTom; local authorities; Moovit; Numbeo.

Range of measures imputed: Time spent in traffic; average commute time via public transport; % of population commuting for more than 1 hour via public transport; annual average congestion level.

Figure 19

Expert perceptions

Measures imputed: Perceptions of 500 global business leaders across 22 countries of the top 3 most attractive locations for setting up a business (KPMG); perceptions of 500 global business leaders across 22 countries of the top 3 cities with the best overall image (KPMG); perceptions of 220,000 global technology and urban planning journalists of the world's smartest cities (EasyPark); perceptions of 900 real estate experts on the best cities in Europe for future real estate prospects (PwC/ULI); perceptions of financial industry experts on the depth and quality of cities' green finance tools, weighted up or down by instrumental performance factors that affect overall green finance adoption and help to predict how each respondent would have

rated the financial centres they are not familiar with (Z/Yen); perceptions of 1,000 startup founders of the best European cities to start a new company (Startup Heatmap Europe).

Citizen/audience perceptions

Measures imputed: Citizen satisfaction with cities' healthcare systems, from IPSOS national satisfaction surveys, Numbeo, and local patient surveys (Medbelle); perceptions of >5000 parents globally of the best cities for neighbourhood child safety and citywide family friendliness (Movinga); perceptions of global travellers of the world's friendliest cities (Big7 Travel); perceptions of 85,000 students globally on availability and quality of cities' graduate employment prospects and ratings of student life (QS); perceptions of residents about safety and criminal activity (Numbeo); citizens' reported levels of happiness and life satisfaction, from Gallup global polls (UN SDSN); citizens' perceptions of quality of life and cities' use of smart apps and technologies in support of citizen wellbeing (IMD); perceptions of 20,000 expats on their experiences of being an expat in 82 global cities (InterNations); perceptions of 5,000 global citizens of the cities with the best all-round brand (Anholt-IPSOS).

Table 4

Track record of decarbonisation

Sources: Z/Yen Global Green Finance Index; Open Charge Map; LinkedIn Talent Insights; World Bank; United Nations; local authority reports and national offices of statistics; Numbeo; Berkeley Earth; WHO.

Range of measures imputed: Perceived depth and quality of green finance tools; CO2 emissions (per capita); CO2 emissions reduction; concentration of electric vehicle charging stations; number of jobs in sustainability sectors; exposure to air pollution.

Appetite and ingredients for remote working

Sources: Wifi Map; online speed test; Coworker.com; TripAdvisor.

Range of measures imputed: Number and concentration of free public Wi-Fi hotspots; number of cafes and restaurants with free Wi-Fi; number of co-working desk spaces per city per capita; average 4G download speed.

Brand and visibility

Sources: Anholt-IPSOS City Brand Index; KPMG Global Investment Monitor; Resonance World's Best Cities Index (Promotion); ING Media World's Most Talked About Cities.

Range of measures imputed: Citizen perceptions of the best city brands; investor perceptions of the cities with the best all-round image; number of references, stories and recommendations shared about cities online; cities' share of total online mentions.

Appetite to integrate next generation technology

Sources: Crunchbase; Uber; Bike Share Map; ADL Future of Mobility Report; Ookla Speedtest; 5G map; testmy.net; cable.co.uk; OECD; World Bank; UN; national/local statistics agencies; WEF; city-level plans and strategies.

Range of measures imputed: Quality of city strategy/vision for next generation technologies; availability, trial or implementation of local 5G services; number of innovative firms specialising in AI; availability of online shared mobility services (e.g. bike sharing, ride hailing).

Inclusive growth and gender equality

Sources: DELL Women Entrepreneur Index; World Economic Forum.

Range of measures imputed: Gender wage gap; % of women in leadership roles; % of women-owned startups; female labour force participation rate; % of women with tertiary education; % of female students at top universities.

Citizen participation and engagement

Sources: International Institute for Democracy and Electoral Assistance; local election reports; ESI Thought Lab.

Range of measures imputed: % of population that vote; traffic of local government sites relative to population; number of methods used to engage citizens; presence of citizen experience officer; citizen familiarity with smart city initiatives.

Health security and healthcare satisfaction

Sources: Numbeo; IPSOS satisfaction surveys; local patient surveys; Economist Intelligence Unit; World Bank; local authority datasets; WHO; IARC.

Range of measures imputed: Citizen satisfaction with healthcare (affordability, accessibility, quality, wait times etc.); concentration of hospital beds and doctors; air and water quality; life expectancy; infant mortality; bioterrorism attacks; average emergency service response time.

Data analytics, cybersecurity and privacy

Sources: Economist Intelligence Unit; Kaspersky Lab; ITU; ESI Thought Lab.

Range of measures imputed: Perceptions of government officials of preparedness for cyberattacks; perceptions of government officials of progress made in detecting, protecting against, and recovering from cyberattacks; citizen awareness of digital threats; presence of dedicated cyber-security teams in city government; % with internet access; % of computers infected.

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