

THE TALE OF TWO REGIONS

A COMPARISON BETWEEN THE METROPOLITAN AREAS OF SOUTH EAST ENGLAND AND THE RANDSTAD IN HOLLAND

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THE REGIONAL IMPERATIVE

Ricky Burdett, Maarten Hajer
and Henk Ovink

All over the world policy makers and academics are increasingly interested in cities and their Metropolitan Regions. They remain engines of global economic prosperity, fuelling growth at breakneck speed in continents like Africa and Asia, where urban centres are expanding at a rate of over 40 people per hour. In some parts of the world – especially in the global North – cities are shrinking, while others – often nearby – prosper. What is going on? And where does the European city-region fit into all of this, especially at a time that ‘localism’ seems to have become a prevailing political ideology?

We got a glimpse of what the future might hold for the European city-region in 2009. Representatives from several European cities gathered in Paris as part of President Sarkozy’s ambitious initiative aimed at rethinking the future of ‘le Grand Paris’ – a metropolitan area containing over ten million people extending beyond the Périphérique to the entire Île de France. Ten teams of architects, planners, geographers and landscape designers were invited to present their visions for the expanded metropolis for the next forty years. Yet as the meeting progressed, two questions kept on nagging those of us who attended the conference from a more northern perspective.

Firstly, were the ‘right’ people there? The French had chosen to invite participants from European capital cities rather than those from Metropolitan Regions, reflecting a very central governmental perspective. Wouldn’t contributions from dynamic and complex areas such as the Oresund, the Ruhr, the Milan-Turin region or greater Istanbul be more relevant to the metro-region debate than from cities like Rome or Berlin? Perhaps the multiple socio-economic and environmental issues addressed by these Metropolitan Regions offered a framework of analysis and comparison that resonated more closely with the problems and opportunities faced by greater Paris?

Secondly, were the ‘right’ solutions being offered? Most of the presentations focused narrowly on ‘big architecture’ as the answer to all metropolitan woes: iconic mega-projects to revive derelict industrial areas or redundant airports would somehow provide an all-embracing urban cure. The presentations from London and the Dutch Randstad, however, offered a broader and more analytical perspective, taking stock of the most urgent problems and prevailing urban trends before offering solutions. As an approach, they reflected an understanding that there is a close link between built form, spatial planning and design (on several levels), and their

social, economic and environmental consequences. For us, this constituted the intellectual starting point to develop successful strategies to address the formidable challenges facing Metropolitan Regions, today and in the future.

This recognition of an unstated, but shared intellectual agenda in London (in its regional context of South East England) and the Randstad became the impetus for further collaboration: a tale of two different Metropolitan Regions facing comparable challenges. Both regions were interested in how politics, research, assessment and design can come together, creating a space for debate and reflection on the issues that really matter. This triggered an eighteen-month interdisciplinary research project, an Anglo-Dutch collaboration between LSE Cities, the Dutch Ministry of Infrastructure and the Environment and the Netherlands Environmental Assessment Agency, or PBL, which forms the basis of this publication. Rather than starting with a precise research question, the initiative set out to unmask the social, spatial and environmental DNA that lies beneath these complex and differentiated metropolitan urban systems.

COMPARING THE RANDSTAD WITH LONDON AND SOUTH EAST ENGLAND

London and the Randstad have been compared before, but from the outset we argued that this time the comparison should be made at a regional scale, encompassing the whole of South East England and the hinterland of cities that form the Randstad. Comparing two large urban regions invariably reveals a host of similarities and differences. At a glance, Randstad is patchy and multi-centred, while South East England is dominated by London as a truly global megacity. The four Dutch cities that make up the Randstad (Amsterdam, Rotterdam, Utrecht and The Hague) define a ‘Green Heart’, while London is contained by a ‘Green Belt’. Within London itself, the urban fabric is relatively dispersed, composed predominantly of terraced housing with front and back gardens and generous public parks. At their core, Randstad cities are denser, with compact urban neighbourhoods made up of apartment blocks and terraced housing, but with dispersed suburban development. South East England has about 18 million residents (with just under 8 million in the capital proper), while the Randstad has approximately 8 million residents and the total population of the four Dutch cities amounts to just over 4 million people. While the Dutch have a train, tram and bus-based public transport system that is still being extended, London is built on a relatively outdated rail and underground radial system that struggles to cope with increased commuter demand. In both

regions, the majority of commuters use the car to get to work, but while over 25 per cent of commuters in South East England use public transport, the proportion in the Randstad falls to 14 per cent. International migration and the challenges of social and ethnic inclusion are significant in both regions, which – unlike other metropolitan areas in Europe – are experiencing modest but sustained levels of economic and population growth.

In the uncertain world of economic development after the financial crisis of 2008 one thing seems clear: spatial inequalities are likely to become bigger. London and the Randstad are disproportionately strong in relation to the United Kingdom or Netherlands as a whole. Yet the appropriate system of governance for these successful core regions is still very much under debate. While London has only recently rediscovered the value of strong metropolitan governance – introducing for the first time in its millennial history an elected mayor in 2000 – the Randstad's equivalent is a fragmented and ever-changing collaboration of cities, regions and provinces. And although Dutch cities have a more mature system of democratic representation with strong local governance, mayors in the Netherlands are appointed by central government and not elected by local constituencies. London's economy is clearly seen as global, competing with Tokyo and New York for prime status as an international business centre, while the four Dutch cities vie for more localised supremacy in terms of business, trade, public administration and culture while at the same time competing successfully with other European regions.

For the Randstad, one of the key issues is whether it will be able to remain competitive as a high-performing region in Europe and hold its position against other clusters like Frankfurt and Milan, given that its cities may be too small to benefit from economies of scale. Whereas 42 per cent of the population in South East England is concentrated in London, in the Randstad it takes 14 smaller cities to reach a similar percentage. Does the region have the urban 'critical mass' to benefit from urbanisation economies? Or is regional connectivity, rather than proximity, the key to the Randstad's success? Could its polycentric structure turn out to be an advantage? These are some of the questions addressed in the comparative essays and data section that follow in the report.

NEW GOVERNANCE STRATEGIES

In terms of planning strategies, at least three realities seem to co-exist: an overlay of networks of governance in which stories fulfil a key role; the more traditional attempt to govern by plan; and the emerging emphasis on 'localism' with consequences and possibilities that are not entirely clear yet.

Firstly, London and the Randstad are run by a complex web of governance systems. A common feature seems to be the future-oriented 'narratives' that are shared by various actors and that give meaning to their deliberations. We can see how both regions in this respect profit from strong metropolitan identities: London and Amsterdam are in effect true brands that attract individuals and firms and

this 'governance by narrative' is also used by local authorities and policy makers in South East England and the Randstad. In this respect, the role of the Mayor of London has clearly been successful. While he is permanently locked in battle with central government over allocation of funds and investment, the mayor has recently increased his profile and powers. A recent white paper on planning for the Randstad cities has promised more freedom and jurisdiction over planning controls with stronger collaboration with national government in crucial areas like infrastructure.

Secondly, despite the significant difference in governance systems, both Metropolitan Regions have a tradition of drawing up strategic plans to guide development over a medium-to-long term timeframe. In Holland, these include the Randstad 2040 strategy, the new white paper for National Spatial Policy and the plans to secure the 2028 Olympic Games for the Netherlands, while in the UK they include the 20-25 year horizon of the soon-to-be-adopted London Plan that was drafted in 2009. Planning in this sense is not a blueprint, a top-down metaphorical process that produces ideas for the future that never lead to a sustainable process. It is a more explorative process of policy making that is viable and weak at the same time. In this respect, it becomes neither plan nor project but a more flexible planning instrument. This resilience could turn out to be a major asset, yet by its very nature the process has to be reinvented and redeveloped over and over again. The process can neither be described as 'survey before planning', nor as 'planning without design', but it can be referenced as 'survey, design, plan and develop policy', all at the same time.

Thirdly, there is a new effort to revitalise local engagement. The current Dutch government has focused its efforts even more on the urban regions within the Randstad, delegating more power to cities and provinces. Deregulation is its first goal, making the process of spatial development more effective, together with a process of decentralisation and a selective national approach on those areas and projects that are of international importance. The British government has invested strongly in a new Localism Bill, which also envisages a high degree of downward devolution, but with central government still in command of the reigns and little evidence of new funding reaching the lower echelons of devolved power.

THE REGIONAL FUTURE OF THE CITY

In this publication we focus on the two metropolitan areas and their regional contexts. While geographers and urbanists have always emphasised that cities should be understood in their regional context, we suggest a further shift. The classic regional 'hinterland' has become global, and cities have become regional. Like the Randstad, London and its region are faced with challenges in a number of fields that affect economic performance as well as sustainable growth. For instance, because almost two thirds of all regional commutes in South East England either originate or terminate in Greater London, the city-regional infrastructure is under

pressure. Also, urban sprawl into London's Green Belt poses a threat to the areas that potentially are the green havens for Londoners. Fifteen cities with more than 50,000 residents are located within the Green Belt's geographical extent. And, where will London find the space that is needed for renewable energy sources?

However, given the UK government's plans to prioritise the local rather than the regional, the question arises whether Europe's largest monocentric metropolitan area is governed with a system that recognises how people, food, goods, energy, jobs and money flow across its borders. While London's governance structure was reinforced by the appointment of its first ever directly elected mayor, its regional structure is still fragmented and ineffective. The Regional Development Agencies have carved up the wider geographic region in an arbitrary way, and there is no real policy integration with London itself and its own development agency the LDA. As a result, all these institutions are being radically restructured under the banner of 'localism'.

In short, while both the Randstad and London have a 'regional DNA', which permeates all aspects of physical planning, socio-economic and environmental processes, effective regional governance is absent. Pressing matters such as the city region's global competitiveness, intra-regional connectivity, attractive recreational areas, and the search for suitable locations for the production of renewable energy require solutions at a scale where government has not proven very effective.

Following the Grand Paris meeting, the Dutch and British teams were eager to learn from each other's planning theories and practices. The Dutch were impressed by the extent to which London could account for its own energy demand and the degree to which it already took the initiative in organising renewable energy (e.g. in the North Sea). The London team on their part were impressed by how Dutch cities recognise their 'regional vocation', at the national level and in the wider European and global context. Over our deliberations we came to a joint awareness of an evolving agenda.

Firstly, cities are gigantic input-output systems. A city's metabolism (e.g. water, food, energy) creates interdependencies between multiple locations in the metropolitan area and beyond. As a result, urban success will depend more and more on an astute awareness of these metabolic inter-relationships at a regional and intra-regional level. As both regions attract new residents, meeting demands in a responsible way becomes a key challenge.

Secondly, cities drive the economy and are themselves producing jobs, knowledge and innovation. It becomes increasingly clear that a certain critical mass is needed to benefit from agglomeration economies. Strategic locations, both in the inner cities and on the urban fringe, need to be well connected in order for businesses to find one another. Certain 'hotspots' need urban densities that help catalyse meetings between (creative) workers, not only from nine to five, but also after business hours. And for urban dwellers to be able to reach recreational areas, the accessibility of green has to be carefully planned. It is

still an open question at what level these 'agglomeration effects' really occur. But there is increasing evidence that quality of living fulfils a key role. Therefore a viable planning strategy must be based on a constructive dialogue between density and green space, intensity and non-intensity at a regional scale.

Thirdly, good cities perform best as a patchwork of places. Explored from this regional perspective, city regions appear to provide the necessary hubs and hotspots in the wider urban network. The urban fabric also hosts a variety of milieus (urban place/activity typologies) that may be more low-profile but that none the less fulfil their specific functions in the region. It is this variety of distinct high-quality places and activities that makes an attractive metropolitan area. In this way the awareness of the regional scale differs from thinking in terms of the compact city, as well as from (economic) thinking in terms of national statistics. This is the reason why Amsterdam looks to its wider context, from Haarlem to Almere. This is why the South wing of the Randstad is often thought of as a continuous urban fabric from the seaside resort of Scheveningen to the old city of Dordrecht. Similarly, the City of London has daily commuters, albeit a minority, all the way from Brighton. But what does good planning mean in such larger spatial settings?

What makes strong regional cities? Here we hope to present some of the building blocks with which planners and citizens, organisations and municipalities, can construct powerful narratives that define and drive well-organised cities. Making these metropolitan areas more viable and more sustainable requires us to connect our thinking of the regional economy with its social capital and culture. Responding to the changing context, both regions realise that the legitimacy of planning will now depend on more than numbers. By presenting facts and figures on London and the Randstad, and by positioning them in the context of analysis and explorative thinking about what makes cities strong, we hope to inspire debate on the future of the regional metropolis.



Vincent Hamers

The Randstad's patchwork of highly domesticated open spaces are intensively used for agriculture and recreation (aerial view north of Amsterdam)



Jason Hawkes

South East England contains a mosaic of vibrant city parks and global financial centres at its core, and villages and country footpaths at its periphery (aerial view Hyde Park, Central London)

THE DEATH AND LIFE OF GREAT URBAN CONCEPTS

Wouter Vanstiphout

There seems little doubt that for most of the still growing world cities of the present time, the Dutch solution is the right model.
Peter Hall, 1966

For me, this inter-urban landscape of marinas, research labs, hypermarkets and industrial parks represents the most hopeful face of Britain at the end of the century. The countryside as we used to know it, apart from the National Trust's colour-coordinated nature trails, is now little more than an agribusiness by-product. We live in the TV Suburbs, among the video shops, take-aways and police speed-check cameras, and might as well make the most of them, since there is nowhere else to go.
J.G. Ballard, 1994

One of the most successful urban models to have been developed by London-based planners is the Randstad Holland. The year 1966 saw two British publications that would have a worldwide impact and would shape the international reputation of Dutch Planning and its legendary self confidence: Peter Hall's *The World Cities* and Gerald Burke's *Greenheart Metropolis*.

The World Cities presents seven agglomerations that contain such concentrations of talent, power, culture, education and economic force, that they can truly be considered world cities. Furthermore, these metropolises present a wide range of shapes that world cities can have in order to fulfil their task: from the centripetal and hierarchic Paris, the immense London, to the dispersed and fragmented Ruhr Area in western Germany and the sprawling low-rise density of Tokyo. The most eccentric choice is the Randstad Holland, a morphologically unique 'composition' of moderately sized cities in a horseshoe shape, bent around a 'Green Heart' of natural and agricultural areas, a model Peter Hall holds up to the other cities in his book as one to follow.

What did the Randstad have that his own city, planned according to the paradigmatic Abercrombie Green Belt plan, did not have? At that time, the Green Belt was just over twenty years old and had had a spectacular effect, not just on the city of London and its region, but worldwide. By tying a huge, but relatively tight band of agricultural and natural landscapes around the existing city, and then jumping over the Green Belt and designating a number of state-of-the-art planned New Towns, while allowing existing towns to grow, London had effectively controlled one of the most inevitable dynamics of modern time: urban sprawl. The planners had managed for a while to contain it in a limited number of spatial vessels in a ring around the great city. However, after twenty years of sprawl, like bacteria, it had already redressed itself. The demographic and economic success of the area outside

of the Green Belt had caused a new type of sprawl: bigger, wider, less controllable, on a regional or even national scale, around the motorways and railway lines, the power stations and airports, within a radius of dozens of miles from central London.

It was therefore no wonder that the Randstad Holland could be recognised as the next model: Green Belt 2.0, i.e. the Green Heart. In the year in which *The World Cities* was published, the London planner and townscape pioneer Gerald Burke dedicated an entire book to this Dutch phenomenon, with the title *Greenheart Metropolis*, and likewise presented it as the best model for the cities of his time, a model to start following now that the concentric sequence of City, Green Belt and Satellites that London had perfected, was showing signs of wear and tear.

The Randstad and the Green Heart, however, were never meant to be urban, nor were they meant to be a model. The first time the Randstad was acknowledged by Dutch planners was in 1958, less than a decade before the English planners sang its praises. That year saw the publication of the 'development scheme for 1980', describing how major Dutch cities were positioned in a horseshoe shape around an agricultural zone, separated from each other by swathes of open space. The report also argued that this structure of separated communities should be preserved, even when under pressure of demographic growth. The report was aimed at creating the opposite of a Green Heart Metropolis or a World City; it was an example of government-driven containment planning. The second report on spatial planning from 1966, with its concept of 'Clustered Deconcentration', and its hugely optimistic prognosis of a population of 20 million people by the year 2000, allowed for each city's modernist dreams of motorways, mega structures, and high-rise buildings. The planning models for the Randstad were never meant to transcend the different identities and to imagine a new megacity, like in London and the South East Region. They were meant to maintain a level playing field and a clear spatial division that would allow each city and each town to fulfil its own modernist destiny.

A simple comparison of the situations of London and the Randstad goes a long way in explaining this fundamental difference in perspective between Dutch planners and their British admirers. If we compare the Randstad to the South East Region and consider their relative national proportions, we see one urbanised region that takes up nearly half the country, versus one single city that takes up only a corner. For the Dutch to imagine the Randstad as being one city, or even one urban identity, would be like expecting the British to understand – and plan – most of the United Kingdom as one coherent urban entity: an urban region 5.5 times its current size, with 3.5 times its current population. This comparison also

uncovers the latent mega-thinking hidden in the pages of *The World Cities* and *Greenheart Metropolis*.

The idea of a world city of millions of people, consisting of different cores and draped around a large open countryside, speckled with rural towns, as proposed by Peter Hall and Gerald Burke, reads as a retroactive manifesto for Holland, but should be understood as a manifesto for London and the South East of England. The scale jump from a single concentric metropolis to what looks like an entirely urbanised country was very much part of it.

It was not the first time that Dutch planning was irradiated by the manifestoes and models coming from London and other world cities of the twentieth century. Right after Ebenezer Howard had published his *Garden Cities of Tomorrow* (1898), the Dutch were among the first to translate it and to establish garden city societies. This was the beginning of a century of modernist urban planning concepts projected onto Dutch territory; from the early garden cities in Rotterdam and Amsterdam, via the Van Eesteren plans for Amsterdam in the 1930s and the Team X mega structures by Jaap Bakema in the IJmeer, all these concepts focused on the extensions of single cities, in absolute size often less than 10 per cent of that of cities like London and Paris, but relatively, and psychologically to their inhabitants, of equal size and importance. None of these plans ever took the Randstad as their starting point. The concept simply did not exist; each city saw itself as a singularity.

Why then this insistence by Hall and Burke on the Randstad model? Why this projection of ambitions and pretensions on a region that was in fact being planned in an entirely different way, bottom up rather than top down, and consensus seeking rather than visionary? The Netherlands has over time been an early adopter of radical urban planning concepts, but always managed to whittle them down to a non-radical matter-of-factness. Nowhere have the hexagonal webs of Walter Christaller been more faithfully reproduced than in the Noordoostpolder, but not as part of a web of village-town relationships that was theorised to cover an entire continent. Instead, it remained one discrete, neatly finished and isolated composition; one that is now applying for UNESCO world heritage status. The same could be said of the Dutch high-rise housing developments of the 1950s and 1960s; despite their predictably bad reputation with the Dutch, nowhere did they reach the alienating otherness, or the hopeless segregation in relation to the existing cities, as occurred in French or English cities. And only a decade ago, it was a Dutch city that offered Rem Koolhaas and OMA their first chance at constructing an entire city centre, thereby potentially unleashing the whole ideological arsenal of the Office for Metropolitan Architecture upon its voluntary prisoners. Here, too, the result is a complete, neat realisation of OMA attributes in a didactically crystal-clear urban ensemble, but again without any dystopian glamour, ideological fervour, or any frisson of excitement at being at the cutting edge of urbanism, as we would have expected from this office.

The Randstad is a laboratory for the testing of radically new urban concepts,

in the sense that just like a laboratory it creates an antiseptic and artificial environment, in which isolated elements of new ideas can be tested, with minimal danger of contamination or catastrophe. Part of this has to do with the particular administrative structure of the Randstad, which basically consists of dozens and dozens of municipalities with a more or less equal status. Compared to the hierarchical structure of the South East of England, which varies from extra large (Region), to large (Greater London), to medium (London) to small (boroughs), urban planning decisions in the Dutch Randstad are dominated by the smallest unit – the municipality – of which there are dozens and dozens. Urban planning decisions in a centralised structure, like the English or the French, are slower to make, but can have an immense impact, cutting through all scales and levels, with either disastrous or redemptive consequences for the entire urban population. The Dutch political conditions for planning can be described as a cell structure, creating great possibilities for trying out new models, but always containing their effects within a reasonable scale, and killing off any attempt that would try to break through the cell membranes. These are the ingredients for a planning situation that creates the impression of being plannable and open to new model thinking, but in fact are heavily immunised against any real transcendent change. International interest in the Netherlands is therefore nearly always of a theoretical nature and is very rarely strategic. The Randstad is the anti-New York: if you can't make it anywhere, you can make it there.

This certainly holds true for the short-lived British interest in the Dutch model, which in retrospect can be seen as a last-ditch effort to formulate an all-encompassing centralist top-down urban planning model that would be able to contain the megacity region that London had become. Short-lived it certainly was on the part of Peter Hall; in the same year as *The World Cities* was published, he visited Los Angeles for the first time and experienced nothing short of an epiphany, which then led to a conversion. In an article called 'The City of All Futures' Hall sang the Californian city's praises, with its loose network of freeways, irrigating endless fields of opportunity for burgeoning ethnic communities, exotic industries like the movies and defence contractors, and leading to a soundtracks by the Beach Boys, Country Joe and the Fish, and The Doors – sprinkled with flowers and basking in eternal sunshine. It forever cured Peter Hall from whatever preconceptions he might have had about the lack of urbanity in the suburbs, and from a youthful trust in top-down statist masterplanning. Hall was at the forefront of a whole group of Londoners who swung their gaze westward, away from old Europe and straight towards California. Very soon Reyner Banham would write his wonderful ode to Los Angeles, the architecture of four ecologies, and explicitly presented it as a treasure trove filled with models, examples and tools for British cities to follow. Paul Barker, editor of *New Society* for which both Hall and Banham wrote, published extensive excerpts from Herbert Gans' *The Levittowners*, the sociological study proving that there is just as much urban



Ramon Stoppelenburg

The well-established Turkish community run numerous grocery shops that enrich communities and create a tapestry of cultures (Kinkerstraat, Amsterdam)



Wig Worland / Alamy

The dominant force of the City of London shapes the regional flows of the wider metropolis (new extension of the former East London line)

vitality in the low-density post-war suburbs of American cities as there is in Greenwich Village and Soho.

Los Angeles was more than just an occidental fantasy on the part of a generation of Brits; the interest in California very soon became serious and operational. It re-oriented the British planning practices and theories in a much deeper and more effective way than the Dutch example ever could have done. The first example is how the Californian urban thinker and traffic planner Melvin Webber became a guru of sorts to the planners of the third-generation New Town Milton Keynes. Los Angeles is clearly visible in the free-flowing and equilibrial road grid that acts not as a divider, but as a non-hierarchical underlay for the suburban neighbourhoods that smoothly sprawl across the landscape, in the unabashed presence of commerce and enterprise in the city, through shopping malls and roadside signage, creating Britain's first Pop Art townscape. 'I believe that Mel was the true spiritual father of Milton Keynes,' Hall would write years later. Los Angeles would leave a deeper and more ideological mark in one of the most prophetic and curious projects ever made for England: Non-Plan: An Experiment in Freedom. Non-Plan was based on a deep disappointment with not just the outcome but also the ethics of public planning, and proposed a paradigm shift if ever there was one. Peter Hall and Paul Barker – the editor of *New Society* – got together with architectural historian Reyner Banham and architect Cedric Price, and set out to hypothesise on what would be the result if new trends and tastes were left to their own devices. Each of the contributors took a tract of land and did exactly this; imagining linear roadway cities stretching through East Anglia, landscapes of leisure in southern Hampshire, enterprise zones in the Midlands, all arranged in a natural and loose way within the landscape, produced by individual initiatives and coordinated by local communities. Non-Plan was illustrated by rudimentary maps and night-time images of illuminated signs in the South East region, laundrettes, night clubs, and petrol stations: early warning signs of the inescapable Californication of England. Non-Plan created a furore in planning and political circles; both the Fabian Socialists to whom Peter Hall belonged, and the architects to whom Banham and Price belonged, erupted in outrage and shock against this rejection of everything they believed in and the sell out to America. Support did however come from the far left, from the anarchist thinker Colin Ward, who saw in Non-Plan a legitimisation of his ideas about autonomy from the state, which he had been advocating for decades, and that were at the core of Ebenezer Howard's thinking, before the Garden City was co-opted by government planning.

The critics, however, felt vindicated a decade later, when the Thatcher Government appropriated one element of the Non-Plan and implemented it, to the detriment of state planning as it existed and to the more social-anthropological ideals proposed by Banham, Barker, Hall & Price. Hall's idea for Enterprise Zones as hypothesised for the Midlands, was picked up by the Tory ministers and would ultimately lead to the creation of Tax Exempt Enterprise free zones, like Canary Wharf, as part of

a package of planning policies that were a radical departure from the post-war period of public planning. Part of this package would be the marginalisation of social housing and the abolition of the Greater London Council. With Non-Plan, it is difficult to discern between its prophetic and its projective contents; the South East of London does look more like Non-Plan than like the Green Belt / Heart Metropolis.

We could even say that, in the end, Non-Plan and the Californian conversion by Hall, Banham, Barker and their generation of British planners and urban thinkers, would turn out to be actually prophetic for the Randstad itself, bringing us full circle. The prophecy has worked on many levels; the late 1960s in the Netherlands also saw a rise of the automotive consumer culture that, in the end, would create some arguments for understanding the Randstad as a single urban entity, but also made it more and more difficult to achieve the spatial coherence of models like the Green Heart. The celebration of a consumerist urban landscape, based on leisure, enterprise and individuality and original use of space, combined with cartoonish graphics and happy modernist architecture, appeared in the Netherlands, 25 years after Non-Plan, and was called SuperDutch. And today, more than thirty years after Margaret Thatcher's revolution in Britain, the Dutch government has also radically rearranged the policy landscape of Dutch planning, along more or less the same lines as its Tory grandmother. The state rejects top-down planning models, the landscape is opened up to enterprise through the building of new motorways, environmental restrictions are relaxed, social housing is marginalised and planning is devolved to the lower authorities. Only now are we gradually learning to cope with the fact that we do not inhabit a laboratory for the testing of theoretical planning models, but that we actually inhabit the same type of 'inter-urban landscape', the same 'TV Suburbs', and enjoy the same kind of nature as an 'agribusiness by-product' as the English science-fiction writer J.G. Ballard fatalistically celebrated over fifteen years ago. It might not be much, but at least it's for real.

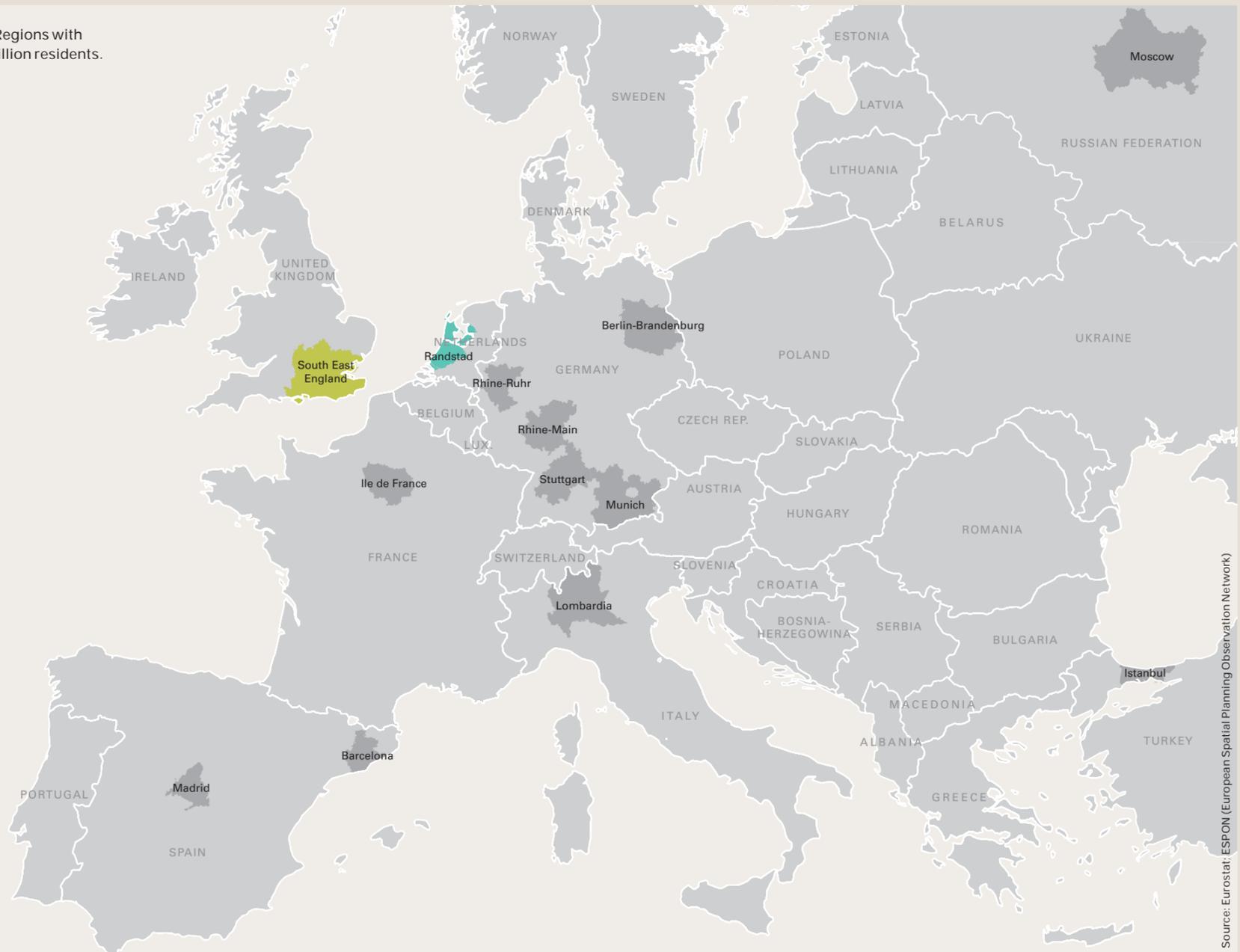
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VITAL REGIONAL STATISTICS

RANDSTAD AND SOUTH EAST ENGLAND COMPARED

Metropolitan Regions with more than 5 million residents.



Source: Eurostat; ESPON (European Spatial Planning Observation Network)

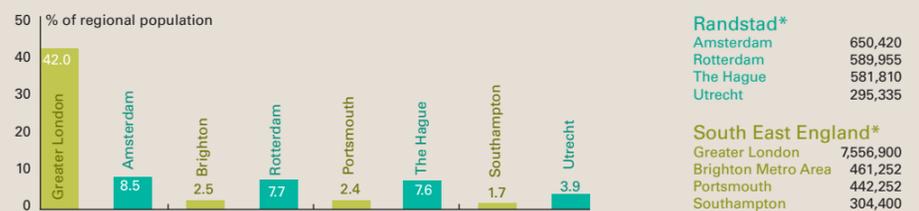
South East England and the Randstad are located on opposite sides of the North Sea and make up two of the major Metropolitan Regions in Europe. They contain their respective nation's capital city (London and The Hague) and a significant part of the national populations in the United Kingdom and the Netherlands. Compared to other global Metropolitan Regions like Mumbai, São Paulo or Shanghai, their population growth has been modest but sustained, largely driven by international migration.

With roughly 18 million people, South East England is Europe's largest Metropolitan Region, encompassing Greater London and its surrounding suburbs. Hosting one third of England's population, the region extends over a surface of 28,000 square kilometres

(10,811 square miles). With approximately 8 million inhabitants, Greater London is home to more than 40 per cent of the regional population, while another 40 per cent cluster around London's so-called Larger Urban Zone, while the remaining 20 per cent live in the metropolitan periphery.

The Randstad is significantly smaller in terms of population and area, with about 8 million people living in an area of almost 9,000 square kilometres (3,475 square miles). The region is not dominated by one major centre (like London), 40 per cent of its population is distributed over 14 cities within the Randstad. With between 300,000 and 700,000 residents, Amsterdam, The Hague, Rotterdam and Utrecht are the Randstad's largest cities, while almost 30 per cent of the population live in cities with fewer than 10,000 inhabitants each.

REGIONAL POPULATION DISTRIBUTION ACROSS LARGEST CITIES



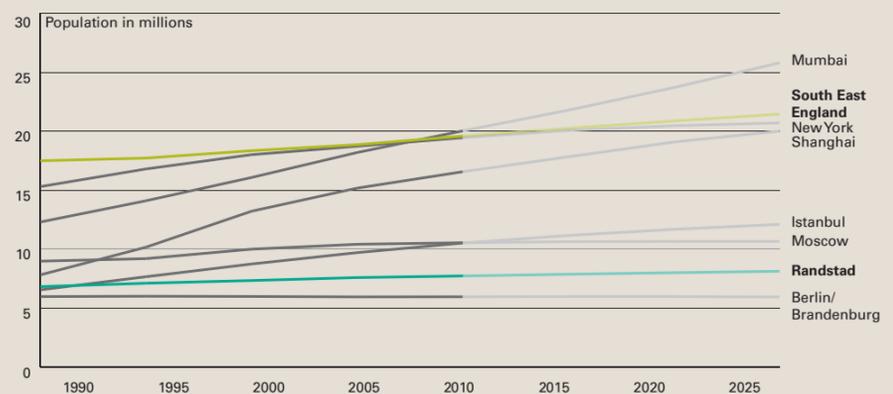
Randstad*	
Amsterdam	650,420
Rotterdam	589,955
The Hague	581,810
Utrecht	295,335

South East England*	
Greater London	7,556,900
Brighton Metro Area	461,252
Portsmouth	442,252
Southampton	304,400

*The population figures refer to continuous built-up land and may therefore deviate from official local authority statistics. Brighton Metro Area includes Brighton, Hove, Littlehampton and Worthing.

Source: Calculations based on data from: CBS (Statistics Netherlands); PBL Netherlands Environmental Assessment Agency; ONS (UK Office of National Statistics); UK Ordnance Survey; Natural England, Defra (UK Department for Environment, Food and Rural Affairs)

POPULATION GROWTH COMPARED



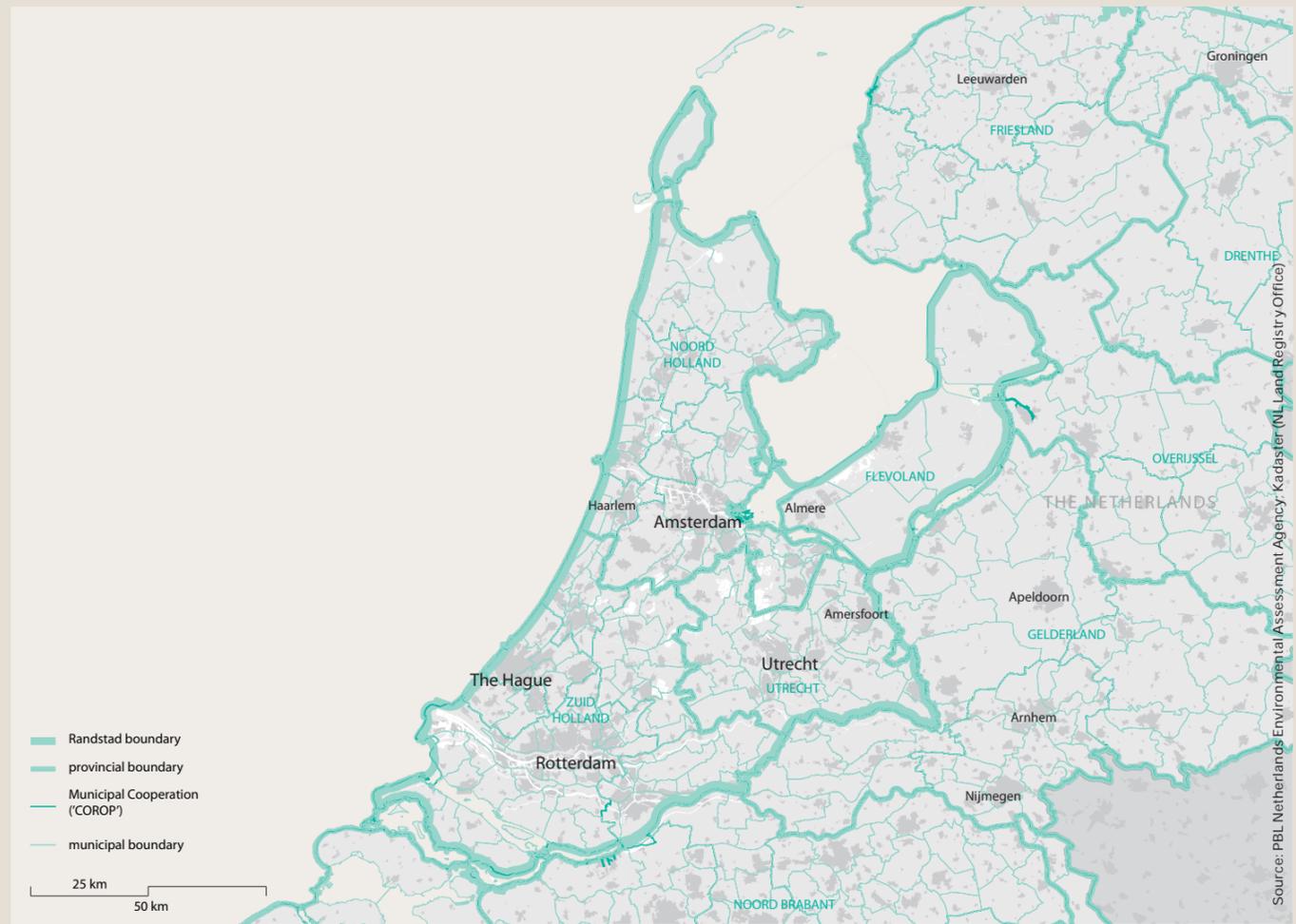
Source: Eurostat; United Nations, Department of Economic and Social Affairs

GOVERNANCE

RANDSTAD

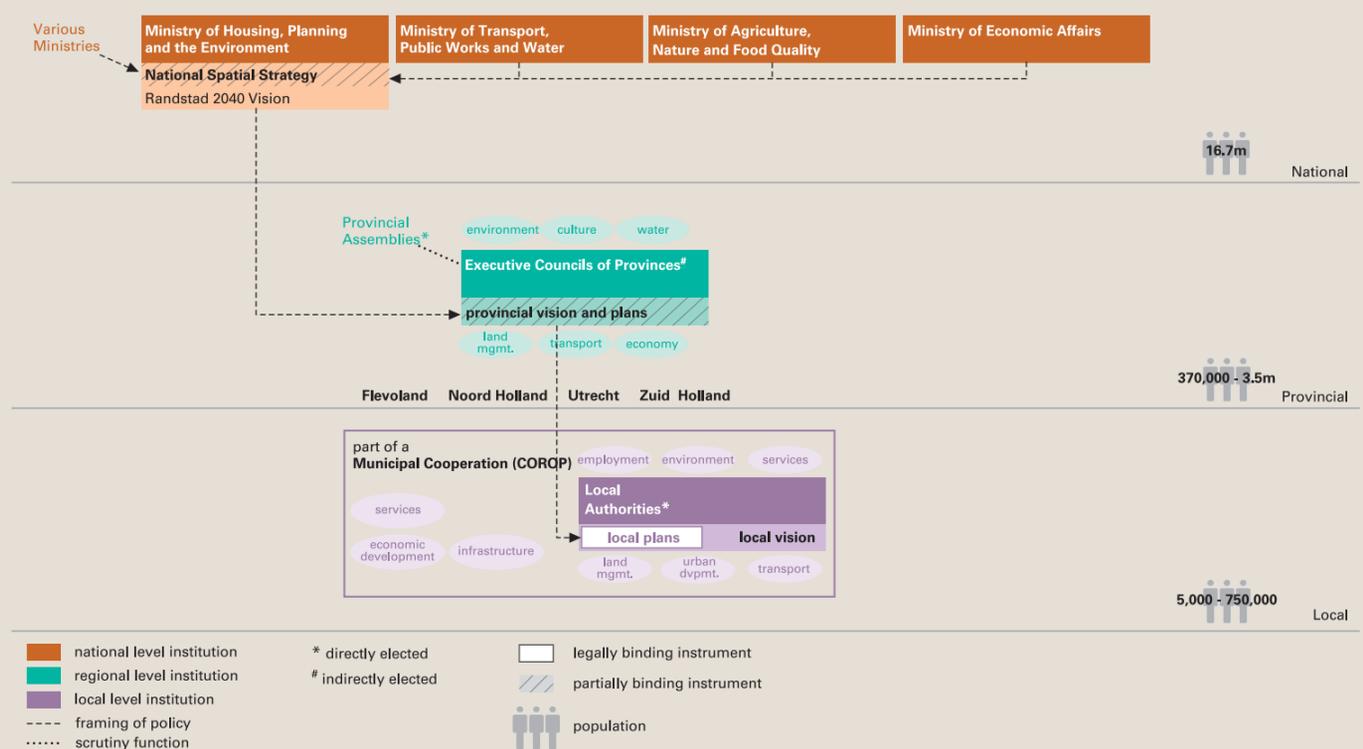
DECENTRALISED DECISION MAKING

The Randstad region is governed by a range of separate governmental entities of varying scales. The governance system is based on the principle of subsidiarity, which calls for decentralised decision making. Local authorities, or municipalities, called *gemeenten*, are the smallest administrative units, and are fully responsible for managing their land-use planning. The municipalities are governed by a mayor, who is appointed by the national government. Coordination of these local governments is the responsibility of the national government and the four provinces of Flevoland, North Holland, Utrecht and South Holland. Each province has its own directly elected assembly, the *Provincial States*, which enjoys strong autonomy in planning and regional development.



TOP-DOWN STRATEGIC PLANNING

The subsidiarity principle extends to the governance structure of Dutch spatial planning. Focusing on different geographical scales, the relevant governmental tier prepares a strategic spatial plan, derived from their interests and spatial vision. The national government identifies areas of national focus, which are framed by national spatial policy; this involves large sections of the Randstad. Until the reform of the planning system in 2008, land-use plans developed at the provincial or local level had to be based on the principles of their respective higher tiers. The former Dutch Ministry of Housing, Spatial Planning, and the Environment developed comprehensive spatial visions for the entire country (the National Spatial Strategy) and a special vision for the Randstad region (Randstad 2040).



This chart illustrates the governance structure of spatial planning before 2008, focusing on the Randstad region

Source: I&M (NL Ministry of Infrastructure and the Environment)

SOUTH EAST ENGLAND

MULTI-LAYERED GOVERNANCE

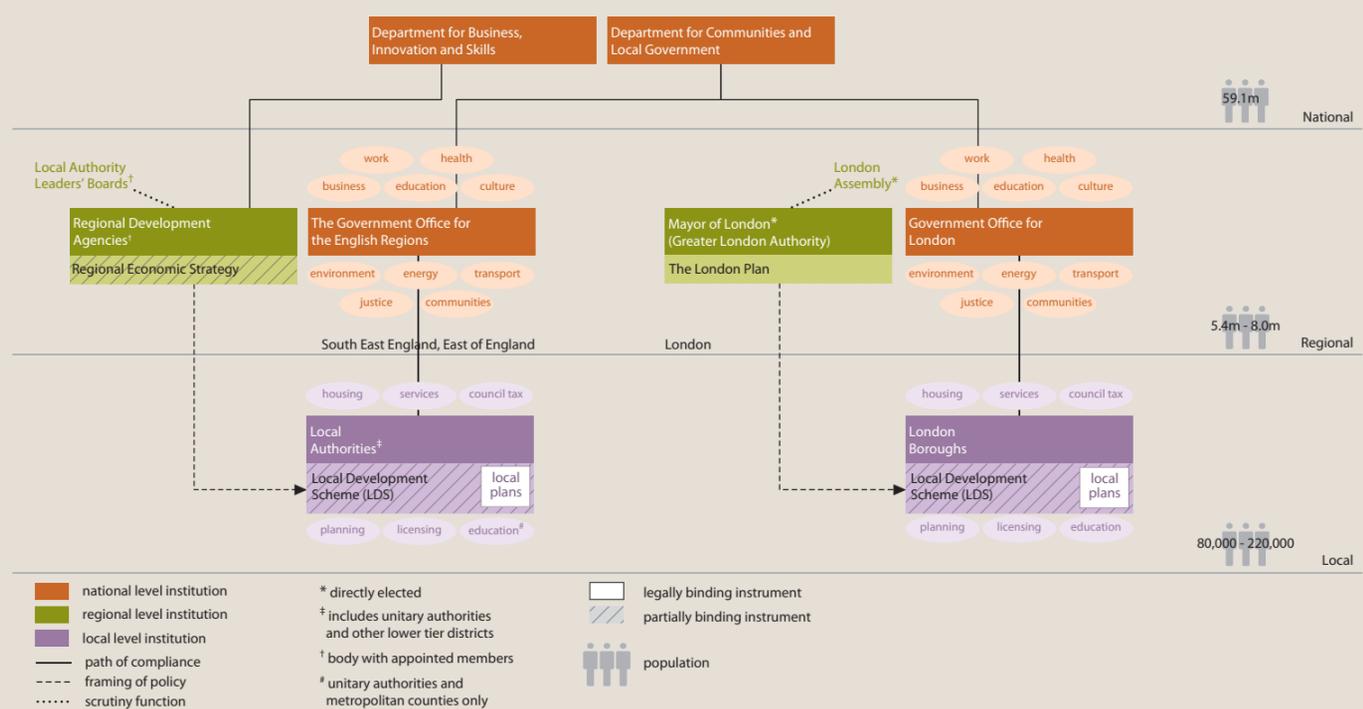
South East England, similar to the Randstad, is not governed by a single administrative unit, but consists of three sub-national government level 'regions': the East of England, South East England and London (this system is currently under review). The lower administrative level consists of two-tier local authorities: counties (such as Essex and Kent) and districts (such as the city of Reading and Portsmouth). In addition, there are unitary authorities, which combine both tiers to a single administrative level. London is an exception, since both the region of London and the county of Greater London are represented by an elected London Assembly, and the lower tier is formed by 32 local borough councils and the City of London Corporation. Since 2000, Greater London has a directly elected mayor, with elections held every four years.



IMPLEMENTING REGIONAL DEVELOPMENT

Apart from acting as statistical units, the English regions carry out regional planning functions that reflect central government policies. Established in 1999, the Regional Development Agencies (RDAs such as SEEDA, South East of England Development Agency, or EEDA, East of England Development Agency) have been responsible for economic development and strategic spatial planning in their respective regions, but they are being abolished by the current government, which was elected in 2010. London is again an exception, where the Mayor of London is responsible for producing a strategic plan, the London Plan, to which individual London Borough councils are legally bound to comply with. The London Development Agency (LDA) is part of the Greater London Authority, but funded by central government through the Department for Business, Innovation and Skills.

Outside London, spatial design and development takes place in local development frameworks. Although plans are implemented by the local authorities, they must reflect the principles of the regional spatial strategies as set by their RDAs. Unlike in the Netherlands, there is no explicit and comprehensive spatial vision at national level.

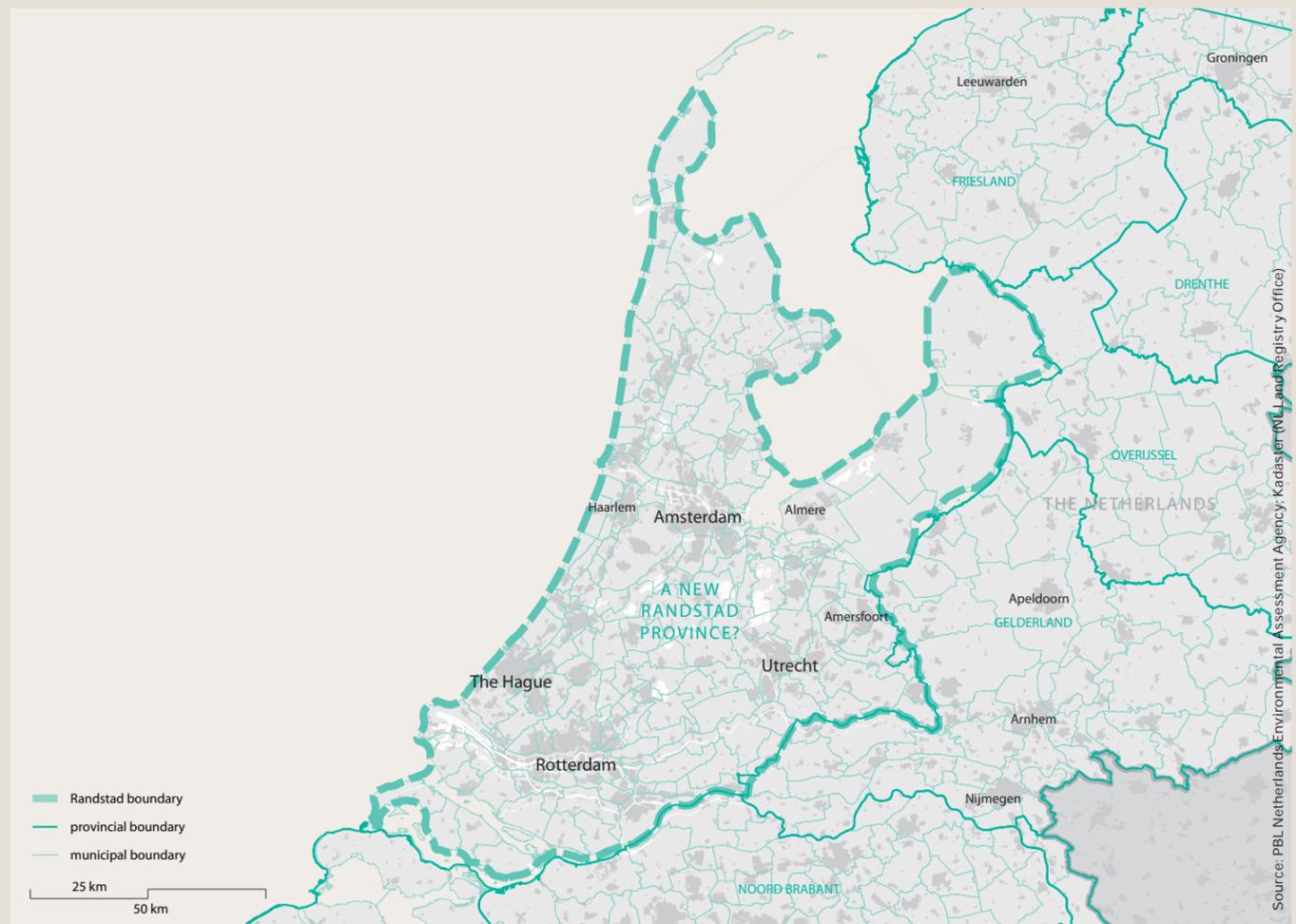


This chart illustrates the governance structure of spatial planning before the government introduced major changes in 2010

Source: legislation.gov.uk (various acts related to governance and planning)

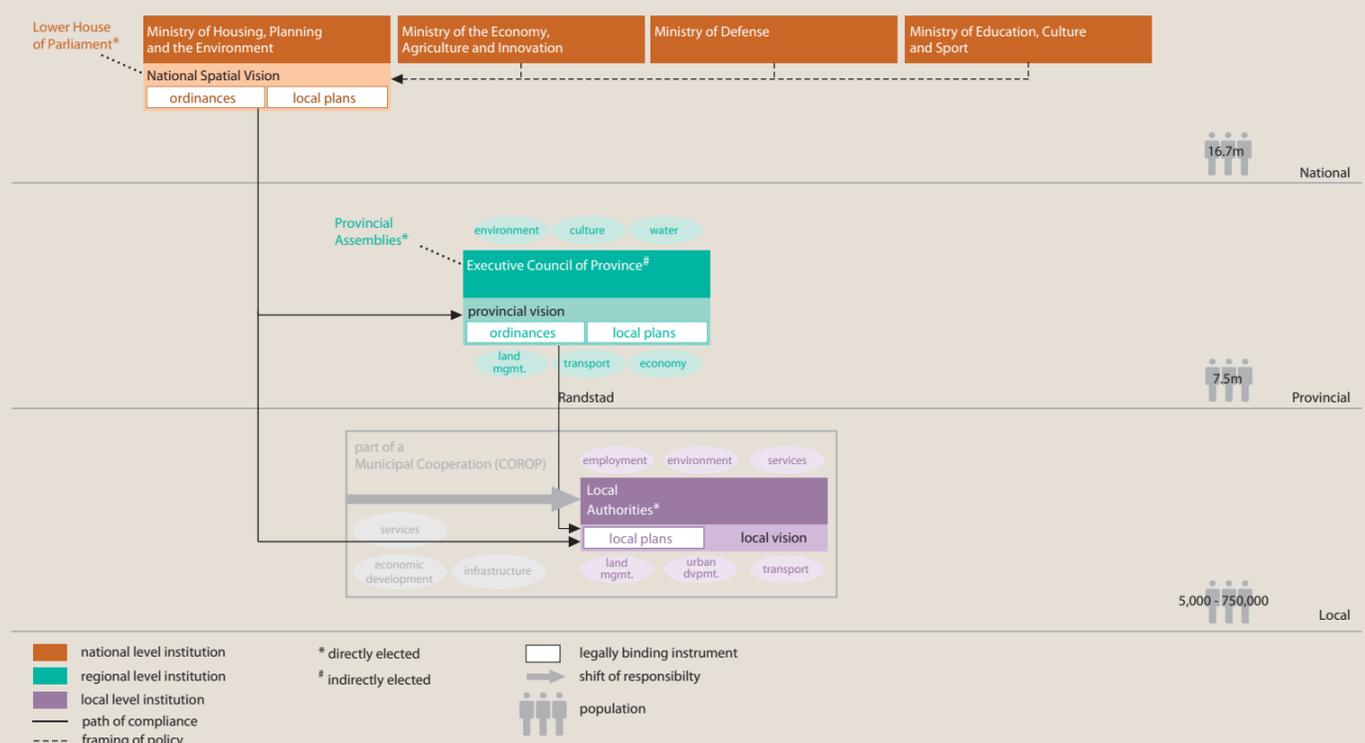
REPOSITIONING POLITICAL GEOGRAPHIES

In order to give greater opportunity to local development aspirations, the current Dutch government (elected 2010) has abolished regional bodies in which the collaboration between municipalities was formally constituted. A simplified planning structure has been developed with only two government tiers – provinces and municipalities. For the Randstad, the government is supporting the development of a 'Randstad Province' (including all four major cities of Amsterdam, The Hague, Rotterdam and Utrecht as well as the other municipalities in the region) which would form a single administrative unit covering the entire geographical extent of the region. This new entity, which would have its own public transport authority, would have the capacity to engage in regional strategic planning, in consultation with its municipalities.



REVISITING THE TOP-DOWN MODEL

In recent years the spatial planning system of the Netherlands has been overhauled and the legal powers and responsibilities of government agencies have been restructured. New policies have unravelled a top-down hierarchical planning system in which local plans were required to comply with provincial plans, and, in turn, provincial plans had to comply with the national spatial strategy. Since 2008, central and provincial governments are obliged to draw up general rules and guidance frameworks before local plans are drafted. There is now a clear separation between discretionary policy documents and binding legal instruments, which give local authorities more freedom to set their own vision for local areas. Nevertheless, if any administration unit feels that their interests are under threat, they may formulate local plans, which, once acknowledged, become legally binding.



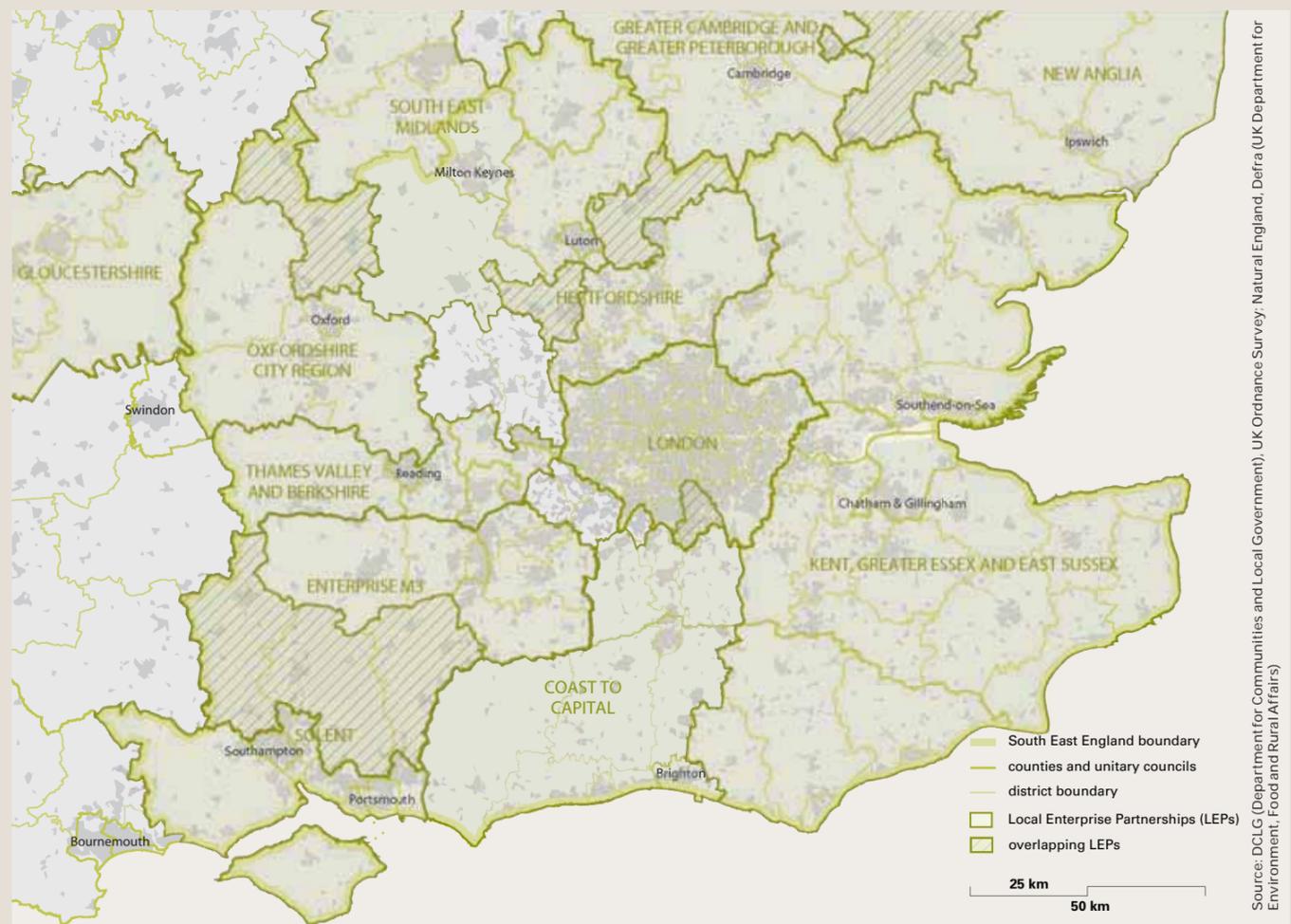
This chart illustrates the governance structure of spatial planning in the Randstad proposed after 2008

Source: I&M (NL Ministry of Infrastructure and the Environment)

SOUTH EAST ENGLAND

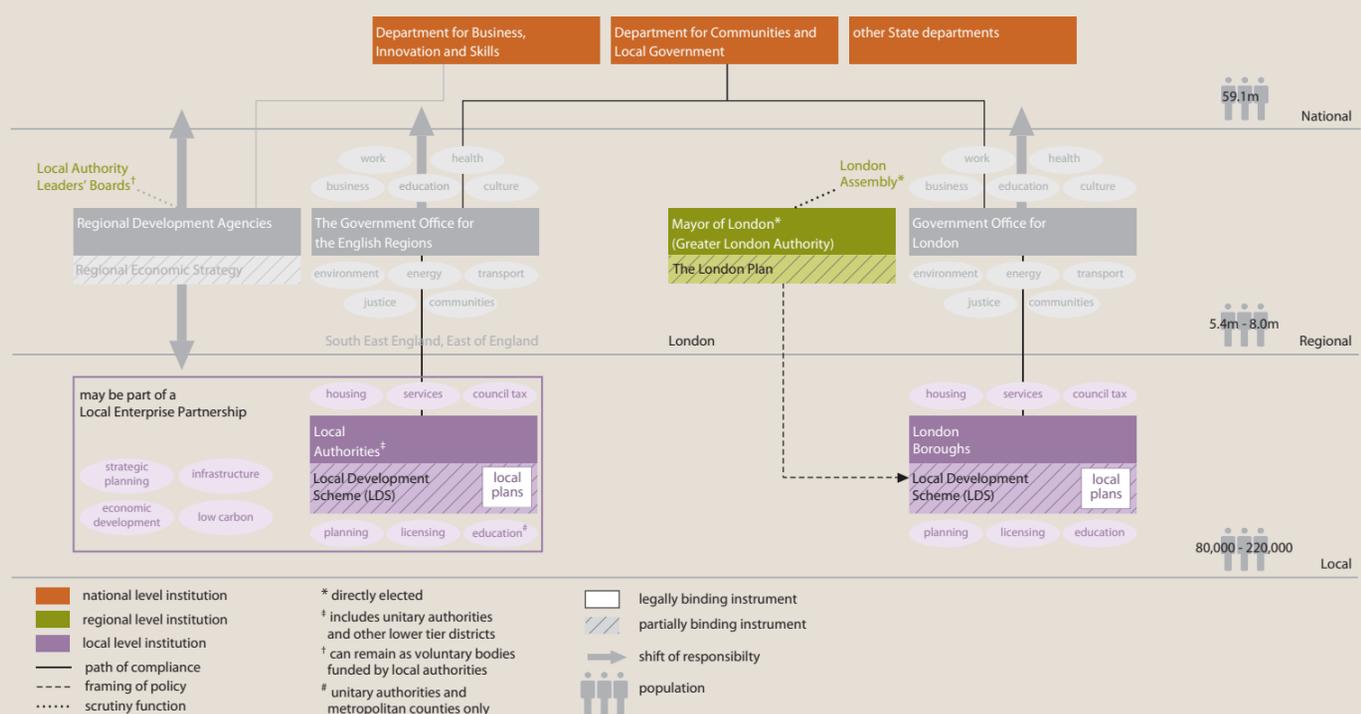
PROMOTING LOCAL ENTERPRISE

Recognising the need for collaboration between districts and local authorities, central government has allowed the formation of self-selected Local Enterprise Partnerships (LEPs) to promote new and vision-based forms of regional collaboration. Although they have no statutory powers or obligation to coordinate spatial plans, members of the LEPs (local authorities, local businesses and other organisations) come together to guide local economic development. Thirty-five of such partnerships have been approved by the government, out of which eleven are located in South East England, varying in size from 450,000 (Oxfordshire City Region) to almost 3,000,000 inhabitants (Kent, Greater Essex and East Sussex). In South East England, most local authorities are LEP members, except for the London boroughs, of which only the Borough of Croydon is part of the Coast-to-Capital partnership.



TOWARDS A NEW LOCALISM

As in the Netherlands, the British coalition government (formed in 2010) has abolished all Regional Development Agencies (RDAs) and their power to set regional strategies, with the single exception of Greater London. The Localism Bill introduced in December 2010 (still being ratified at the time of writing) has partially devolved spatial planning responsibilities that were previously held by the RDAs to local authorities. New provisions have been introduced to give communities the power to draft their own neighbourhood plans, which, in turn, could be adopted by local authorities, leaving room for local authorities to informally collaborate on a regional scale. Despite these more bottom-up initiatives, the English regional government offices and the Government Office for London have been reincorporated into the Department for Communities and Local Government, reinforcing some of central government's responsibilities.



This chart illustrates the governance structure of spatial planning in South East England proposed in 2010

Source: RTPI (Royal Town Planning Institute); legislation.gov.uk (various acts related to governance and planning)

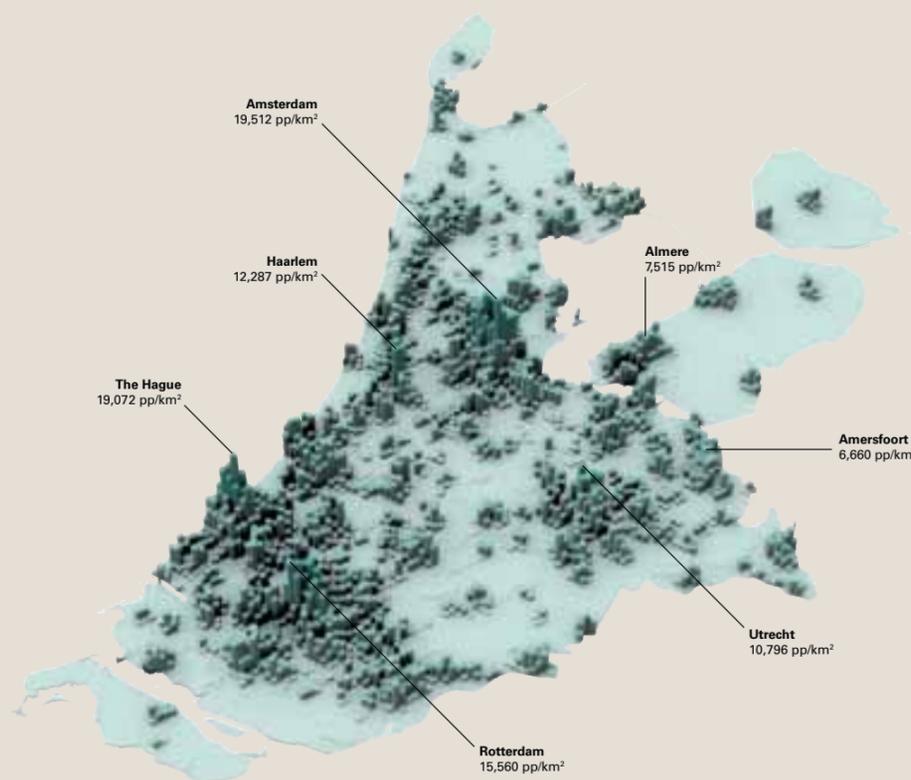
WHERE PEOPLE LIVE

RANDSTAD

POLYCENTRIC DENSITY

Both the Randstad and South East England are relatively dense areas compared to other European regions, but the levels of residential density are considerably lower than in other global metropolitan areas like New York, Shanghai and Istanbul, which reach peaks of over 50,000 people per square kilometre (129,500 per square mile). The four main cities in the Randstad region have similar patterns and levels of density within their central areas – between 15,000

to 19,000 people per square kilometre – and are surrounded by low density peripheries and extra-urban areas where more than half of the population live in areas with less than 3,000 people per square kilometre. In fact, despite its reputation as a ‘dense’ urban region, only a minority, around 7 per cent, live in areas with over 10,000 people per square kilometre, while nearly a quarter live in areas with extremely low densities of below 1,000 people per square kilometre.



The illustrations show residential densities in 1km² hexagon cells. Densities were modelled on the basis of population data obtained from censuses or equivalent surveys and spatial data of built-up land.



BERLIN

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NEW YORK CITY

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MEXICO CITY

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SOUTH EAST ENGLAND

MONOCENTRIC DENSITY

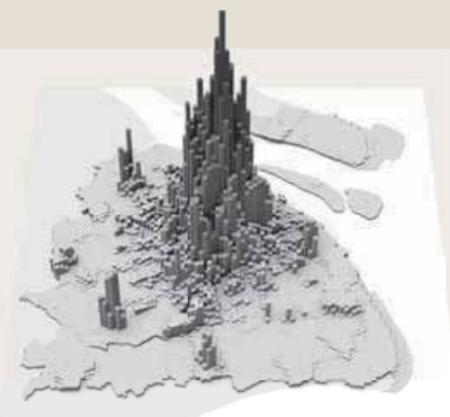
The population of South East England is spread out less equally than in the Randstad. Across the entire region, only some parts of Brighton or Portsmouth come near the peak densities found in central London – which remain slightly lower than those found in Amsterdam, Randstad’s largest city. The most densely populated neighbourhood in London is Notting Hill, with almost 17,500 people per square kilometre, which

is close to other dense areas in Kensington, Paddington and Earls Court – all relatively prosperous areas with over 10,000 people per square kilometre. The majority of people in South East England live in low-density areas: about half in areas with less than 3,000 residents per square kilometre, while only 10 per cent live in densities of over 10,000 residents per square kilometre.



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SHANGHAI

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PARIS

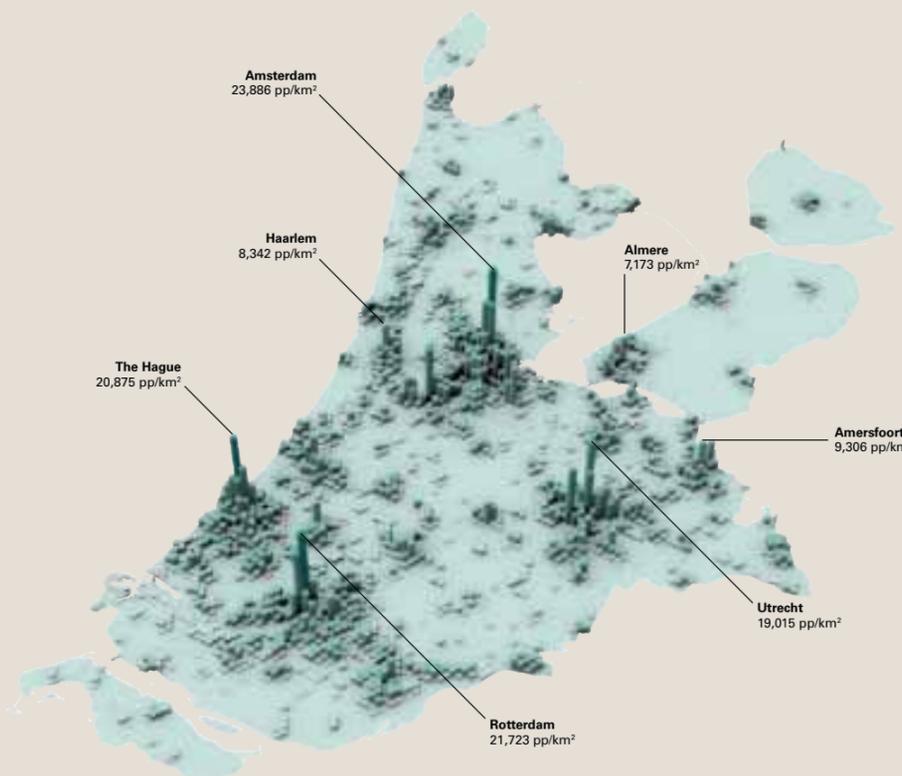
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DECENTRALISED CONCENTRATION

In the Randstad, offices, shops, factories and other places of employment are evenly distributed across the four main cities of Amsterdam, The Hague, Rotterdam and Utrecht, which show relatively high densities of 19,000 to 23,000 workplaces per square kilometre. Unlike London and South East England, though, the distribution of residential areas and work locations is more unified with people living closer to their jobs, especially in areas where both residential and workplace densities are high. Fifty-six per cent of workplaces in the Randstad are located at density levels of up to 2,000 workplaces per square kilometre, with 3 per

cent focused in Amsterdam's most densely built up areas.

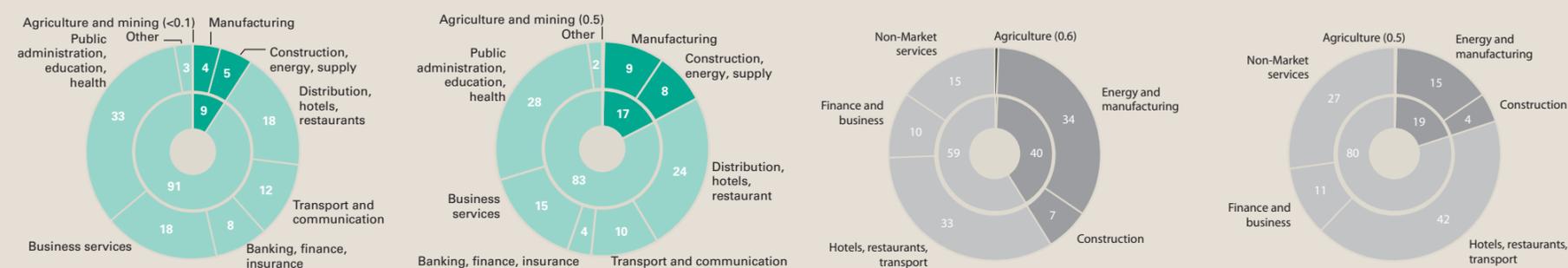
A comparison of workplace shares per sector shows that the areas with the lowest workplace densities house general services, such as food, distribution and personal services, while business services, banking, finance and public administration are concentrated in the four major centres with manufacturing relegated to lower density areas outside city centres.



The illustrations show workplace densities in 1km² hexagon cells. Densities were modelled on the basis of workplace data obtained from censuses or equivalent surveys and spatial data of built-up land.

Source: Randstad: LISA (NL Companies and Employment Register); Istanbul: Eurostat; Mexico City: INEGI (MX National Institute of Statistics and Geography)

EMPLOYMENT BY SECTOR



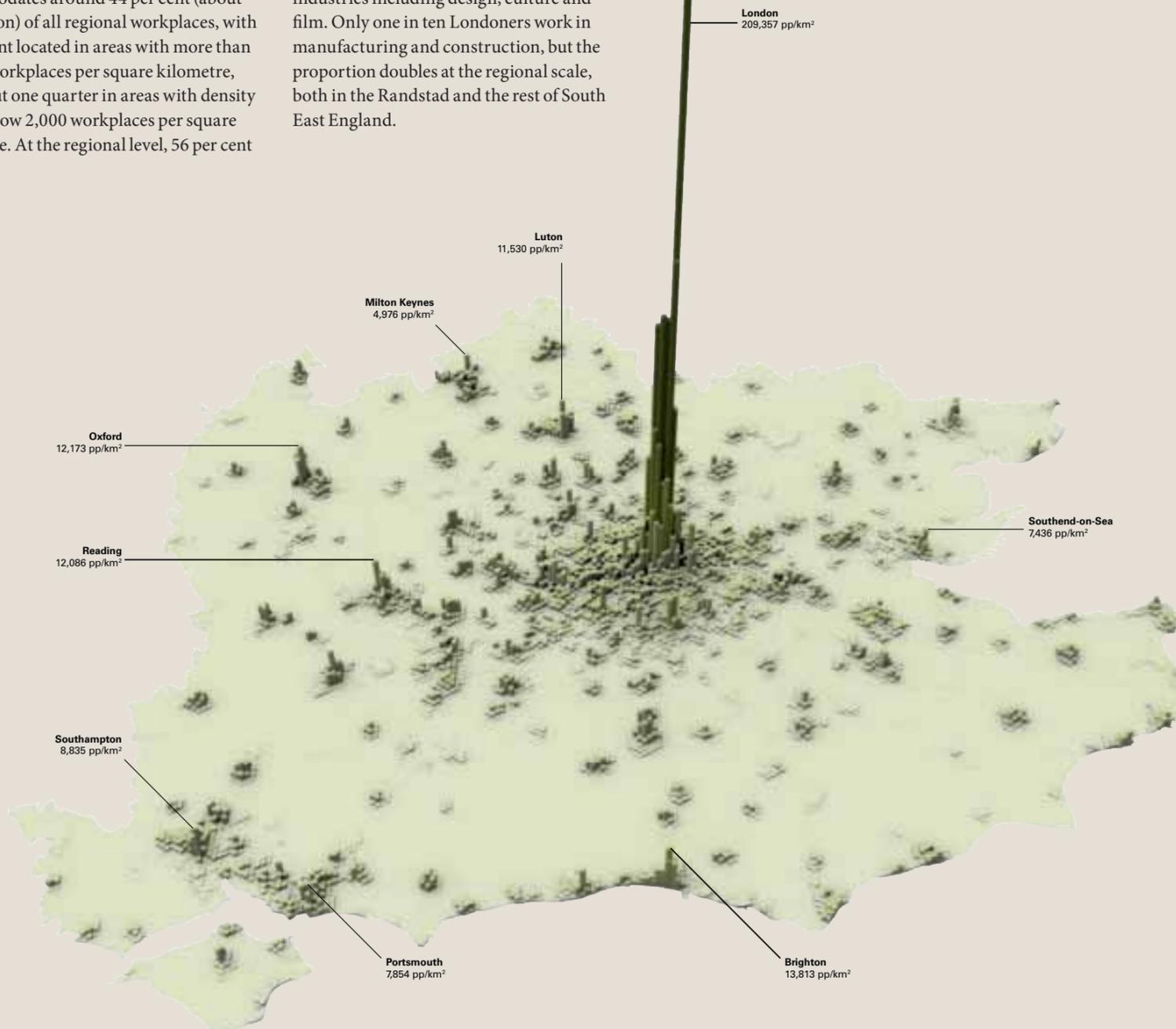
SOUTH EAST ENGLAND

HYPER-CONCENTRATION

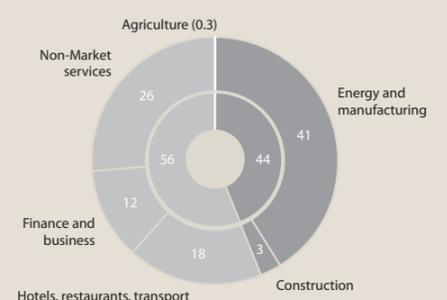
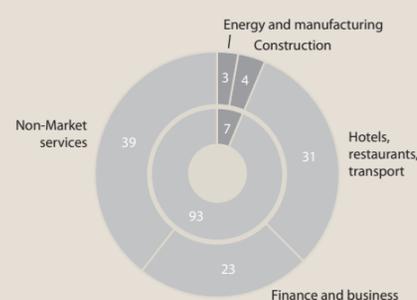
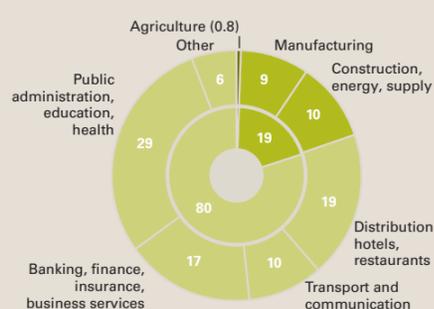
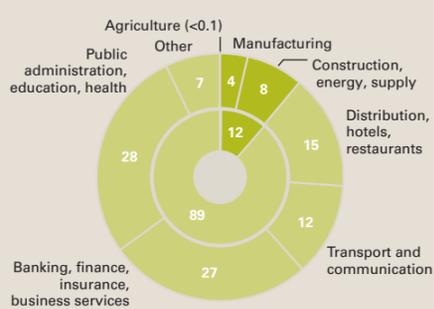
Unlike the more evenly distributed Dutch system, South East England has an unequal distribution of workplaces, heavily skewed in favour of London, and its business and financial centre in the City of London and Canary Wharf. Here the highest workplace density is more than eight times greater than the highest in the Randstad. Greater London accommodates around 44 per cent (about 4.2 million) of all regional workplaces, with 11 per cent located in areas with more than 20,000 workplaces per square kilometre, and about one quarter in areas with density levels below 2,000 workplaces per square kilometre. At the regional level, 56 per cent

of workplaces are located in areas with less than 2,000 workplaces per square kilometre, and almost three quarters in areas that house less than 4,000.

One quarter of the jobs in Greater London is in the banking, finance, insurance and business services sectors, but with equally strong performance in the creative industries including design, culture and film. Only one in ten Londoners work in manufacturing and construction, but the proportion doubles at the regional scale, both in the Randstad and the rest of South East England.



EMPLOYMENT BY SECTOR



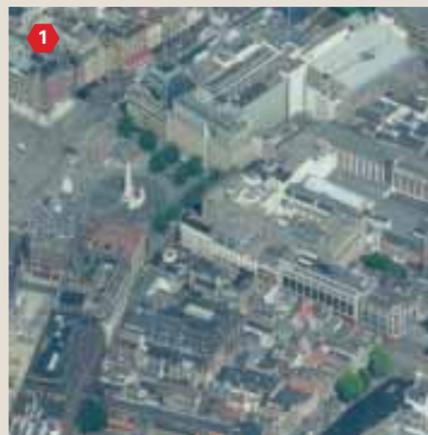
Source: South East England: ONS (UK Office of National Statistics); New York City: CCEW (US Quarterly Census of Employment and Wages); Shanghai: China Statistical Yearbook

LAND USE AND BUILT FORM

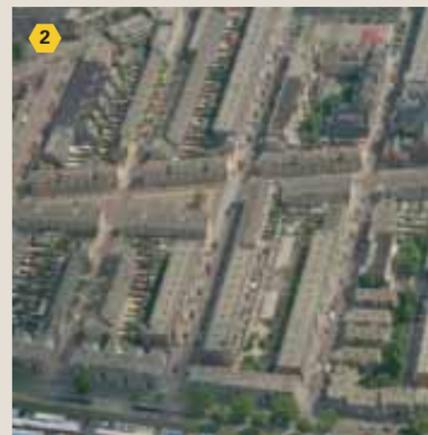
RANDSTAD

BALANCING DIFFERENT USES

There are strong similarities between the spatial distributions of the residential and working populations in the Randstad and their relative densities, suggesting a balanced spatial relationship between the two activities at a regional level. Mixed-use, dense urban areas characterised by both high population and workplace densities (dark red on the map) are prevalent in the Randstad's four main centres and medium-sized towns, such as Haarlem and Amersfoort. More densely populated residential areas (shown in dark yellow) typically form a ring around mixed-use centres, with low-density, mixed or residential areas of 1,000 to 5,000 people per square kilometre and workplace densities of under 1,000 per square kilometre defining the outermost peripheries. Amsterdam's Schiphol airport and the Zuidoost business complex (in south-east Amsterdam) and Oudenrijn in Utrecht represent areas with high concentrations of commercial activity, while Giessendam, Amstelveen and Baarn are typical low-density towns and villages located on the region's periphery.



Amsterdam Centre:
high degree of mixed use



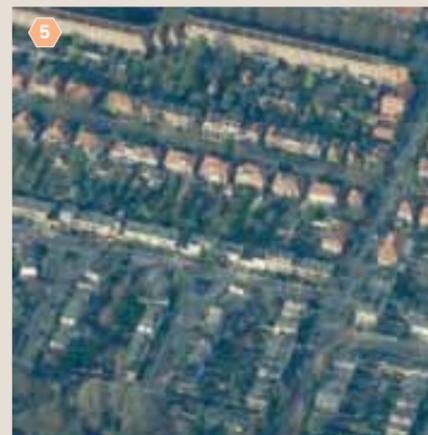
Transvaal, The Hague:
predominantly residential



Oudenrijn, Utrecht:
predominantly working



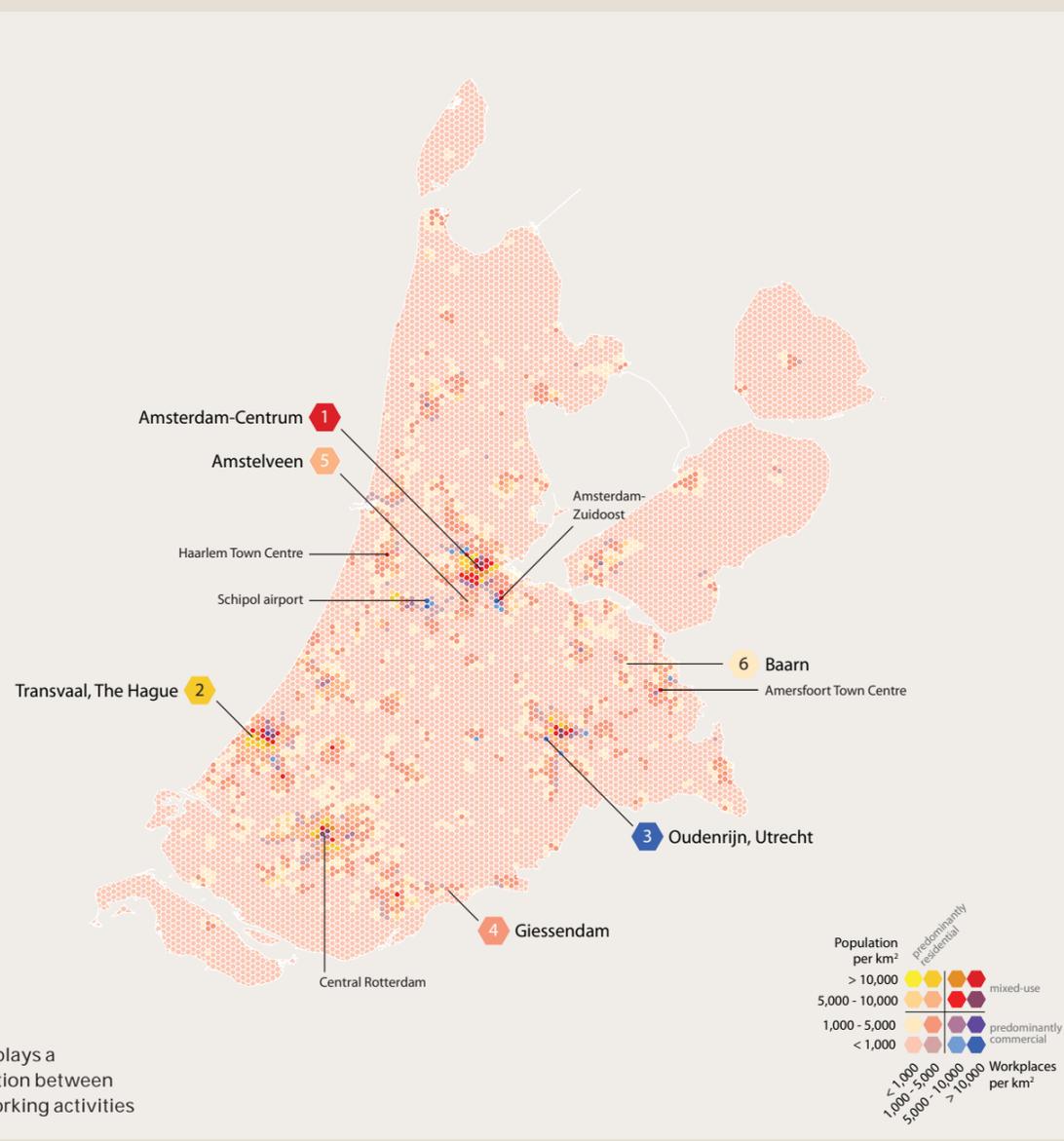
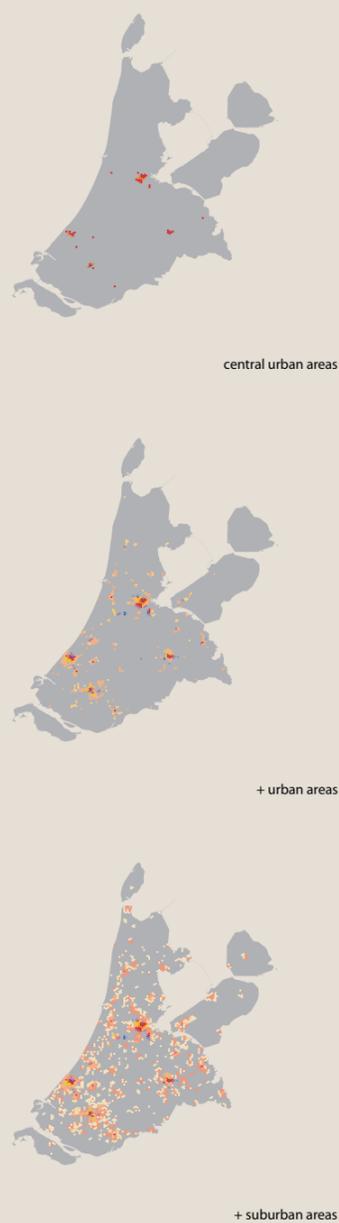
Giessendam:
mixed use at average density levels



Amstelveen:
average residential density levels



Baarn:
low degree of land-use intensity



Source: CBS (Statistics Netherlands); PBL Netherlands Environmental Assessment Agency; Kadaster (NL Land Registry Office)
Images: Bing maps

SOUTH EAST ENGLAND

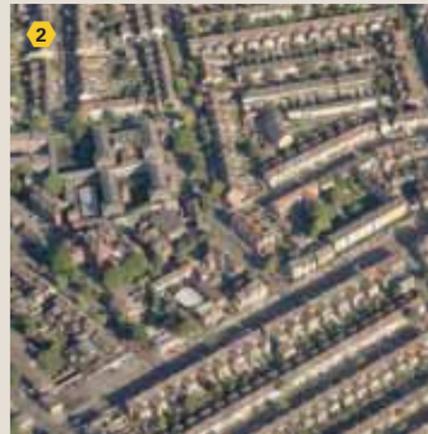
A SEGREGATED URBAN LANDSCAPE

Compared to the Randstad, South East England displays a less distributed pattern of density and mix of uses, with a more pronounced separation between where people work and where they live. The greater concentration of jobs and homes in high-density environments occurs in a ring around central London, with a few outlying 'hotspots' like Croydon and Southend-on-Sea. Apart from the City of London and Canary Wharf – which are predominantly occupied by offices – the mix of activities in other regional centres like Reading, Oxford, Luton, and Southampton is heavily segregated, with clusters of residential or commercial activities occupying distinct zones. South East England's town centres are dominated by commercial and office hubs, unlike Randstad's more mixed urban nodes. While London displays a more polycentric pattern, most central business districts of the towns and cities of South East England cities are surrounded by low-density areas, which include workplaces and housing at density levels of 1,000 to 5,000 people per square kilometre, while the outskirts are predominantly defined by suburban residential development.

Source: bing maps



1 Bloomsbury, London:
high degree of mixed used



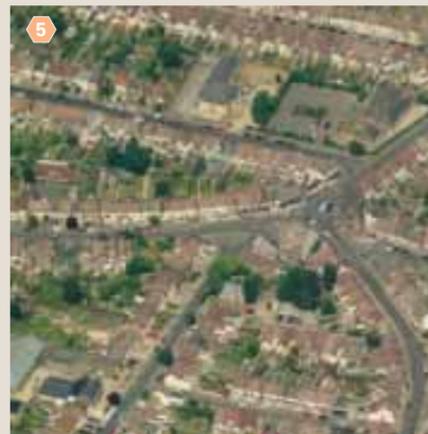
2 East Ham, London:
predominantly residential



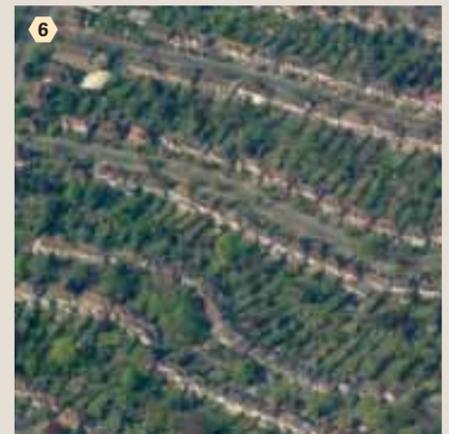
3 Reading Town Centre:
predominantly working



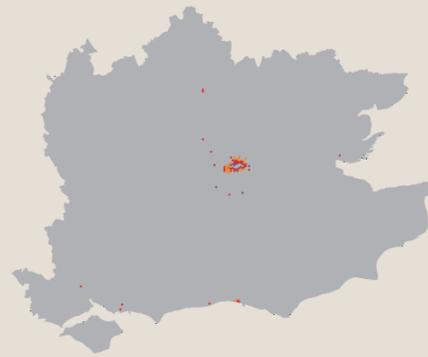
4 Ashford, Kent:
mixed use at average density levels



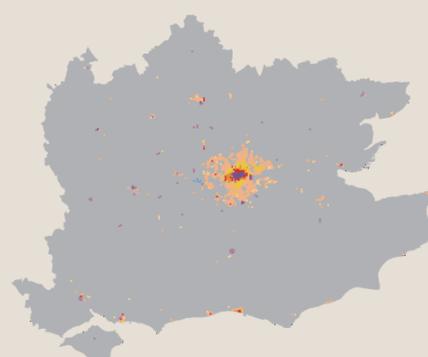
5 Gillingham, Kent:
average residential density levels



6 Orpington, London:
low degree of land-use intensity



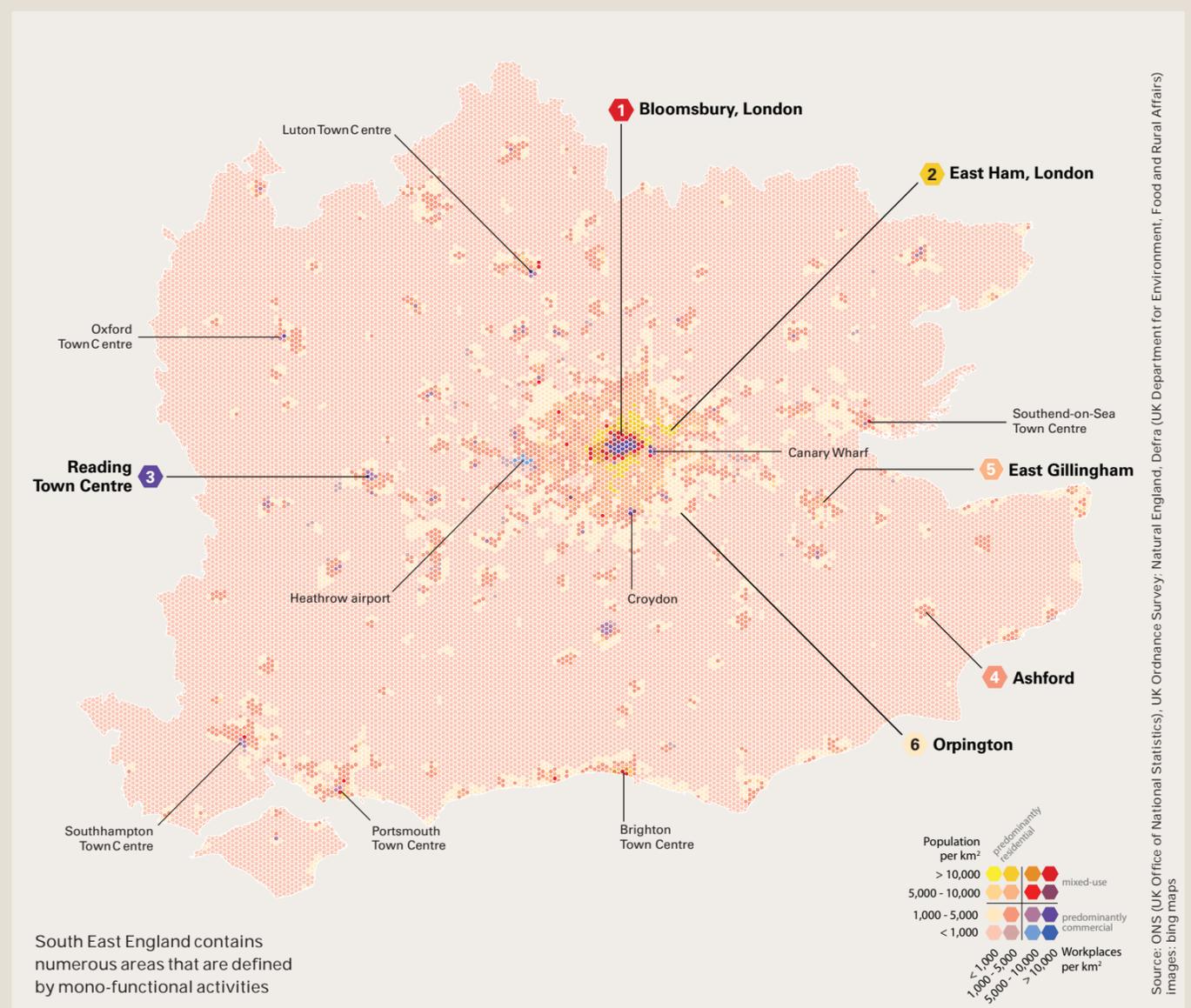
central urban areas



+ urban areas



+ suburban areas

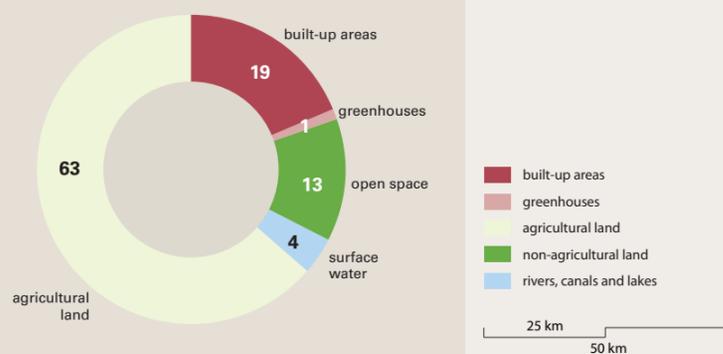


SYSTEMS OF OPEN SPACE

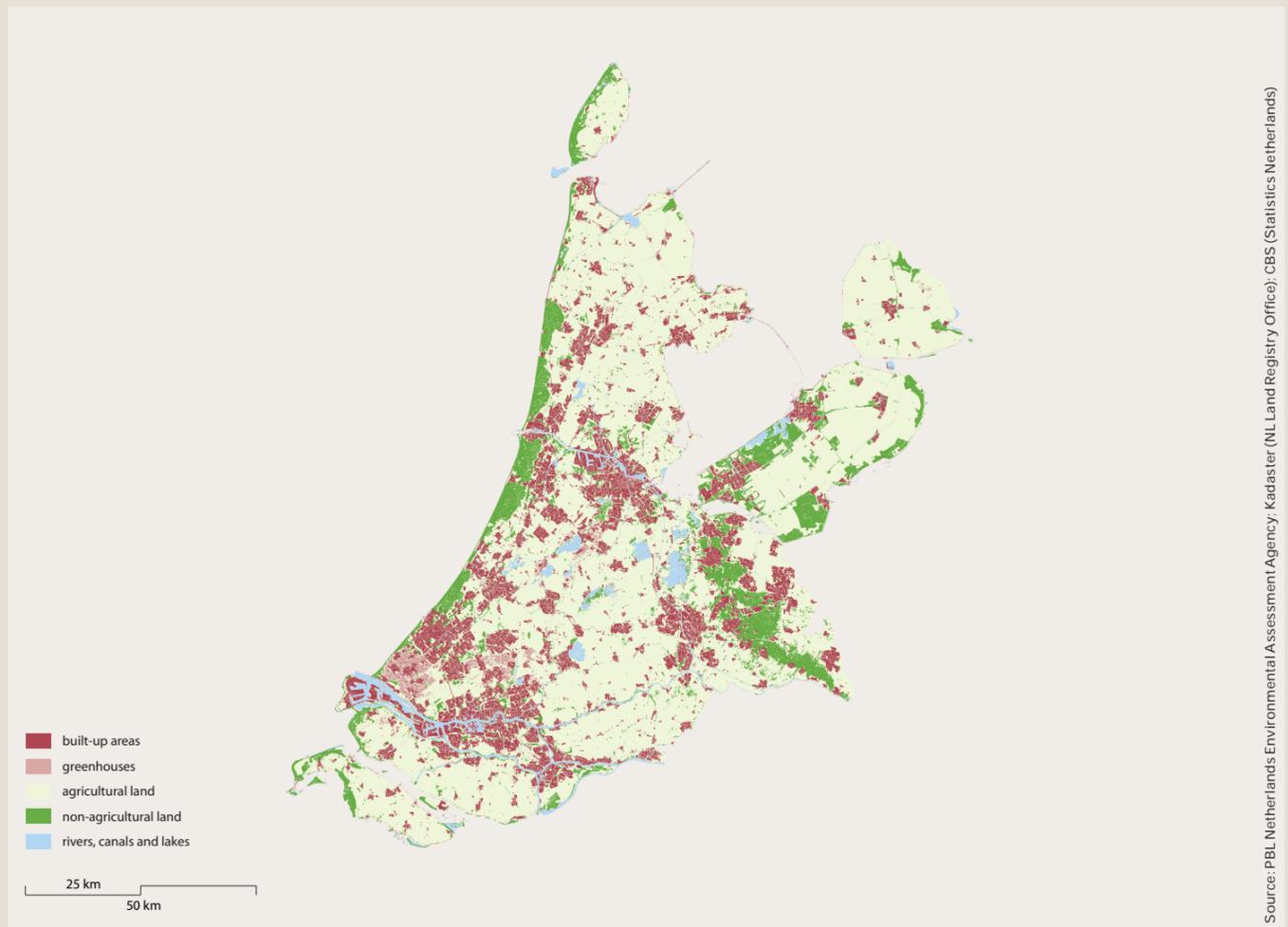
RANDSTAD

A PRODUCTIVE GREEN LANDSCAPE

The open space structure of the Randstad is made up of both inhabited and non-inhabited areas, which include agricultural areas with low-density concentrations of housing and workplaces as well as non-built-up areas made up of woodlands and wetlands. Agricultural activities take place very close to built-up areas, with large expanses of greenhouses (many for growing flowers) in the south-west of the region located close to residential suburbs. If one includes greenhouses, 65 per cent of the Randstad is occupied by some form of agricultural activity, which shapes the metropolitan landscape and the extra-urban experience for its residents.

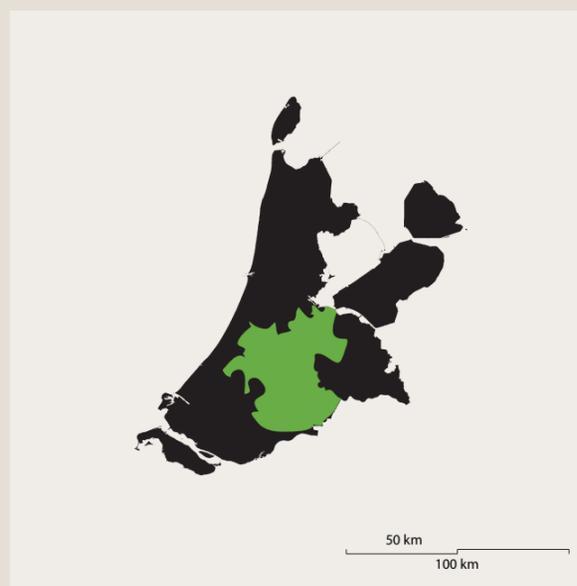


* includes rivers, lakes and canals

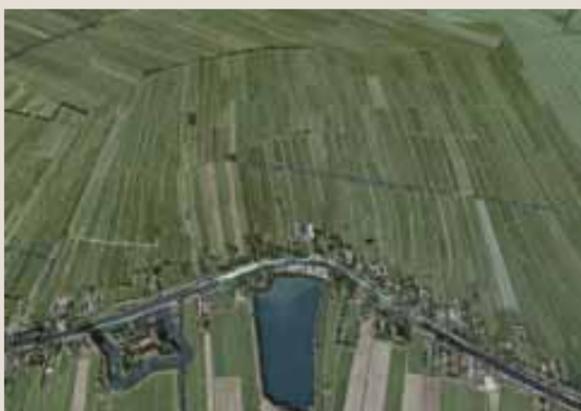


THE GREEN 'HEART'

The Green Heart was developed to contain urban expansion in the Randstad and provide recreational space for urban dwellers. Located in the Randstad's geographical centre, it offers significant expanses of open space, which none the less contain a number of smaller cities of 50,000 people or more, such as Zoetermeer, Alphen aan den Rijn, Gouda and Woerden. The average population density in the Green Heart is 340 people per square kilometre and about 7 per cent of its surface area is built-up.



Bodegraven, South Holland



Rotterdam, South Holland



Uithoorn, North Holland

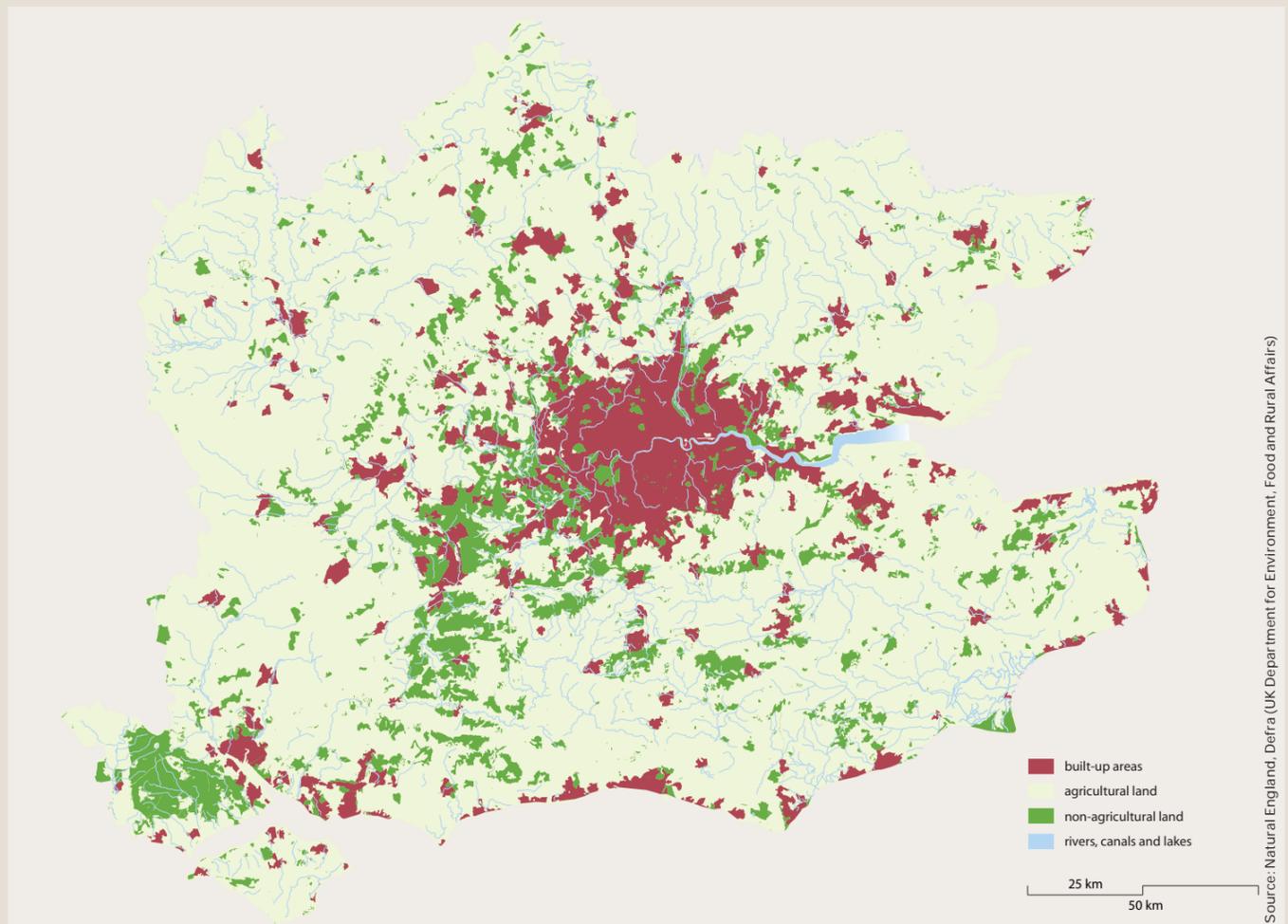
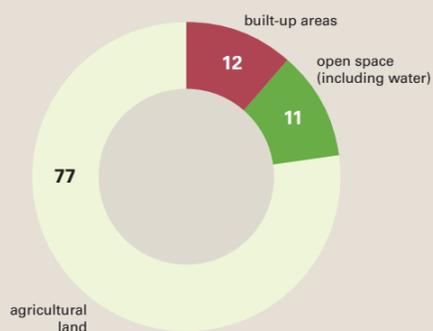


Source: I&M (NL Ministry of Infrastructure and the Environment); PBL Netherlands Environmental Assessment Agency; Images: Google Earth Pro

SOUTH EAST ENGLAND

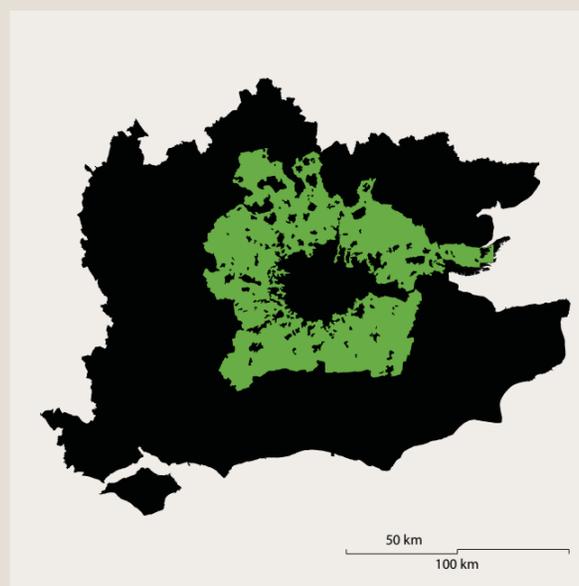
A REGIONAL GREEN NETWORK

Despite London's dominance, almost 80 per cent of South East England houses agricultural activities, which are less intrusive than the Randstad's intensive farming practices. Woodlands are scattered in small patches, mainly in the north and south-east of the region, while a continuous swathe of forests creates a green wedge that stretches from London to the coast. Access to these woodlands and other green areas (including some agricultural land in private ownership) is granted by the government via the Countryside and Rights of Way Act, which ensures that Londoners and other urban residents have legal access to green spaces for recreational use, providing an important ecological and health asset to the region.



THE GREEN 'BELT'

Implemented by the Greater London Regional Planning Committee in 1935 to contain sprawl at a time of intense growth, London's Metropolitan Green Belt surrounds the city and covers a surface area of more than 5,000 square kilometres (1,950 square miles). The average population density of the Green Belt is 420 people per square kilometre, and a total of 15 cities with more than 50,000 residents are located within its boundaries. In total, 14 per cent of the Green Belt is built up, but development opportunities are statutorily limited and protected by the planning inspectorate. The current London Plan has reinforced the role of the Green Belt as an essential tool to sustain the capital and the region's environmental balance.



Norwood Hill, Surrey



Epping Forest, Essex



Hemel Hempstead, Herfordshire



Source: Natural England, Defra (UK Department for Environment, Food and Rural Affairs); images: Google Earth Pro

PATTERNS OF MOBILITY

RANDSTAD

REGIONAL HUBS

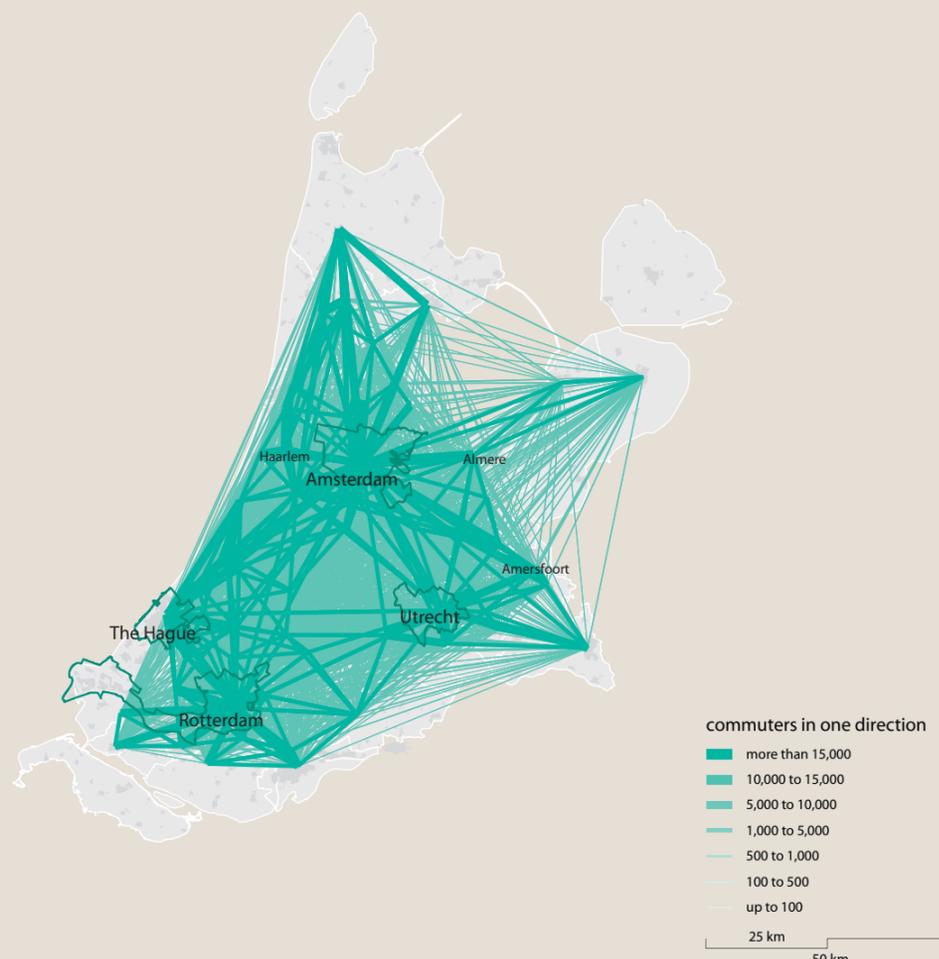
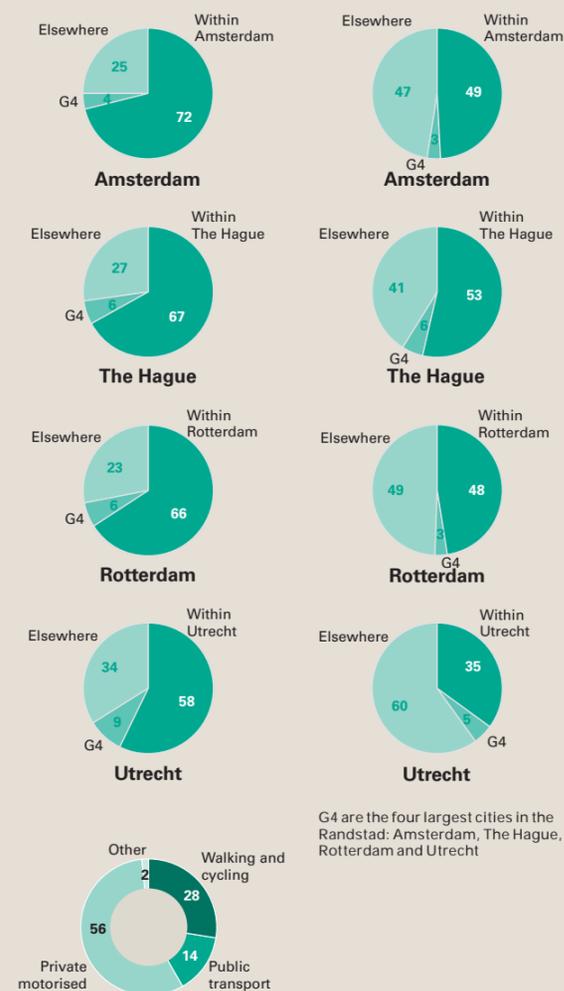
The Randstad's passenger and goods transport system is based on a dense rail and motorway network that links the four major cities, allowing residents to travel efficiently between urban centres and beyond. Apart from the high-speed rail link to Belgium, the region hosts two international airports and two major harbours, which are major hinges of global air traffic and shipping. Despite the provision of a sophisticated and well-integrated rail network, more than half of all commuters in the region travel by car, over a quarter walk or cycle to work, and only 14 per cent of commuter traffic use public transport.

Daily commuter flows exhibit a highly decentralised pattern around the Randstad's four centres. Around half of the people commuting into Amsterdam, The Hague and Rotterdam originate from outside the region, and more than two thirds commute within each municipality. The majority of people commuting to the four centres come from neighbouring municipalities. As many as 50,000 people commute between any two of the four centres; on a daily basis 13,000 people travel for example between Amsterdam and Utrecht, 12,500 between The Hague and Rotterdam, and 8,500 between Amsterdam and The Hague. This pattern of interconnectivity underscores the role the four centres play as regional hubs within the Randstad's patterns of mobility.



REGIONAL COMMUTERS FLOWS

Work-related commuter flows between municipal local authorities



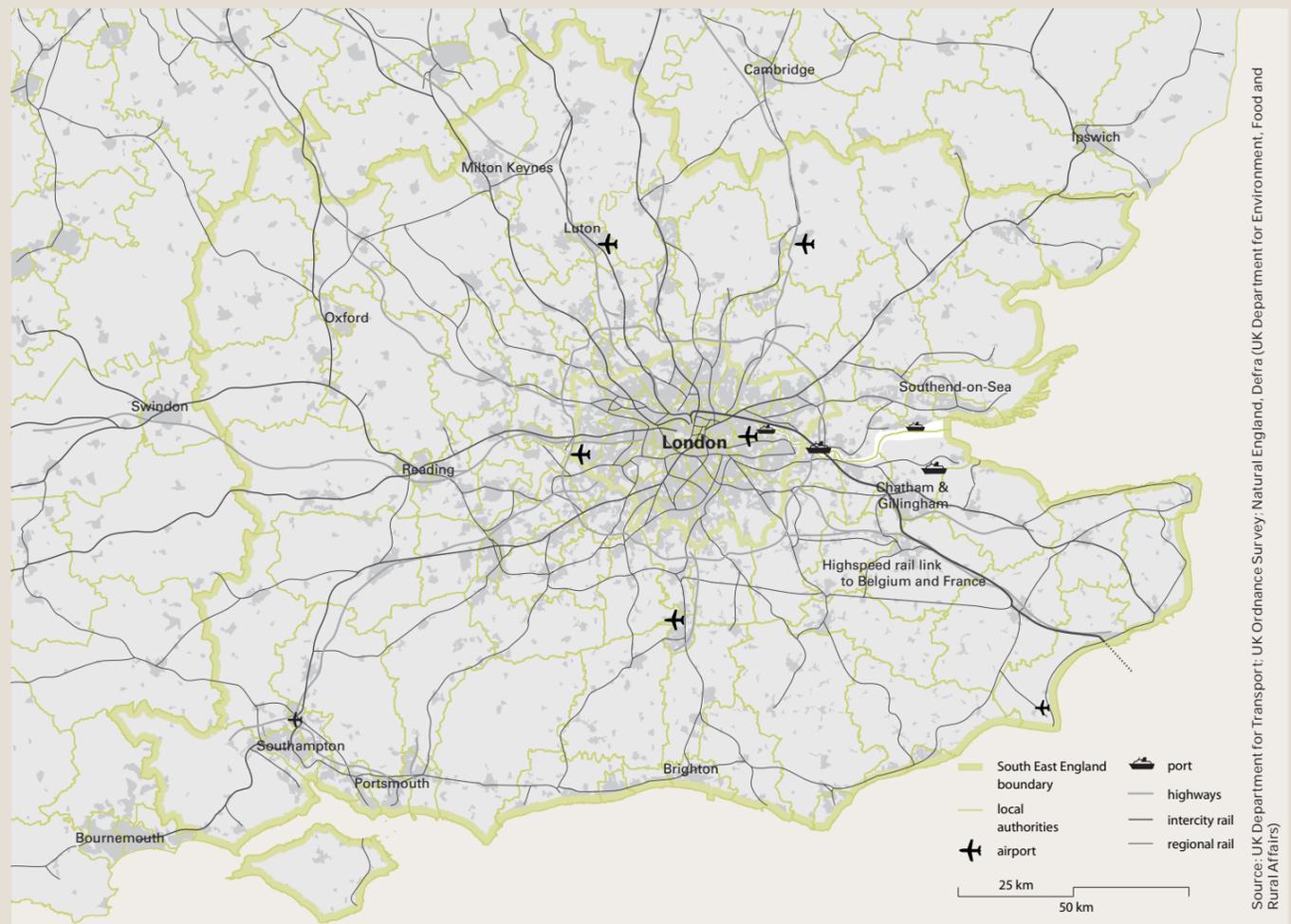
SOUTH EAST ENGLAND

LONDON'S GRAVITATIONAL FORCE

In South East England, the railway network is more extensive and compact than the motorway system, connecting London with regional sub-centres of Brighton, Southampton and Reading. Five international airports, a high-speed rail link and two major ports provide further access to the region.

The pattern of daily commuting confirms London's disproportionate centrality. It acts as a strong gravitational centre for regional commuters with almost two thirds of all regional commutes either starting or terminating in the capital, while only 7 per cent of those living in London travel to destinations elsewhere in the region. Especially strong links exist between Greater London and Southend-on-Sea (more than 30,000 commuters a day), Chatham and Gillingham (almost 20,000) and Brighton (about 10,000).

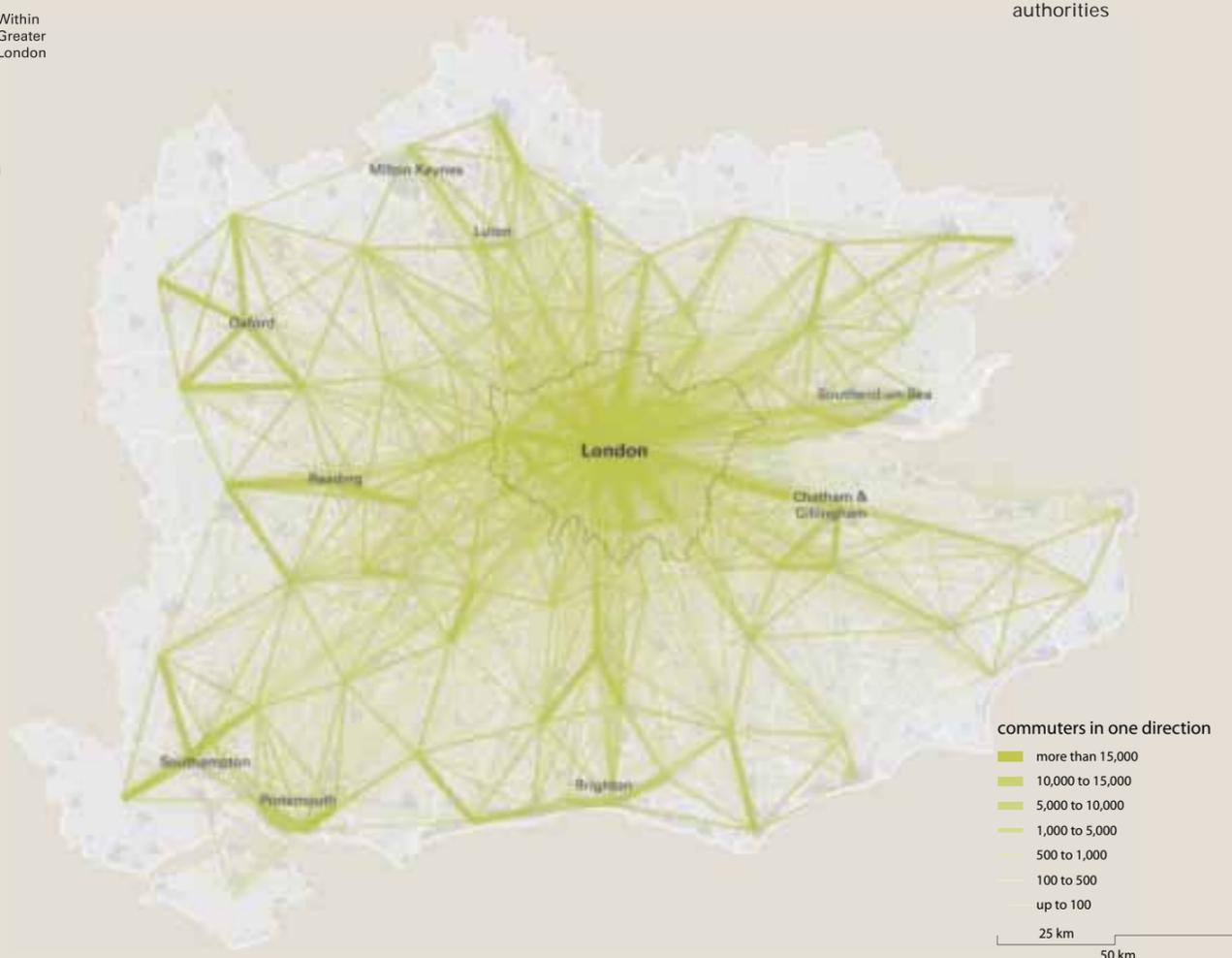
Some regional sub-centres have emerged as key destinations, indicated by the strong commuter traffic (up to 10,000) between Brighton, Oxford, Portsmouth and Southampton and their respective neighbouring centres. Notwithstanding London's dominance, this indicates a degree of functional decentralisation. A quarter of all commuters use public transport, representing a greater proportion than that of the Randstad. Yet, only 13 per cent of people walk or cycle to work.



REGIONAL COMMUTERS FLOWS



Work-related commuter flows between local authorities

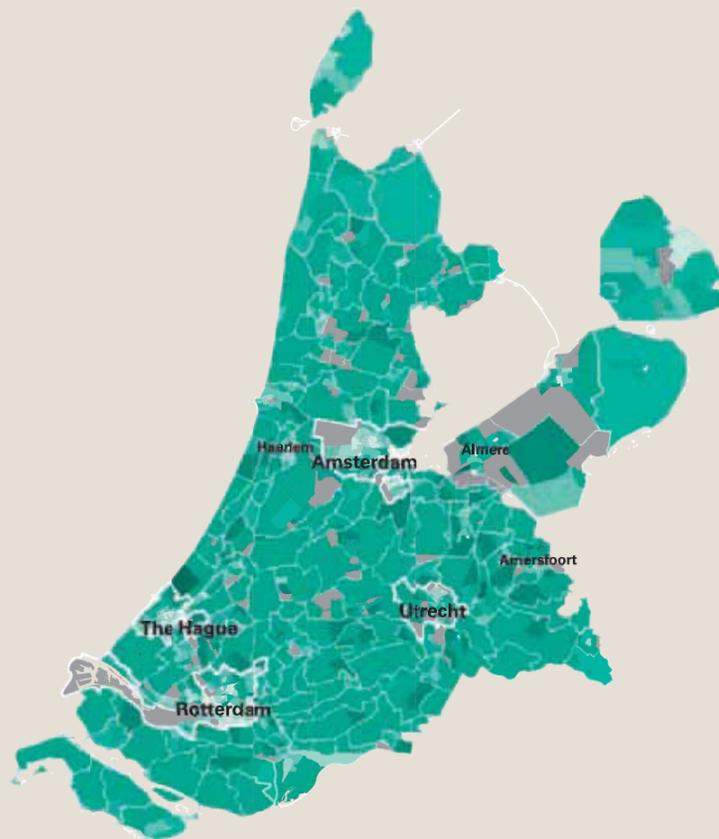
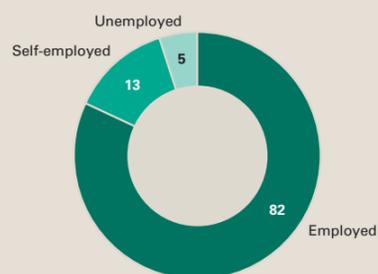


MAPPING SOCIAL DIFFERENCE

When compared to the rest of the Netherlands, the Randstad remains the centre of the high-income and highly skilled labour force. Nevertheless, the share of the two highest household income quintiles is above average throughout the region, with the exception of the four major centres, suggesting that wealthy residents and high-income households tend to locate themselves further away from the cities, often in suburban and low-density areas. In 2009, almost five per cent of all economically active people were unemployed in the Randstad; a proportion that mirrors the national average. Likewise, the ratio between employed and self-employed people in the Randstad is similar to the national average.

The share of households of the highest national income quintiles. The residence-based data is used as a proxy for high-skilled labour and includes estimates.

ECONOMIC ACTIVITY

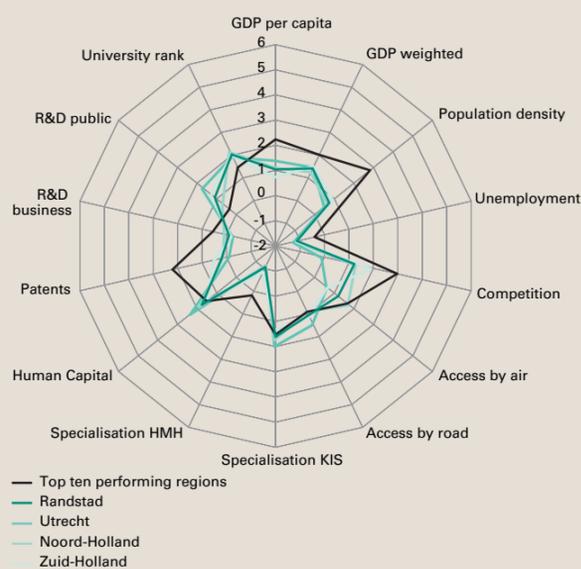


Household income relative to national average



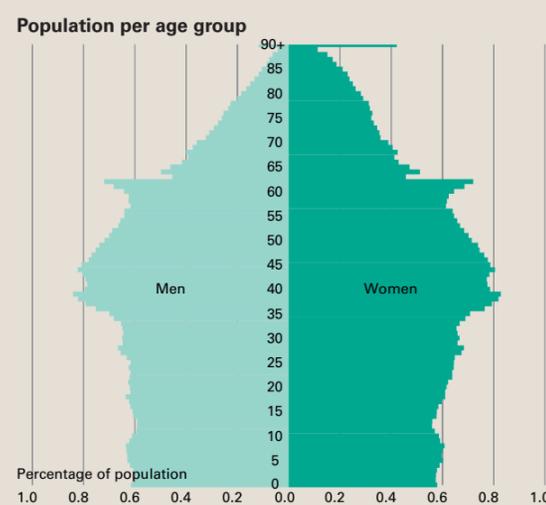
Source: CBS (Statistics Netherlands); ABF Research

BUSINESS CLIMATE



Measured by 14 indicators, the regional business climate of the Randstad is not very different from that of the top-ten European regions that receive direct foreign investment. Significant differences can be observed in the number of patents, for which the regions in the top-ten score much higher. A sub-regional subdivision also shows that the Randstad's performance is strongly carried by the province of North Holland, in which Amsterdam is located, which ranks 20th for attracting direct foreign investment in Europe.

AGE PYRAMID



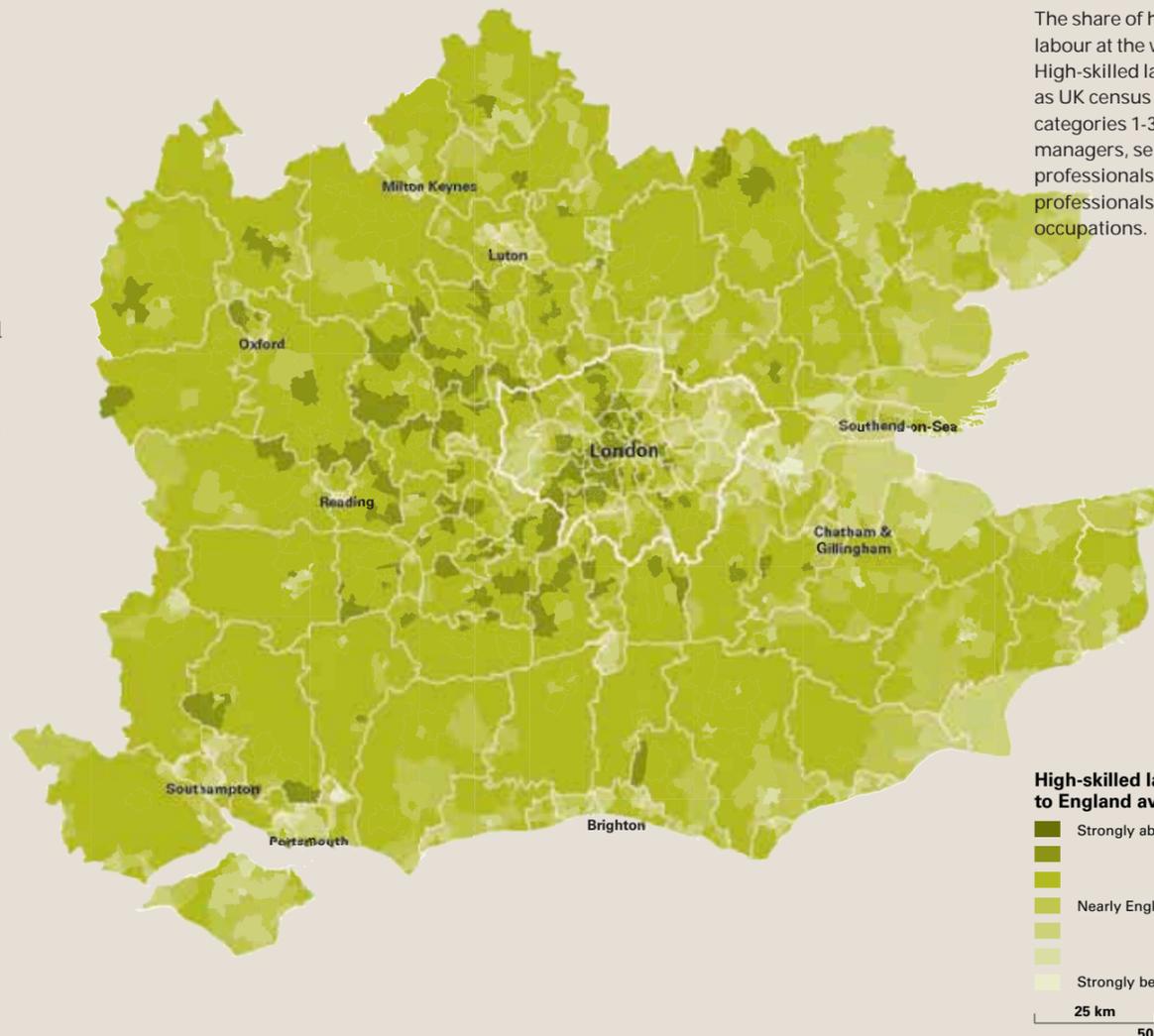
If immigration levels hold, the Randstad's age pyramid suggests that the regional population will remain constant, if not decline, in the foreseeable future. Eighteen per cent of the population is younger than 15, while 13 per cent is older than 65. However, given the large numbers of people who are in their 40s and 50s today, it is anticipated that the share of those over 65 will exceed that of those who are younger by a substantial margin in the coming decades.

Source: Business Climate: PBL Netherlands Environmental Assessment Agency; Age Pyramid: CBS (Statistics Netherlands)

SOUTH EAST ENGLAND

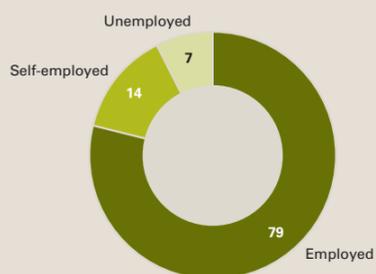
UNEQUAL SPATIAL GEOGRAPHIES

In most areas of South East England, the share of highly skilled labour is above the national average. However, the geography of this highly skilled labour exhibits a pronounced East-West divide with most deprived residents living in East London (beyond the City of London), while highly skilled individuals tend to live to the West and in the capital's outer suburbs. While above-average areas can be identified along the commuter corridors leading to Reading or Oxford, below-average concentrations are found in the East around Essex and Kent. In terms of unemployment, the region is slightly better off compared to the national average of 8 per cent in 2009. Almost 80 per cent of economically active people are employed, which is similar to that of the rest of the country.

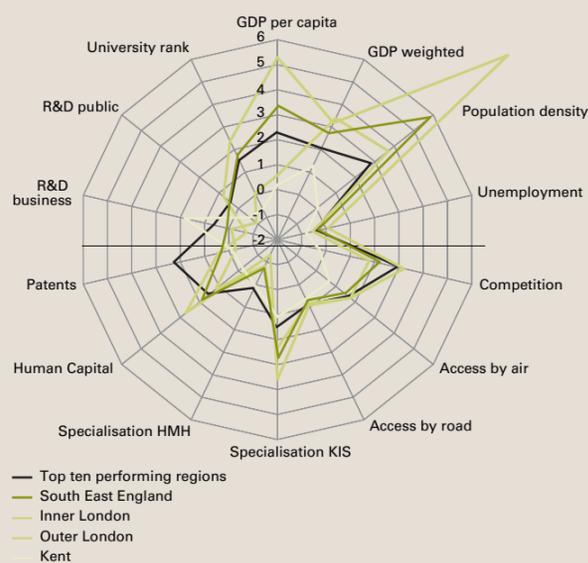


The share of high-skilled labour at the ward level. High-skilled labour is defined as UK census occupation categories 1-3, which include managers, senior officials, professionals, associated professionals and technical occupations.

ECONOMIC ACTIVITY

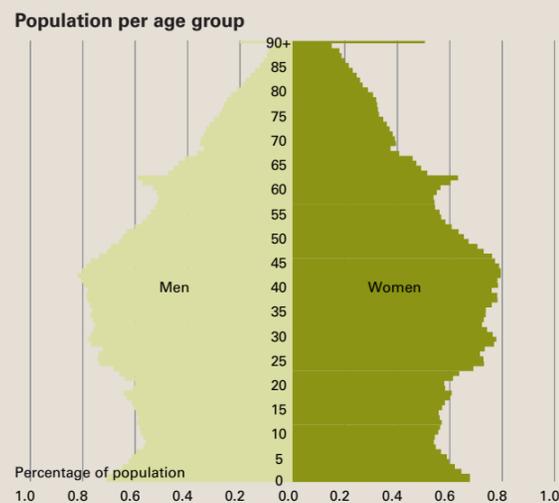


BUSINESS CLIMATE



Mapping South East England's performance according to the 14 business climate indicators, presents a strong intra-regional variation. Inner London, ranking first in Europe for direct foreign investment, strongly outperforms the other regions in Europe's top ten, on almost all counts. Other top-ten regions seem to be stronger in patents, research and development. Despite these differences, all regions perform slightly above average in terms of unemployment.

AGE PYRAMID



As in the Randstad, ageing populations are also a concern for South East England. The share of people younger than 15 is 18 per cent, and 15 per cent for those older than 65 in a region where people have a higher than average life expectancy. The number of children below the age of 5 has increased in recent times, due to strong levels of foreign migration. In London alone, over 90 per cent of new residents over the last decade were born outside the UK.

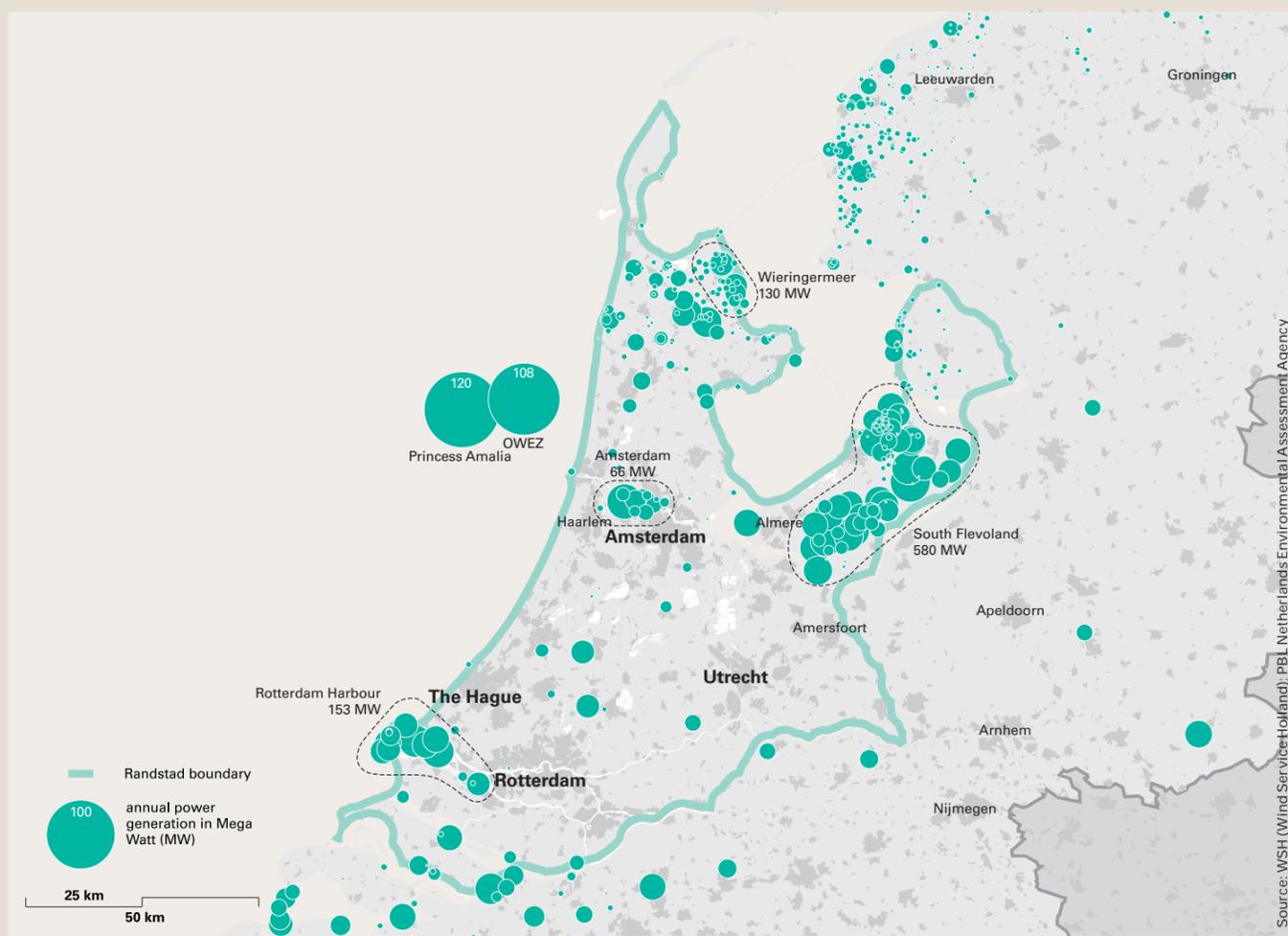
Source: ONS (UK Office of National Statistics)

Source: Business Climate: PBL Netherlands Environmental Assessment Agency; Age Pyramid: CBS (Statistics Netherlands)

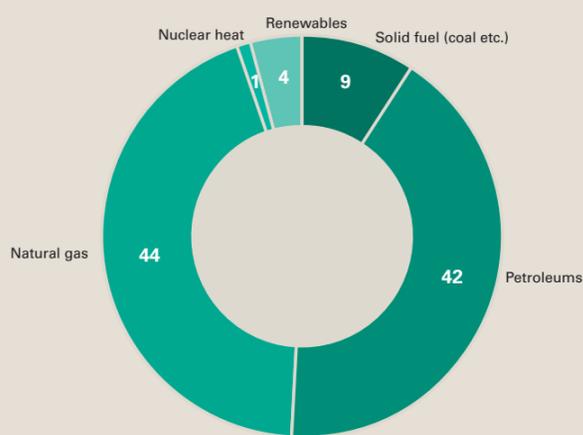
EXPLOITING NATURAL ASSETS

In the Randstad, almost all primary energy is supplied by petroleum, gas and solid fuels and CO₂ is emitted mainly by power plants, factories, transport and households, with industrial emissions the worst offenders. Apart from redesigning industrial processes to be more energy efficient, carbon reduction strategies involve insulating and retrofitting buildings, as well as shifting energy production towards renewable energy sources. Biomass and wind energy are the main sources of renewable energy, accounting for four per cent of primary energy consumption.

Given the country's flat landscape and exposure to wind, there is a significant potential to increase wind generated energy. Two offshore wind farms, Princess Amalia and OWEZ, already produce an annual amount of 228 MW, while wind farms on land contribute almost 1,200 MW. The density of wind farms is relatively high, especially in the southern part of the Flevoland province, where almost half of the regional output is generated. Other significant spatial clusters of wind farms are in the North, in and around the municipality of Wieringermeer, the harbour of Rotterdam and within the region of Amsterdam. There are future plans to build large-scale wind farms of over 100 MW.



ENERGY GENERATION



Rotterdam Harbour, South Holland



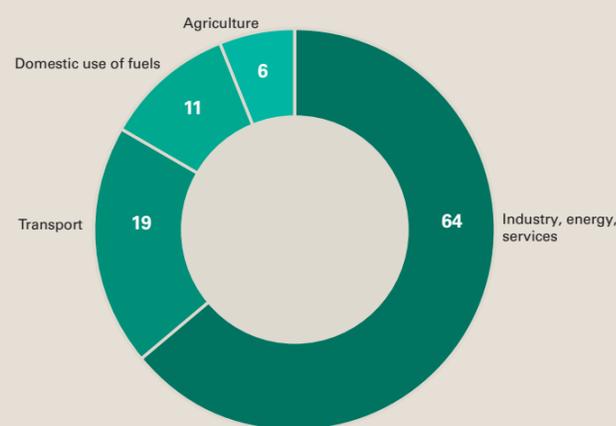
Solaris pavilions, Rivium, South Holland



Zoneiland, Almere, North Holland



CO₂ EMISSIONS



Source: CBS (Statistics Netherlands); ECN (Energy Research Centre of the Netherlands); PBL Netherlands Environmental Assessment Agency; RIVM (National Institute for Public Health and the Environment)

SOUTH EAST ENGLAND

OPTIMISING THE POTENTIAL

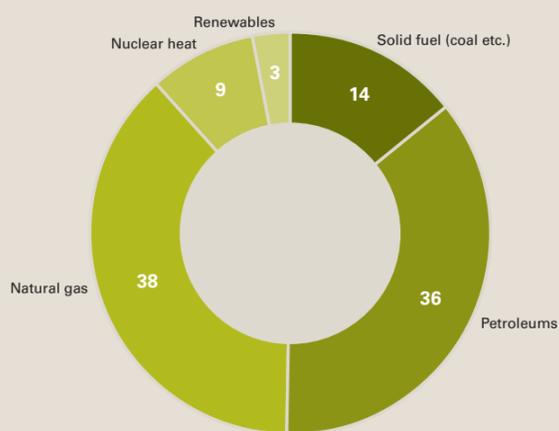
More than half of the CO₂ emitted in South East England stems from production-related industrial processes and energy generation. The large share of domestic fuels indicates that there is a strong potential for reducing CO₂ emissions through retrofitting buildings. In terms of power generation, conventional and carbon-intensive energy and nuclear power sources are prevalent in the United Kingdom. Wind energy is widely seen as a key element in the decarbonisation of electricity supply and, at present, meets approximately two per cent of the electricity demand, while other power generation renewables account for three per cent.

The majority of wind-generated electricity in the United Kingdom is produced by large, grid-connected turbines. South East England has a number of wind farms, but the greatest potential for wind energy generation is in the northern and western parts of Britain. The second largest wind farm (Thanet) generates an annual wind power of 300 MW. It is located some 11 kilometres (6.7 miles) off the Kentish coast and constitutes one of four offshore wind farms in the region's proximity, generating approximately 563 MW annually. Wind farms on land, with 80 MW, contribute less to this type of power generation in South East England, which is mainly due to poor wind quality.



Source: LDA (London Development Agency); RenewableUK; Natural England; Defra (UK Department for Environment, Food and Rural Affairs)

ENERGY GENERATION



Gunfleet Sands, Clacton, Essex



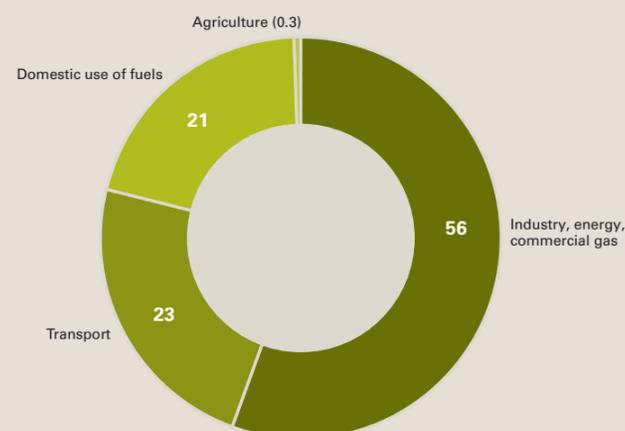
BedZED (Beddington Zero Energy Development), London



Palestra House solar panels, London



CO₂ EMISSIONS



Source: DECC (UK Department of Energy and Climate Change)

IT'S THE AGGLOMERATION, STUPID!

Otto Raspe, David Hamers and Willemieke Hornis

If 'distance is dead', then why are New York, Tokyo and London still at the top of the economic world hierarchy? How do global economic activities relate to local business opportunities in the different locations that make up the agglomeration; not only in the strong city centres, but also in the more peripheral economic hotspots and fringe locations?

The past few decades have witnessed a sharp rise in the globalisation of economic activities. This phenomenon is expected to become even more manifest, as rapidly falling communication and coordination costs and the proliferation of access to knowledge will make it easier to relocate knowledge-intensive production and services to other countries. Thomas Friedman, among others, argues that these developments level the playing field between countries, producing a 'flat world' in which geography matters less and less.

Recent evidence suggests that the globalisation of our economy does not mean that 'distance is dead', as some have said, or the 'world is flat'. The continued growth of agglomerations and concentrated clusters shows that economic activity is not spreading out. On the contrary, globalisation is accompanied by the assertion and reassertion of agglomerative tendencies and cluster advantages. A global-local paradox seems to exist, in which global competitiveness is driven by local initiative and local characteristics. This poses a policy and planning challenge at the national and regional level. Because of the key role of city regions in national economies, governments at both levels need to know what binds economies to agglomerations and what drives business location decisions towards cities. Recently the European Union's economic development agenda was refocused along similar lines: on the role of regions as Europe's powerhouses.

Nations and city regions competing to attract businesses is nothing new. However, today this competition is increasingly taking place in the global marketplace, with businesses looking for investment opportunities abroad, and selecting particular regions within foreign countries. A good example of how the global-local paradox is becoming a reality is the dramatic growth of so-called foreign direct investment (FDI) in particular city regions, while other regions lag behind. In the global marketplace, nations and city regions compete for FDI to increase their standard of living. What location preferences do these foreign firms have? A relevant question, since many government initiatives aim to attract FDI by creating an excellent business climate.

In recent years, policy makers have become focused on the innovation-enhancing potential of FDI, therefore focusing to attract this type of investment in knowledge-intensive activities. This makes one wonder what characterises the regions that are successful in attracting knowledge-intensive FDI, and how attractive the London and Randstad regions are for such investments.

When analysing FDI on a sub-national level, Europe shows significant variation. The FDI landscape is not flat but spiky, and this pattern is especially visible in urbanised regions and regions that specialise in specific industrial and technological clusters, which attract high shares of knowledge-intensive FDI. This uneven spatial pattern in Europe illustrates that competitive advantages in the global economy are in fact local. Examples of top performing regions are London, Frankfurt, Milan, Paris and Munich.

Therefore we conclude that as long as resources, capital, technology, and other input can be obtained efficiently from global markets and via corporate networks, agglomerations, cities and clusters will remain important. This gives rise to the question what underlying principles actually bind the economy to agglomerations.

The literature on urban economics is quite specific on this. Firms, especially international corporations, choose agglomerations, cities and clusters, because of the respective advantages that stem from the strength of specialisation and urban size, density and diversity. These advantages fall into three categories. First, dense agglomerations contain large numbers of suppliers and buyers, and provide easy access to needed resources. Second, a dense and specialised labour market increases labour flexibility and helps firms avoid the risk of costly delays in finding the skills on which they depend. Third, cities, agglomerations and clusters generate learning and innovation because they are the locus of intense knowledge spillovers fostered by face-to-face contact. In a globalised economy they offer proximity, which is a prerequisite for the transfer of people and ideas.

City regions that are attractive to foreign firms have strong market characteristics: high Gross Domestic Product (GDP) per capita and/or close proximity to other high-GDP regions, good accessibility by car and by air, strong competitiveness, high population density and low unemployment. In addition, attractive regions score high on knowledge indicators like R&D intensity (related to both business and public sector), number of patents, the level of education of the workforce, the presence of top universities, and specialisation in

high and medium high-tech production or knowledge-intensive services. Successful regions score above the EU average on all these indicators.

Given that South East England and the Randstad are both attractive locations for foreign knowledge-intensive firms, it would be interesting to know what the characteristics are of their regional business climates and compare these to the best-performing regions in the EU. It must be stressed, however, that there are large differences between South East England and the Randstad, for instance in population densities, GDP and specialisation in knowledge-intensive services. But, when compared to the top-performing European regions, both South East England and the Randstad have a strong business climate in terms of market potentials and public sector knowledge (presence of top universities, public sector R&D), but less so for technological knowledge (R&D business, patents).

So far we have addressed 'agglomeration economies', without having been really precise about what we mean by agglomerations and at what spatial scale these economies operate. Generally this occurs at the sub-national level in metropolitan areas, but these take many different forms. The classical model is that of a monocentric big city surrounded by suburban areas, of which London is a good example. The more polycentric structure of the Randstad is another example. Although the internal structures of city regions are often ignored, they are definitely relevant.

If we look at travel patterns and business relationships in the Randstad, we see that it consists of four relatively small central cities: Amsterdam, Rotterdam, The Hague and Utrecht. These so-called Daily Urban Systems (DUS) show more intra-regional commuting and business relationships than interactions with other DUS regions. The mass of a region (in population and jobs) and the distance between regions largely determine the interaction between them: the greater the mass and the shorter the distances the more interdependencies exist. Within the Randstad intra-urban economic interdependencies are stronger than interdependencies between cities. On the other hand, half of the inter-firm relations are with (inter)national regions outside the Randstad, which causes spatial and functional dependencies.

Although the jury is out on what spatial structure is better for overall economic performance, there is a lively debate on this topic. A recent study of American cities shows that polycentricity is associated with higher labour productivity. This appears to justify suggestions that so-called agglomeration diseconomies are more limited in polycentric metropolitan areas, whereas the cities in these areas share a certain level of – advantageous – agglomeration. However, it was also found that a network of proximate smaller cities cannot be a substitute for the urbanisation economies of a single large city.

In short, when analysing agglomerations it is important to take several sub-level regions or locations into account. For the Randstad, this means that the analysis of the central cities should include their suburbs. For London, a distinction must be made between the inner city, the outer city, and

other sub-regions such as Kent.

Considering differences between sub-regions within both agglomerations, each sub-region has location-specific characteristics. The unique economic force and density strongly come to the fore, but also the relatively high R&D investments in the private sector in Essex, and the air travel accessibility of Amsterdam.

This more sub-regional focus illustrates that economic activities are not spread evenly, but are concentrated in specific places with distinct characteristics. An example is the presence of 'hubs' that link global pipelines with local buzz. The Zuidas in Amsterdam is such a hub: a new central business district, located at the edge of town, but well connected by train and motorway to the international Amsterdam Airport Schiphol. Canary Wharf in London is another example: a business hub located at some distance from London's financial heart, but near London City Airport and good public transport links.

In relative terms, both South East England and the Randstad are dense regions, a characteristic that may apply to existing agglomeration economies. However, compared to other top world cities, both agglomerations have relatively low-density figures. This leads us to consider whether other, softer factors are influencing the economic performance of agglomerations.

These softer factors are often referred to as 'quality of living', a concept that is increasingly attracting attention in economic policy circles. Quality of living refers to a wide array of qualities, ranging from safety, education, hygiene, health care and culture, to the environment, recreation, political-economic stability and public transportation. All may influence multinational companies' decisions on where to establish offices or plants.

On the basis of FDI, foreign firms do seem to be attracted to locations that score high in terms of quality of living. In a benchmarking study of business climates in European regions London and Amsterdam score well. Although a lot of research still has to be done, findings like these suggest that both 'hard' agglomeration economies and 'soft' factors matter in the global knowledge economy.

With regards to questions like these – that address both density and quality of living – it is important to highlight one of the great assets of agglomerations: their ability to host internationally operating firms, as well as many local businesses (in less central and less expensive locations). Both types make agglomerations the places where local buzz and global pipelines come together and create an excellent climate for business opportunities.

As agglomerations are not homogeneous in terms of spatio-economic development, but instead are often characterised by large within-city heterogeneity, planners should allow for innovative solutions to the challenges in both central and more peripheral locations. Within regions, different areas show varying spatio-economic developments. In the Randstad and South East England, developments not only take place in urban centres and sub-centres, but also in less developed, less densely built areas at the urban fringe. Although a quick glance at the respective maps of both city regions shows quite clear-



Your Captain Lucht fotografie

New and existing financial and business districts continue to drive the regional Dutch economy (Zuidas, South Amsterdam)



Richard Bryant / Arcadid

Canary Wharf marks the growing expansion of London's business activities eastward (view from the City of London)

CHANGE IN LAND USE IN THE RANDSTAD, 1989–2006



cut monocentric and polycentric urban structures, a more detailed analysis of the morphology of fringe areas – locations adjacent to the existing built-up areas – shows far more complex, irregular, mixed, amorphous urban and rural land-use patterns. Various studies show that fringe fights in these fragmented rural areas have increased the pressure on the landscapes of both the Green Belt and the Green Heart.

Although a large body of geographical and urban planning literature pays special attention to the risks associated with urban sprawl, economic studies also highlight the qualities of fringe areas in terms of business opportunities and economic performance.

For different reasons the urban fringe is important for the spatio-economic development of urban regions. First, relatively cheap land provides businesses with opportunities to expand. Second, motorway locations provide companies with connections to the hinterland. Third, fringe areas offer opportunities for medium- or low-density housing. It is assumed that a sufficient supply of low-density housing, in addition to housing in high densities in the inner cities, adds to the quality of the overall business climate, which in turn is important for a city region's economic performance.

In the international literature, urban planning in fringe areas is considered to be extremely complex, largely because of conflicting land demands – for employment, (low-density) housing, national and regional infrastructure, recreation (for urban dwellers), (urban) agriculture, and nature – combined with spatial fragmentation, inter-municipal rivalry and a lack of clear integrated (as opposed to sectoral) spatial planning strategies. In such a complex

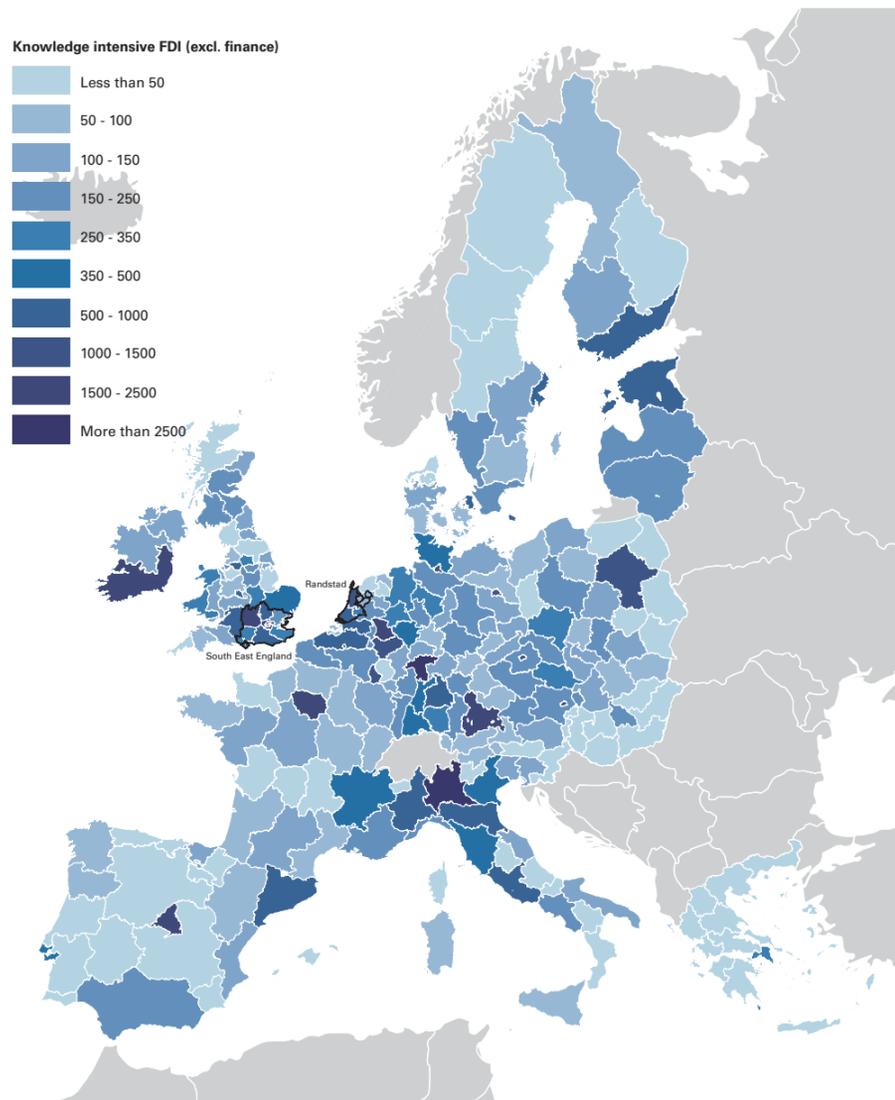
context the desired balance between growth opportunities and quality of living is not easily found.

The above land-use map of the Randstad illustrates the complexity of the regional planning issues. The map shows five decades of compact urban development, the traditional, but increasingly contested national planning approach in the Netherlands. The urbanisation patterns differ between and within sub-regions. For example, in the Amsterdam region, new urbanisation takes place in smaller cities away from the capital, such as in the Haarlemmermeer and the relatively new town of Almere. In the south wing of the Randstad, urbanisation has transcended the scale of the urban fringes of Rotterdam, Delft, The Hague and Zoetermeer. Many new construction projects are located away from the larger cities, in the wider peri-urban region. There, they connect with smaller centres and/or new or existing infrastructure, such as Randstad Rail.

The map shows that local urban growth generally complies with the national and regional policies of compact urban development, but that this can result in unplanned contiguous urbanised regions in the long run. In terms of agglomeration effects this may be beneficial. However, for urban growth to support economic performance, including aspects of quality of living and the business climate, as well as sustainable growth in the broader sense, a focus on the contrast between urban and rural, or a new focus on innovative combinations of both seems to be needed.

Variety and contrast can be enhanced by increasing densities in inner cities as well as near infrastructural nodes on

FOREIGN DIRECT INVESTMENT ACROSS THE EUROPEAN UNION



the urban fringe, and by simultaneously protecting and developing high-quality nature and recreational areas, not only in the countryside but also in selective fringe areas. Given its (economic) importance for the Netherlands as a whole, the urbanisation of the Randstad requires attention in a national spatial strategy. However, given the spatial differences between urban sub-regions in the Randstad, a generic planning concept appears to be inadequate. National planning should allow for innovative solutions for the complex problems and opportunities on the urban fringe in a set of complementary (sub-)regional plans.

The key challenge for planners is to enhance the strengths of agglomerations. We saw that although the playing field is becoming level globally, firms do not locate 'just anywhere' in the global spatio-economic landscape. Especially urban agglomerations and regional clusters play a key role in the modern knowledge economy. For planners, creating attractive agglomerations implies channelling urban growth and developments in such a way that the economies of scale are maximised, and negative effects like congestion are minimised. One way of doing this is by providing good proximity or accessibility for production and consumption markets. But it is just as important to ensure a good living and working environment and to create attractive places where knowledge is shared and innovation is developed. Agglomerations in developed countries like the Netherlands and the United Kingdom simply cannot compete with upcoming megacities, such as those in China and India, on the basis of size or cheap labour, and increasingly have to

distinguish themselves by offering an excellent quality of living.

Planning on a regional level is necessary to ensure the array of qualities and places, both urban and rural, that are needed to create attractive agglomerations. Hubs are especially important: Canary Wharf and the Zuidas are places that connect the local buzz of agglomerations to the global pipelines.

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GREEN BELTS AND GREEN HEARTS

Ton Dassen and Atakan Guven

To the casual visitor, the English and Dutch countryside may seem relatively unchanged from when they first entered our collective consciousness through works of art. However, these areas have undergone profound physical and conceptual transformations. With the advent of modern planning, they had become functional buffers against urban encroachment. At present, they are undergoing yet another metamorphosis: they are turning into consumption landscapes for urbanites.

The English and the Dutch landscape are both renowned for their rich human history set in natural surroundings. Nineteenth-century landscape paintings depict an England of villages and parish churches embedded in scenery of hilly green meadows and woodlands. This (re)presentation of a picturesque countryside within an idyllic natural setting is far removed from the grim reality of the industrialising cities at the time. Similarly, no visit to the Netherlands is complete without a trip to the iconic Dutch windmills in sumptuous green polders. These landscapes recall a seventeenth-century Netherlands of trade cities dotted across a flat landscape of lakes and polders. Here, the calm, geometric regularity of ditches and dykes bears witness to the Dutch acumen in taming the natural elements.

Despite rapid urbanisation, the rolling landscape of South East England and the lowlands of the Randstad continue to shape their identity. These 'open areas' also shape the physical morphology of their respective regions: both the Green Belt and the Green Heart mark the boundaries of urban development. The land contained in these areas supports vibrant ecosystems and offers natural qualities such as soil fertility, pollination, flood protection and air filtration. Furthermore, they offer space for a variety of agricultural and recreational uses. For the visitor, accessibility determines the way the landscape is experienced. In rural South East England, with its hedges, walls and fences that form patterns of containment, access is granted via myriad country foot- and cycle paths, whereas in the Randstad, it is a planned network of cycle paths that to a certain extent facilitates its citizens' enjoyment of the Dutch green landscape.

In both contexts the influence of the city is increasing. For over sixty years the urban containment policies of the Green Belt and the Green Heart have helped to prevent sprawl, saving thousands of hectares of countryside from development while ensuring that rural towns retain their unique character. In both regions, the idea of green space carries a double meaning. On one level, it refers to what is inside: nature, and recreation and agriculture. At another level, it refers to what is outside: a buffer to shape urban form. According to

the latter view, the London Green Belt helps maintain the city region in its monocentric form and the Randstad's Green Heart keeps its four major cities at a safe distance from one another.

The two urban containment policies have, to a great extent, been successful, but they need to be recalibrated to fit present-day realities. Today, neither the Green Belt nor the Green Heart resembles the rural idyll of old. In the Netherlands, vast greenhouse complexes and mega-structures for livestock have transformed the open polders into an industrialised landscape. At the same time, farmers are diversifying their operations by providing recreational facilities, such as campsites or riding schools, and governments create 'new nature' and new infrastructure to connect the main ports with the (European) hinterland. In South East England the demands for new housing is putting green areas under pressure. As a result, the rural and the urban are no longer opposed but inextricably linked in today's urbanised region. The landscapes in both regions have become an integral part of overlapping, multiple systems, including agricultural production, ecological services and recreational areas for the surrounding towns and cities.

THE PAST AND THE NEW ERA OF MULTIFUNCTIONALITY

Today, as policies move towards localism, city regions can learn from each other. This presents an interesting starting point to revisit the role of green space in South East England and the Randstad, and specifically to assess how both the Green Heart and Green Belt can be reframed as multifunctional green infrastructure that can deliver sustainable development to a vibrant, growing region.

In order to do this, it is useful to first take a step back in time, to when policy interest in green environments in England and the Netherlands first arose: the period of the Industrial Revolution. It was then that the balance between urban and rural population began to shift, changing the spatial relationship between cityscape and landscape. In this period of intense urbanisation, the Romantic ideal of town and surrounding countryside was in danger of becoming inverted: the countryside was increasingly enclosed within and becoming part of the urban region. As a result, a policy response was deemed necessary.

In the UK, Green Belts were first conceptualised by Ebenezer Howard's Garden City movement as a means of containing urban growth and preserving open space. By an Act of Parliament in 1938 and the Town and Country Planning Act of 1947 new policies were formulated that allowed local authorities to designate Green Belts around their major towns and cities, but it wasn't until the 1950s that London's 4,000 km² Green Belt started to take the shape we know today.

In the western part of the Netherlands a series of urban and suburban expansions in the late 1950s began to threaten the central green core, leading to intervention by the national government. A national policy document on the development of the western part of the Netherlands issued in 1958 sought to preserve green space by protecting the Green Heart and creating green buffers (*Rijksbufferzones*) between the large cities. The buffer zone policy established strict regulations for housing development; the available land was to be used primarily for agricultural purposes and, eventually, be accessible for recreational use. As a result of the polycentric urban form of the Randstad and these planning policies, almost all Randstad inhabitants are no further than five to six kilometres away from open, non-agricultural green areas. In the monocentric region of South East England about a quarter of the population lives further away from large, open non-agricultural green areas, and about 5 per cent are at a distance of more than 10 kilometres from green landscape.

In the Green Heart a zero-migration policy applied: new housing was intended solely for people born in the Green Heart. This has had mixed success. Despite the popularity of 'living in the country but with the city close at hand', population growth in the Green Heart equals the Dutch average. This is, as the policy intended, mainly due to indigenous population growth: immigration levels into the Green Heart are below the Dutch average. Local authorities generally only grant permission for new housing construction within existing urban areas.

Not only urban development, but also agriculture is putting pressure on green areas. Growing economies of scale pose a major threat to the landscape and its qualities. The proliferation of greenhouses (which, unlike other parts of the agribusiness, are still very competitive, but do not match our traditional image of the rural landscape), the development of woodlands and new nature (man-made, monitored and controlled), the construction of business parks and the expansion of villages and towns, have changed the image and size of the green landscape significantly. Land-use conflicts are increasing too: the peat landscape and salination of the deep polder areas require more and more water to be introduced, but the landscape's agricultural function requires water levels to remain low. This situation will be further complicated by climate change.

At present, many areas of the Green Heart have become an uncoordinated patchwork of rural and urban functions, blurring the distinction between the two. In effect the boundaries of the Green Heart have been moved in order to enable urban development along city edges. Especially near The Hague and Rotterdam, ongoing urbanisation and infrastructure development has fragmented the rural landscape, creating areas that are congested and monotonous. This is a far cry from the idyllic landscapes of the Dutch masters. Towards the centre of the Green Heart, the polder landscape has been less affected, and in its north-east one can still find attractive recreational areas and nature reserves.

Recent changes to the national spatial policy have cast a shadow of uncertainty over the future of the Green Heart. In order to strengthen the Netherlands' position in the

global economy, the national government currently promotes urban development above planning restrictions, and has abandoned its National Landscape policy (of which the Green Heart was part) and abolished the *Rijksbufferzones*. It is now up to the discretion of provincial and municipal bodies to continue these policies, or not. Most expect that this liberalisation and decentralisation will initiate competitive behaviour between municipalities and thereby accelerate the urbanisation of the Randstad's remaining open landscapes.

This course of events may offer some lessons for the UK. Since the designation of London's Green Belt by Act of Parliament in 1938, various environmental and agricultural policies have improved the protection of the countryside and its wildlife. Planning Policy Guidance 2 (PPG2), introduced in 1995, provides protection against 'inappropriate' development. Where existing local plans are being revised and updated, existing Green Belt boundaries cannot be changed unless alterations to the plan have been approved by the planning inspectorate. The Green Belt also has a strong agricultural function. As of 2007 there were around 4,000 farms of various sizes within London's Green Belt, making around 57 per cent of its area dedicated to agricultural use.

Despite housing demand pressures and UK planning policies that encouraged higher residential densities since the 1980s, housing development within the Green Belt typically has a very low density. While city development has on average occurred at a density of 27 dwellings per hectare, development in the Green Belt was less than 9 dwellings per hectare. Between 1985 and 2006 approximately 7,000 hectares, around 1.48 per cent of the total surface of the Green Belt, was developed for urban uses.

While acknowledging the low-level building activity during the last couple of years, London's Green Belt is under new pressure to meet housing demand. With new policies of localism, the UK Government is delegating more planning powers to local authorities, and there are concerns that this will erode Green Belt protection, although the planning inspectorate can still help to ensure that the Green Belt remains open. In recent months the UK Government has revoked regional strategies to meet housing demands, alleviating the burden on large areas of green, open space in which local authorities had little non-Green-Belt land to spare.

At the same time the meaning of the Green Belt is changing from an instrument to contain urban development to a valuable area in its own right. Under PPG2, recreational and educational activities have become key functions. Under the Countryside and Right of Way (CRoW) act, the public can access certain designated areas in England, without having to use specific pathways. Around 3 per cent of London's Green Belt may be accessed due to CRoW laws. To facilitate this, landowners are financially compensated for the upkeep of hedges and pathways. This example can be considered a form of remuneration for ecosystem services *avant la lettre*. These newly accessible landscapes are surrounded by areas that possess various 'green' policy labels, such as that of Area of Outstanding National Beauty (AONB) or National Park.



Joern Sackermann / Alamy

Ditches, fences, dykes and gates define the Dutch landscape, where the visitor becomes spectator (Tidal Dyke, North Sea)

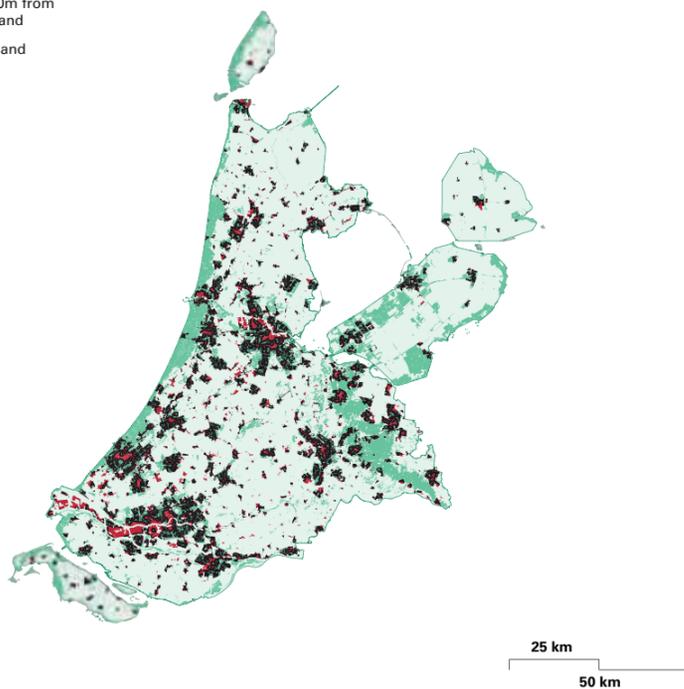


Tony Eveling / Alamy

Public footpaths, by-ways and public rights-of-way shape the experience of the English countryside (Ditchling Beacon in the South Downs, East Sussex)

DISTRIBUTION OF SPACE IN THE RANDSTAD

- Built-up land
- Built-up land within 500m from open non-agricultural land
- Open non-agricultural land (> 2ha)



83% of Randstad's population lies within 500 metres of non-agricultural open land

These were introduced by the Countryside Act of 1949, to conserve and enhance natural beauty, and are funded by both the central and local governments. Approximately 25 per cent of London's Green Belt is comprised of Areas of Outstanding National Beauty. In addition to CRoW, public access is further enhanced by Public Rights of Ways (PRoW) laws. These are largely remnants of the historical network of paths connecting villages, farms, and markets, providing opportunities for urban communities to connect with the countryside. With 9,900 kilometres of routes for walking and cycling in the Green Belt, there are around 20 metres of PRoW pathways per hectare for recreational use.

In the Netherlands, the situation is different. Here, the Green Heart, previously a destination of choice for a day out, has become one of the least appreciated landscapes of the country. This low status is not only due to the increasing urbanisation and loss of historical identity, but also to the presence of recreants themselves. The flat openness of the Green Heart's polders and therefore high visibility of any visitor, make even a relatively small number of people enough to spoil the illusion of a solitary stroll. At least as important is the fact that people living in the Randstad label the Green Heart as inaccessible. Because virtually all agricultural land is private property and closed to the public, cyclists and pedestrians can feel unwelcome and cut off from their surroundings. Many people therefore spend their leisure time in the busy areas just outside the Green Heart, giving rise to the new phenomenon of bicycle queues.

The two urban containment policies have protected the respective green landscapes from urban sprawl for over sixty years. But the new challenges faced by urban regions force one to rethink the rationale behind these policies. The contemporary regional scale encompasses cities, villages, agricultural areas, infrastructure, water, natural and cultural-historical landscapes with a multitude of functions and identities.

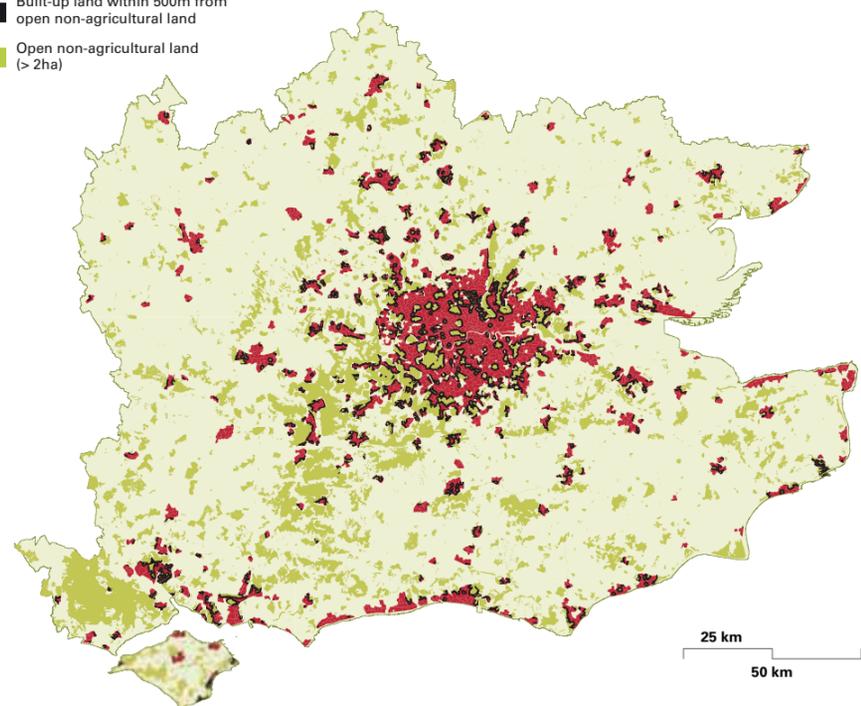
Urban and green landscapes have equally become enmeshed in a complex, integrated regional system.

Any renewed approaches to the Green Belt and Green Heart will need to grapple with several thorny issues. First, the notion of regional connectivity and accessibility will need to be resolved. Second, multi-functionality must be acknowledged as a key characteristic of green spaces. Finally, planners will have to acknowledge the green landscapes in city regions as the dynamic areas that they are, while at the same time realising that their traditional idyllic images remain in the hearts and minds of residents. While landscapes are often far from picturesque, especially in dynamic rural-urban fringe areas, in South East England they are still commonly interpreted as the 'real England' and posited against images of grey, expansive, multi-ethnic urban cores. The distinction between urban-grey and rural-green may be simplistic, yet it remains an undercurrent of how urban residents perceive their place in the larger regional tapestry of South East England. Planners need to perform a delicate balancing act between securing a combined urban and natural landscape that instils a sense of identity and belonging, that also fits today's fragmented, hybrid *rurban* spatial system.

There are several ways forward. A system of corridors and wedges can for instance help connect the urban fabric to multifunctional green areas in the region. In South East England, with its single core city, and around the four cities of the Randstad, regional green corridors can help create a blended 'green experience'. These metropolitan green corridors connect the different landscapes – from the inner-city to urban and non-urban green landscapes, offering users the possibility of identifying with the wider region. The importance of this connectivity cannot be underestimated. In addition to serving recreational purposes, this green metropolitan landscape provides room to develop natural functions while at the same time accommodating uses such as agriculture, livestock grazing, and

DISTRIBUTION OF SPACE IN SOUTH EAST ENGLAND

- Built-up land
- Built-up land within 500m from open non-agricultural land
- Open non-agricultural land (> 2ha)



38% of South East England's population lies within 500 metres of non-agricultural open land

renewable energy. Urban parks, urban agriculture, communal lots, cycle paths, nature reserves, reservoirs and footpaths can all be combined in this green infrastructure, flowing from city to city and towards other green landscapes in the wider region.

This notion of networks of green wedges, fingers or corridors is not new. The Lee Valley Regional Park was created through an act of Parliament in 1967 to recognise the needs of the growing population of London and the counties of Hertfordshire and Essex for recreational green space. The Park comprises a corridor along the River Lee, stretching 42 kilometres, from Ware in Hertfordshire to the River Thames. Covering an area of over 4,000 hectares, the valley's facilities are easily accessible via public transportation, bicycle and car. The multiple ownership of land across the park fosters an environment that is dynamic, collaborative and responsive to community needs.

Whereas the Lee Valley Regional Park quite successfully caters to the needs of a wide variety of users, owners and stakeholders, the example of the Groenblauwe Slinger (Green-Blue Ribbon) in the Randstad's south wing shows that a regional approach to green infrastructure is no easy task. The Groenblauwe Slinger is intended to keep the urbanised areas of The Hague and Rotterdam from merging into a contiguous built-up area. This ambition has been met, although it should be noted that at some points the 'open' space left is only a few hundred metres across. However, it is probably mainly the lack of spatial logic that is so characteristic of the Lee River corridor that makes it so attractive, while the Groenblauwe Slinger does not easily offer the sense of place that is needed to inspire urban dwellers to see the green-blue area as part of their region.

These examples show that regional planning of green infrastructure is possible but challenging. Continuing urbanisation pressure and shrinking governmental budgets have increased the risk of further loss of open landscapes in South East England and the Randstad. British and

Dutch governments are reconsidering the relationship between public and private spheres regarding green spaces. In the United Kingdom, government plans to sell off public woodlands were dismissed shortly after having been announced. In the Netherlands, the national government has abolished its restrictive policy for the Green Heart, and is actively encouraging small-scale housing developments within it. The roles of lower tiers of government, NGOs and private parties are becoming increasingly important for the protection and management of green areas.

This move towards localism in both countries provides opportunities for a variety of individual stakeholders as well as communities to contribute to the quality of their environment. Taking these political realities as a starting point, an innovative, attractive regional green design will need to forge an alliance between public sector agencies and other parties to find new sustainable combinations of economic benefits, ecological quality and social equity in the city region.

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GETTING AROUND THE URBAN NETWORK

Daniëlle Snellen and Atakan Guven

At present, both South East England and the Randstad are struggling to make their regions more accessible, liveable and sustainable. They each have the largest concentration of people and jobs in their respective countries, and consequently the highest transport volumes and levels of congestion. The mobility pattern in each region is quite different, reflecting their different spatial structures. Nevertheless, transport in both seems to be increasing in complexity, posing a challenge to keep people moving in the polycentric and the monocentric region.

At a number of transport facilities in and around London, commuters have witnessed the appearance of dark blue hoardings in central locations, such as Oxford Street and Paddington, as well as in suburban centres such as Slough and Brentwood. These hoardings carry the name Crossrail, and behind them ambitious infrastructural works are taking place. By 2018 Crossrail will fill an important gap in South East England's transport system: a rail route connecting East and West, straight through the heart of London. Crossrail's 118 kilometres (75.5 miles) of upgraded and new tracks aim to link key business and regeneration nodes along a corridor of transport interchanges with international, national and sub-regional hubs, while alleviating congestion.

A similar development is occurring in the Netherlands. The Beatrix Quarter, a burgeoning office area close to The Hague's city centre, has acquired a new landmark: an elevated light rail system. Snaking its way among the highrises in a futuristic casing, the line is the most visually striking part of the RandstadRail system. This system began as an old railway line between Rotterdam and The Hague that was revamped into a regional light rail system running on existing tracks, and now connects the two cities with numerous suburban centres and districts in between. The line is expected to provide services to several Rotterdam districts beyond the city centre later in 2011.

Both Crossrail and RandstadRail are examples of new investments in public transport systems that try to acknowledge the new reality of regional scale by connecting central, tangential and suburban locations into a single network. Such infrastructural investments serve as a reminder that transport systems lie at the heart of our daily lives: we rely on them to get to work, visit friends and relatives, shop and take our children to school or football practice. The efficiency of these transport systems not only affects our individual lives, but also has profound implications for cities' liveability, sustainable development and economic growth.

Economists generally agree that regional

transport, in addition to adding proximity, is crucial for agglomerations' economies and thus their competitiveness. By locating themselves in cities, businesses capitalise on the opportunities for face-to-face contact, and rely on urban transportation for the efficient movement of its workforce and products. These advantages, which are inherent to urban regions, stimulate the formation of agglomerations and clusters, which in turn attract specialised workers and high-quality services, all adding to the economic performance of a region. By increasing the quality of transport systems – that is, by providing the right connections at the right frequency – and by acknowledging their effects on land use and urban form, the number of opportunities available to a business – or any person for that matter – will also increase.

Good connectivity means different things in these two regions. South East England, with a high concentration of jobs in Central London and congestion charging in place, boasts phenomenal levels of radial public transport commuting. Its spatial structure is largely responsible: its monocentric character, coupled with a radial network, compensates for low residential densities compared to other metropolises, which are not higher than in the Randstad. As a polycentric region, the Randstad lacks the density for high-quality regional public transport, although some cities have excellent municipal service. Therefore, more people rely on their cars to get around the region. Another remarkable feature of the Randstad is the importance of cycling: this mode of transport is used for many local trips. In addition, bicycles are often used to reach rail stations, and therefore their common use opens up opportunities for providing high-quality public transport, even in a more diffuse urban structure than that in South East England.

In both the Randstad and South East England mobility patterns reflect the functional relationships between different land uses. Mobility patterns in the Randstad reveal the existence of different sub-regional specialisations at varying spatial scales. Industrial, distribution and logistical activities are for example centred around the transport hubs of Schiphol Airport and Rotterdam Harbour, while governmental and administrative functions are concentrated in The Hague, and commercial and knowledge-intensive services tend to cluster in the business districts of Amsterdam and Utrecht. This specialisation contributes to the fact that there seem to be two levels among the Randstad's commuter patterns: patterns oriented towards the four core cities and patterns within smaller Daily Urban Systems (that partly overlap). When looking at the number of local workplaces and distances between municipalities in the Randstad, Utrecht occupies a notably different position than the other three main cities in terms of commuter flows. By virtue

of its location in the geographic centre of the country, and its position as a node in the national rail and road systems, the city attracts high-skilled jobs and commuters who are prepared to travel long distances from a diversity of origins.

In South East England the central commuting pull is focused on and around London's commuter belt. London hosts a wide array of specialisations that makes it the focal point for governmental, cultural, academic and business activities. This affects its ability to attract a workforce well beyond its administrative borders: a pull so strong, that it makes other centres underperform. Larger centres, such as Oxford, Southampton and Portsmouth, do have their own specialisations that attract a large workforce from their surrounding towns. However, when considering distance, their regional links to London still remain strong.

As stated, both South East England and the Randstad have distinct settlement patterns and transport networks. In the former we have a core city surrounded by the Green Belt, and a largely radial rail system. In the latter we have four core cities surrounding a Green Heart with a higher reliance on road transport. The commuting patterns reflect these structural differences. To explain this, one could take a historical perspective on how these two regions developed. This would reveal a complex set of relationships between technology, transport demand, housing preferences, economic systems and geography, but also the influence of planning culture, spatial policies and governance structures.

NATIONAL TRANSPORTATION AND SPATIAL STRATEGIES

The impact of planning and governance is clearly legible in the Randstad's spatial structure. After decades of post-war reconstruction – including a total restructuring of the city of Rotterdam – national spatial planning in the 1960s and 1970s embarked on a policy of controlled suburbanisation. Under the banner of 'clustered deconcentration' new towns and growth centres were identified and developed. As most jobs still remained in the cities, and development of out-of-town retail was strictly curtailed, the success of the clustered deconcentration policy resulted in increasing suburb-to-city traffic patterns, mostly by car.

By the 1990s the Dutch national government had clear misgivings about this policy. City centres were losing their populations and road congestion was becoming intolerable. The answer came in the form of a new national spatial strategy. First, new residential areas were designated in or adjacent to existing cities by the national government, and these were to be well connected by public transport. Second, the location of businesses was regulated according to three broad categories: a) those businesses generating many trips, which should be located centrally; b) those with moderate trip generation, which should be located in areas with good public transport; and c) those with low-frequency visits, which could therefore be located at the urban fringes. This 'ABC policy' was supported by the encouragement of commercial development with restricted car parking facilities around major rail stations, and

discouragement of such developments at greenfield locations.

The housing policy proved relatively successful, resulting in both infill development and more dense urban extensions than would have happened otherwise. Although the policy had succeeded in terms of proximity, public transport use levels fell short of expectations. This was often blamed on the belated arrival of such infrastructure, although that was never substantiated by research evidence. The ABC policy for businesses was far less successful. Some inner-city development was achieved, but at the same time, business parks, DIY superstores, multiplex cinemas, storage facilities and the likes proliferated – and continue to proliferate – along motorways and major thoroughfares. This process has led to the Randstad becoming a region of many settlements varying in size, measure of monofunctionality or multifunctionality and transport facilities, and increasingly dependent on cars. At the same time, locations with good multimodal transport connectivity to many other points of interest do have competitive advantages over locations with more unimodal connectivity.

The South East of England witnessed major transport investments and urbanisation initiatives from the late 1940s until the early 1970s. Under the New Towns Act of 1946, waves of New Town developments grew close to rail networks to relieve housing congestion in London, Manchester and Liverpool. This decentralisation was followed by extensive road construction until the fuel crisis and subsequent cutbacks to the roads programme. Settlement planning during the 1970s did not continue along the lines of deconcentration policies of the New Towns, but instead turned its focus towards urban redevelopment and revitalisation. This new focus was supported by a transport policy oriented towards improving public transport, especially rail.

The 1980s was a decade of changing policies, dominated by a change in government and decreasing fuel costs. In many ways the different transport sectors went their own separate ways, as buses became deregulated and other industries were privatised. The decade saw increasing public awareness of environmental issues, and it is probably linked with the last of the 'first-generation' motorways, the final of which was the M40, completed in 1990. However, trouble was looming, as the 1989 National Road Traffic Forecasts predicted a 142 per cent growth in traffic levels between 1989 and 2025. The government responded to this announcement by instigating a new GBP23 billion roads programme for the 1990s, with proposals for new routes as well as improvement to existing roads. This was a key moment in UK transport policy history, as it was finally recognised that whatever road construction policy would be adopted, congestion would increase, which in effect signalled the end of the 'predict and provide' policy. Road building programmes were cut dramatically over the next ten years.

More recently, these historical trends have culminated in a region where rail and road networks provide improved mobility and thus connectivity, which are spurring patterns of counter-urbanisation. Still, population growth in the South East of



The bicycle is the first link in the multi-modal chain of the Randstad's transport system (Bicycle storages in Amsterdam)



Regional and suburban rail, integrated with London's extensive underground network, define regional patterns of movement (aerial view of a train near the River Medway, Kent)

England is relatively high in small towns and rural areas. If this continues, the population will disperse further throughout the region. Since London remains the central economic hub, hosting jobs with high wages, transport demand to the city will continue to rise. Future housing demands, together with the devolution of planning powers to local authorities, may change regional transport demands.

VISITING THE REGIONAL SCALE

The regionalised commuting patterns in both the Randstad and South East England support the notion that the region is a relevant entity for planning. Recent years have shown that travel distances increase over time. The Randstad has seen an upscaling of commuting patterns, especially between core cities and specifically to Amsterdam. Travel distances of over twenty kilometres are not uncommon. This increase can be attributed to several factors. The housing market is changing due to increased demands for better quality and more floor space, and the price differences between urban, suburban and more rural areas. Furthermore, the job market has changed. Rising educational levels have reduced the chance that people will find the job they want close to home. And an increasing number of dual-income households have to take two job locations into account when buying a home. Finally, rising incomes and car ownership have made it possible for more people to travel longer distances while investment in infrastructure has made this mode of travel faster.

Similarly, in South East England the average journey to work has lengthened in both distance and time. The combination of relatively low residential densities, a high concentration of jobs in Central London and a Green Belt between the city and some of its commuter belt, have led to long travel distances. Unlike in the Randstad, commuting to central London usually means using public transport. The structure of road rings around London that connect with rail routes into the conurbation both reflects that and reinforces it: the presence of a railway connection induces rail travel and many commuters in suburban and rural areas have opted to live near stations to allow them to use rail transport for their journeys to and from work, especially to London. Those travelling to sub-regional work centres often use rural bus networks or their private car. The congestion in the urban area, London's congestion charging and the difficulty and costs of parking have further strengthened the position of public transport. With London continuing to be the centre of economic activity policy makers have recognised the need for fast and efficient regional connectivity.

Other factors that have not been mentioned so far are influencing travel patterns too. Many Dutch and British workers receive some sort of compensation for commuting costs, or are given a company car. In the Netherlands commuters who travel by public transport benefit from a special tax deduction, whereas in the United Kingdom such incentives are entirely employer driven, for instance through discount offers on certain travel modes or loan schemes on ticket purchases. There are a few schemes such as tax-free bikes for

work through the UK government's Green Transport Initiative.

Such compensation often makes living further from work not a significant financial burden in the Randstad. Some regulations in the housing market actually provide a disincentive for moving closer to work. Housing prices are high in cities and moving usually means paying a hefty transfer tax.

At present, both regions are working hard to improve connections between urban and regional centres, in an attempt to answer the call for more intraregional connectivity. Infrastructure investments reflect the different requirements of each region. Crossrail is a heavy rail project, geared towards large flows of commuters and others to and from central London. RandstadRail and similar initiatives are light rail systems connecting city centres with smaller settlements and city districts, attempting to provide service to a multitude of origins and destinations, adding to the existing heavy rail connections that are also undergoing improvements under the High Frequency Rail Programme.

Transport and infrastructure provisions have kept moving forward, even during the economic crisis. In the Randstad, the OV-bureau Randstad (Public Transport Office Randstad) has been set up to improve coherence and cooperation in public transport provision, and is working on plans for a Randstad-wide public transport network. These plans seek to incorporate and expand existing systems (such as Stedenbaan, RandstadRail, Zuid-Tangent Rapid Bus and more) and create new connectivity. In South East England various lines are being updated and modernised: the proposed High Speed 2 would connect London to Birmingham and further to Manchester; London's Overground system has been extended; Thameslink is a GBP6 bn investment programme running from North to South through regional towns and London. This project also foresees upgrading existing tracks and building new stations at central London interchanges that will link to existing rail networks, substantially increasing their capacities.

These recent large-scale public transport initiatives show a positive move towards integration of transport and planning practices as they strive towards multiple goals: responding to existing demand for connectivity from within the region but also aiming at creating new opportunities. Every new transport investment offers a new chance to improve the accessibility of certain destinations, and therefore their potential. Explicitly taking the existing urban structure as point of departure and incrementally working from it has several benefits: it recognises the economic value of what is already there, and it is sustainable. Long-term demographic and economic forecasts have made it clear that efficient use of existing infrastructure, accompanied by investments at multi-modal interchanges, offers a viable route towards sustainability. However, further consideration has to be given to the wider benefits of regional transport investments and impacts on land use. Currently cross benefits tend to reward areas of high economic growth activity over and above other parts of the spatial economy. Here, London and the economic hubs of the Randstad are at an advantage, since the benefits of agglomeration and

journey time savings tend to reward core economic centres over and above other parts of the country, limiting efforts towards a more balanced growth agenda.

Innovations are also being implemented in road networks. Both highway agencies of the United Kingdom and the Netherlands are committed to reducing congestion and improving road efficiency, mainly by good road maintenance and investments in the expansion of existing connections. In addition to increasing road capacity, there are initiatives to improve traffic flow, for instance by dedicating specific lanes to through or origin-destination traffic. In the Randstad, more road initiatives are in place than in the South East of England, both in the national motorway network and the regional road network. This reflects the regions' different needs: the South East relies much more heavily on public transport, while the polycentricity of the Randstad requires more road connectivity.

The rise of virtual connectivity raises the question whether new technologies will dramatically aid future sustainable transport in city regions. For the time being, the answer seems to be 'no'. Although a new form of connectivity that is no longer confined to the physical realm has emerged, studies have shown that effects of technological options on our daily activity patterns are limited. An increasing number of people occasionally work from home, but this has not led to substantial changes in travel patterns. The near future offers a vision of cities and citizens becoming smarter by using apps that track buses, find parking spots and relay information on congestion and transport availability. As Internet connectivity is available on the go, we can use these facilities anytime and anywhere. Yet whether this has the potential to change our travel behaviour towards more sustainable patterns is unclear. Over time, speed and distance travelled have continually increased, despite the invention of telephone, e-mail and fax machines. On the one hand, new technologies could reduce the amount of travel, because increasingly we do not need to be in certain places physically. Then again, it is just as likely that new technology will lead to more mobility because it can introduce us to new places and people to visit, and can help us to avoid congested roads and packed trains and create opportunities to use travel time more productively.

In view of the intraregional transport challenges and the exciting infrastructural projects that are being put in place to meet them, both the Randstad and South East England are making similar choices. They are focusing on transport systems for regional connectivity that fit existing patterns and demand, enhance economic performance, intensify the use of existing infrastructure and stimulate new land use development within existing urban areas and at well-connected locations. We are witnessing a new era of transit-oriented development in both regions: Crossrail and RandstadRail are not just about creating transport connections, but about creating new places in close proximity to multi-modal public transit nodes. These places can be improved further through close access to amenities and high-speed Internet – connecting the real world to the virtual one. We are at the dawn of a new era in

which virtual connectivity may not dissolve distance and thus solve our transport problems, but it may still help us to create attractive, liveable and vibrant places that are mixed-use, high-density and accessible from around the region and beyond.

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ENERGY AMBITIONS MEET SPATIAL CONSTRAINTS

Anton van Hoorn, Clara Morri,
Michael Doust and Rob Folkert

In regions and cities all over Europe, carbon efficiency is being touted as an answer to concerns about energy supply and climate change. Success will not depend on physical space, but on governance and planning. Innovative planning tools and financial vehicles are being developed in cities in South East England and the Randstad to realise the potential within their boundaries.

Amsterdam aims to reduce its CO₂ emissions by 40 per cent by 2025. For Rotterdam this figure is 50 per cent, while the Greater London Authority's (GLA) ambition is 60 per cent. Cities throughout Europe are setting similar targets, and some even seek complete self-sufficiency through renewable energy in less than a few decades. These targets will be instrumental in setting the stage for a fundamental shift that – perhaps in a few decades – will definitely take place. Increasingly, cities will set up innovative experiments and incorporate clean-energy techniques into mainstream policies. As loci of the 'knowledge economy', cities have access to vast supplies of know-how and financial backing.

That being said, cities will find that delivery on their ambitions may prove arduous. For one thing, renewables are expensive; only a few options will be able to deliver at a reasonable price in the short term. Most simply cannot compete with the economy of burning coal. Major investments are needed to make renewables technically feasible. The possibility to use renewables is often hampered by physical or institutional constraints during implementation. Since renewable energy is relatively space consuming, navigating through the planning process is no easy task.

The energy challenge requires that spatial planning in the both regions adapt to new techniques and assistance in facilitating projects at the regional level. At the same time, the energy sector has to understand that their solutions have impact on existing structures and landscapes.

Whether or not cities' ambitions are realistic is highly dependent on the local context. Some areas are blessed with hydroelectric or geothermal potential, or with copious amounts of wind, while others have few immediate options for alternative energy. Governance too will play a key role in mediating the transition. Some regions have planning systems in place that are well-equipped to deal with conflicts surrounding energy infrastructure, while entrenched interests in other regions may only serve to exacerbate the impasse.

The European context however, is set. The European Union (EU) has established binding targets for the reduction of Green

House Gas (GHG) emissions and for the production of sustainable energy. European markets would profit from stable energy prices that are currently under increasing pressure on the global prices for oil and gas. Harnessing energy from local, renewable sources will produce less CO₂ and provide a boost to innovation and markets.

However, abating GHG emissions and producing clean energy is more complex than it may seem. In the Randstad the major sources for CO₂ are energy and industry, traffic and households. Decreasing emissions will require a focused approach in each sector. Buildings need to be better insulated, cars need cleaner engines, gas powered plants need to become efficient. At present, neither country is a top league producer of renewable energy. Although the Netherlands has ample wind sources, it is struggling to get turbines allocated and commissioned. Still there is the ambition to comply with EU regulation for 2020.

In the United Kingdom, a number of defining national policies and White Papers have been published with regards to meeting the targets of CO₂ emission reductions. Overarching central policy has introduced targets and measures aimed at fulfilling the UK energy and climate obligations. However, it is at local government level that the physical change is taking place.

LOCAL RESPONSES TO THE CHALLENGE

In South East England two local authorities have developed plans and policies aimed at achieving emission reductions. These cities vary considerably in character and location: Brighton and Hove is a coastal city with the South Downs National Park in close proximity to its north. Architecturally, the city has monumental Regency facades, including the Royal Pavilion. In contrast, Milton Keynes, designated as a New Town in 1967, was planned and built with future growth in mind. Surrounded by open countryside, the city has been laid out according to a grid system.

Planning energy policy in cities must take into account central planning statements. The UK Government's 2007 Building a Greener Future policy statement, for instance, measured the move towards zero-carbon homes by 2016. In Brighton and Hove, planners created planning documents for energy and sustainable building design that later became part of the authority's core strategy.

In response to national policies, local policy requires all development to incorporate sustainable design features to avoid expansion of the city's ecological footprint, help to reduce greenhouse emissions, particularly CO₂, and to adapt to climate change. The Brighton and Hove

authority has developed instruments via the Sustainable Building Design Supplementary Planning Document, the Sustainability Checklist and the Annual Monitoring Report. As well as providing guidance and information to the construction industry, these instruments are used for monitoring the effectiveness of the policy.

Although the energy policy for Milton Keynes may not encounter the same kind of issues as Brighton and Hove, Milton Keynes does have a projected high population and economic growth for the next decade. The local authority is nevertheless confident that it will be able to provide sustainable and equitable energy. It is already introducing procurement policies for sustainable energy by buying locally manufactured items with minimal energy use and environmental impact.

Milton Keynes' planning policy on the sustainable construction of five or more units per project stipulates high-energy efficiency, a minimum of 10 per cent renewable energy, and carbon neutrality or carbon offsets for all major developments. In addition, it uses Section 106 contributions from developers to secure carbon-offset funding and plans to create community heating networks as part of a wider smart-grid programme.

Despite these examples of policy innovation for the provision of renewable energy to homes and communities, these policy levers could still fail. A common example is when planning requirements are taken to appeal. In these cases, the developer aims to demonstrate that requirements to incorporate renewable energy technologies are not technically feasible and/or would render the scheme unviable. The challenge for local authorities is to try to strike a balance between encouraging sustainable development and the economic viability and the financial risks attached to innovations.

ROTTERDAM'S DISTRICT HEATING SCHEME

Looking at the Randstad, we consider Rotterdam: a modern city with an ambitious programme for brownfield development and greater sustainability. Rotterdam embraces urban development, with a strong focus on architecture, but still relies on port activity – a lot of which is based on oil and coal.

The city has ambitions to reduce its carbon emission by 50 per cent by 2025. One avenue to meet this target is via its district heating schemes: an example of an extensive network that developed out of the recognition for the need of a spatial vision. In addition to fuel and electricity, heat and heating makes up a substantial part of energy requirement. Demand for heating is found primarily in built-up areas and varies according to the type, age and function of built structures. Over the course of a year, demand fluctuates according to temperature and building activity. Supply is ample, since heat is a by-product of numerous industrial processes around Rotterdam.

Typically there is a spatial mismatch between supply and demand, which can only be overcome with expensive heating infrastructure. One way to improve the profitability of the system is to create large volumes of demand by linking up many customers in a given area. Both Rotterdam and Amsterdam have plans to create a regional network to connect smaller heat sources scattered around the urban districts'

fringe areas, as a regionally coordinated approach seems more conducive to an efficient and clean supply of energy.

Rotterdam's district heating system services about 15 per cent of the city's homes (43,000) and about 100 larger commercial customers. The heat is provided by two gas-fired power plants. As an alternative, residual heat sources from traditional industries can be utilised. But to significantly reduce CO₂ emissions, sustainable energy sources, such as biomass and geothermal energy, need to take priority. Unfortunately, a number of initiatives to link up to these new sources throughout the region have failed.

The Eurodelta project, for example, had the intention to construct a pipeline to transport heat and CO₂ from industries in Rijnmond to greenhouses in Westland. The project failed for both financial and organisational reasons. Farmers already had gas infrastructure in place and did not need a second system. New demand would have to come from the expansion of the greenhouses, but this did not materialise because of the need to restructure horticultural activities.

After several failed attempts, the city now seems to be on the right track. A district heating company was founded in 2010, Warmtebedrijf Rotterdam, and a deal was made to connect a further 25,000 houses to the system by 2013. This agreement included more stakeholders than previous ventures – several housing associations, energy companies and suppliers – which has reduced the financial risks.

The lessons from Rotterdam's heating network resonate in a number of innovations. Most importantly, the shift to a low-carbon economy will require a united effort between cities, their residents, their companies and their hinterlands. Assessments in both the Netherlands and the United Kingdom to gauge the level at which alternative energy options exist confirm this interconnection. While the opportunities for large-scale renewable generation technologies are largely driven by the supply side, and impeded by spatial constraints, the opportunities for decentralised energy are much more demand-driven and fundamentally linked to economic viability.

GREATER LONDON AND ITS ENERGY POTENTIAL

National and EU policies geared towards the use of renewable and sources for the supply of electricity via the national grid will drive down CO₂ emissions from London's energy generation. However, to deliver on the mayor's commitment to cut CO₂ emissions by 60 per cent by 2025, many of London's power users must be persuaded to stop relying on the existing national grid, and to move to a local, low- and zero-carbon energy supply. In 2010/2011 the UK government funded regional studies to estimate the potential for generating low-carbon energy.

Building integrated renewable energy systems, particularly photovoltaic solar panels and air source heat pumps, proved the most significant options, with limited opportunities for the deployment of large-scale renewable energy within the city boundaries. For the Greater London area the renewable energy potential could, theoretically, meet 34 per cent and 49 per cent of London's demand for electricity and



Peter Hiltz / Hollandse Hoogte

The individual home is not only a place of consumption, but one of energy production and conservation (a solar-powered house in Rotterdam)



Ian Murray / Corbis

Regional geographies extend beyond their boundaries when it comes energy generation (Gunfleet Sands wind farm off the English coast)

HEAT ENERGY POTENTIAL THE RANDSTAD



heating, respectively. Lack of economic viability and deployment constraints reduce the overall potential to between 1 and 9 per cent of total energy demand, depending on the scenario.

Nevertheless, London's geography offers significant potential for realising carbon savings through more efficient generation and distribution. The mixed building types and their uses, close proximity to heat loads, and diverse energy demands, combined with consistently high rates of new development, make London well-suited for the deployment of district heating networks fed by waste heat and combined heat and power (CHP) systems. Delivering a heating network may prove to be difficult, given the uncertainties and risks, ranging from the electricity market to finding suitable sites for the deployment of decentralised energy.

To overcome some of the barriers, spatial planning instruments have been put into place, with the Mayor of London as an active stakeholder. To be more specific, he has developed the Decentralised Energy Master-planning (DEMaP) Programme to gather and disseminate spatial intelligence on opportunities for decentralised energy. The mayor is also using the planning system to identify opportunities for the development of decentralised energy in London. New developments are required for instance to connect to existing local district heating and cooling networks, or to use site-wide heating networks and, where appropriate, install CHP systems. In addition, the mayor has adopted a strategic focus by ensuring that local spatial planning policies promote decentralised energy infrastructure and by encouraging boroughs to work with neighbouring authorities to identify cross-boundary opportunities.

Furthermore, the mayor will work with local planning authorities to create a blanket planning permission in the absence of specific planning applications, by using Local Development Orders (LDO). LDOs will remove some of the risk associated with seeking planning consent for heating network pipe routes, for instance. The use of LDOs enabled, among other projects,

the development of the London Thames Gateway Heat Network Project.

The Thames Gateway is Europe's largest regeneration area and holds the key to the future expansion of London. The project involves the construction of a 23-kilometre transmission network, capturing low-carbon and renewable heat from a number of generating plants. This heat will then be delivered to consumers such as homes, businesses, hospitals and public buildings. Connection to the London Thames Gateway Heat Network will offer developers both an opportunity to meet the planning requirements as well as a cost-effective solution to decarbonise existing buildings. Connecting London Thames Gateway's buildings to the network has the potential to save 100,000 tonnes of CO₂ each year.

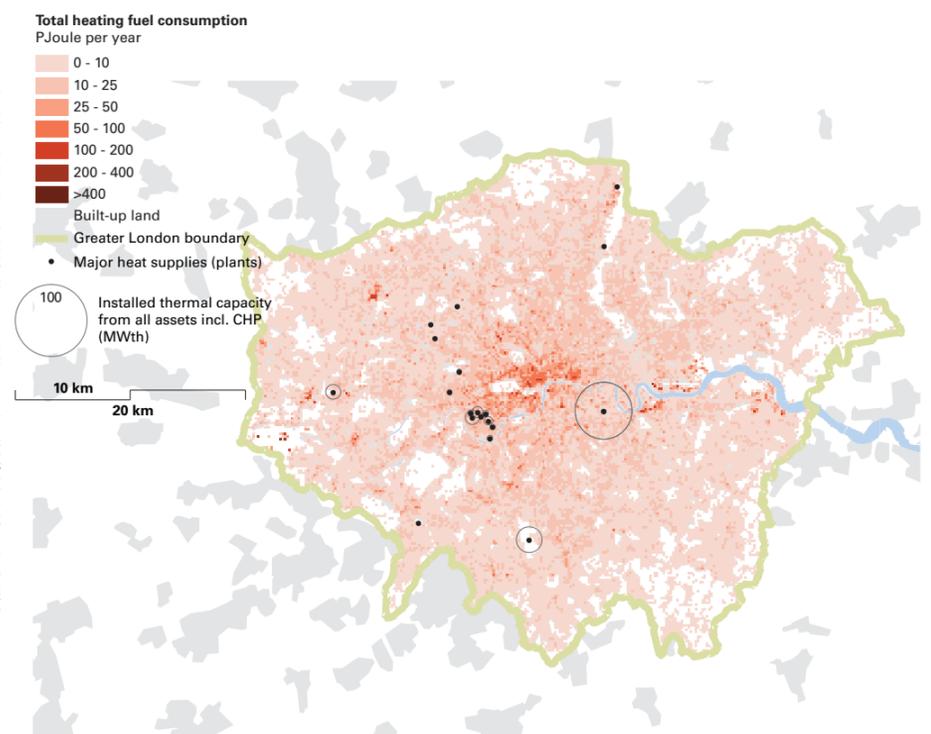
THE NEED FOR REGIONAL AMBITION

Without a mayor in charge for the whole of the built environment, the cities in the Randstad are more or less left to their own devices. So far, integrated assessments regarding the feasibility of options for reducing net emissions have only been performed at the national level. Although some of these entail generic measures, others imply land-use changes within the built environment and its environs.

The Ministry of Infrastructure and the Environment performed a survey on the potential for various sustainable energy options, including geothermal, carbon capture and storage, warmth-cold storage, solar, biomass and wind energy. The results show that renewable energy supply in the Netherlands can exceed the total demands. Findings showed that, without any further constraints, the potential yield in the Netherlands could be about 30,000 MW through wind power alone. Considering that the current plans for 2020 would only add up to 6,000 MW, one can deduce that the problem has less to do with a potential shortage of renewable energy, and more with its implementation.

This research echoes the situation in South East England, but there are differences. London's renewable energy supply is small compared to that of the wider

HEAT ENERGY POTENTIAL GREATER LONDON



region, which already contains commercial-scale wind turbines and waste incineration facilities. As London expands its heating networks and starts the transition to CHP systems fuelled by renewable energy, and as financial viability matures, regional energy sources will become more important as part of the low-carbon system.

Both countries have many plans for wind and solar power and district heating. Cultural and institutional differences between regions have led to slightly different outcomes. Heat pumps are for instance favoured in London and hardly enter the debate in the Randstad. Outcomes in the Netherlands are still largely dependent on national policy, while the connection between national and bottom-up initiatives is more pronounced in the United Kingdom.

In the United Kingdom, the national government sets targets and provides infrastructure, but it is in the towns and in and around the buildings that change actually occurs. The political will and differing levels of commitment across the United Kingdom means that some areas are extremely proactive in the renewable energy arena while others are not. In contrast, the Dutch have no feed-in tariff system, which makes it much harder for smaller enterprises or households to contribute. It is advantages like these that place UK cities in a somewhat better position.

The various studies and regional examples all demonstrate that spatial planning is being rediscovered as a key player in delivering energy solutions. Renewable energy depends on spatial optimisation: turbines should be situated in the windiest areas and tidal generators in the most suitable coastal locations. In an increasingly efficient and competitive energy market, businesses will try to find the best locations for their conventional power plants. Planning law, building codes and urban design may help streamline investments from top-down to bottom-up.

Cities remain important stakeholders for action – even though they still depend on national government, businesses, civic society and their environs. Brighton's solar power initiative is largely funded by private

money, but it was the city's identity that was decisive in mobilising local action. Equally, Rotterdam now has a heating network, but in the end private partners actually exchange the heat.

Cities should also be inclusive: a sustainable lifestyle should not be the sole prerogative of the affluent. A local approach to urban renewal could help more segments of society live in a more sustainable fashion. Adapting the institutional base to allow clear return on investments in sustainable energy could become an important asset when engaging local communities. The awareness of cities being both offenders with regards to carbon emissions and stakeholders in innovation, while at the same time being the loci of trade-offs between solutions is imperative for their success.

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SITOPIA – SHAPING THE WORLD THROUGH FOOD

Carolyn Steel

Our need to eat as humans shapes our daily existence. Yet, for those of us living in cities, it also creates a paradox. Our urban lifestyles depend on food that comes from elsewhere: a place we often refer to as 'the countryside', although the term bears little resemblance to the realities of modern food production.

Cities are the apogee of human civilisation, yet may also prove its nemesis. Centres of commerce, learning and creativity, cities are also resource hungry and wasteful, their inhabitants divorced from the consequences of their actions. A glance at urban history soon reveals how easily the creative and destructive power of cities can result in ecological collapse. Mayan cities and those in Mesopotamia, as well as in Greece and Rome, Paris and Madrid all faced starvation, and only the latter two survived as centres of power. In our own time, food riots are increasingly common as failed harvests, soaring oil prices, bio-fuels and commodity speculation push food prices to record levels. Despite our technical abilities, we are no closer to solving the urban paradox than our ancient ancestors.

Nothing short of a complete review of our way of life is required if we are to avoid ecological calamity. Yet our social, political and economic systems are set against such a task. Forged in an era of apparently limitless abundance, they depend upon the idea of growth in order to function. For a generation, their mutual alignment in a neoliberal capitalist configuration created economic prosperity for some. Yet, as the 2008 food and banking crises demonstrated, the structures upon which such prosperity depends are both inequitable and unreliable. Despite this realisation, our response to those crises has amounted to little more than an attempt to restore business as usual.

Like the bones in an old body, the structures underpinning our society have become brittle. Faced with sudden shocks, they have two basic responses: to carry on as normal, or break. In rapidly evolving and uncertain times, this lack of flexibility poses a greater threat to our prospects than our dwindling physical resources. Current proposals to create an African 'Green Revolution' are a case in point. The increased crop yields achieved during the early years of the Indian Green Revolution are used as justification, yet the declining harvests of recent years in the Punjab, its loss of soil fertility, depletion of aquifers and multiple farmer suicides are tacitly ignored.

In order to cope with complex and interconnected problems, we need new ways of thinking and acting. We need instruments that are better attuned to

the conditions of modernity, better able to respond to uncertainty: tools that are complex enough to reflect reality, yet simple enough to be grasped. But where are we to find such tools?

Food provides an answer. Our most vital shared commodity, food, is embedded in our lives socially, physically, and symbolically. Our landscapes and cities were shaped by food, as street names such as London's Cornhill, Bread Street and Fish Street, and The Hague's Riviervismarkt (fish), Kalvermarkt (cows), Dunne Bierkade (beer) and Varkenmarkt (pigs) attest. Food once played a vital role in creating the social and commercial networks that bound city and region together. Daily routines revolved around food, politics and economies were driven by it, people knew their survival depended on it. Food's influence in the pre-industrial world was obvious and ubiquitous.

Of course, food still shapes the world, it just does so in ways of which we are far less aware. We might notice its most obvious effects – for instance on our waistlines after Christmas – but how many of us notice the way in which food shapes our public and private spaces, the social bonds we form or the landscapes we create? It takes a special kind of seeing to notice food's all-pervasive influence, yet seeing the world through food – and understanding its positive potential – is precisely how we can use food as a tool.

Societies around the world differ in the habits, beliefs and skills they apply to food, and the values they attach to it. Significantly, however, every pre-industrial society has always placed food at its social and spatial heart, and every post-industrial one has placed food at the periphery. How come? The short answer is that food represents power; a fact all too evident in pre-industrial societies, yet relatively obscure in ours. Lulled by the prospect of year-round, plentiful, cheap food, we have allowed our most precious common resource to slip beyond our control.

The results, from a social and ecological point of view, have been disastrous. The costs of modern agribusiness in terms of global warming, water scarcity, biodiversity loss, resource depletion, soil degradation, pollution, poverty, poisoning, obesity and type-B malnutrition are immense, yet almost all are disconnected from the price we pay for food in the shops. Factor in the externalities, and it becomes clear that cheap food is an illusion, and an extremely expensive one at that. One recent estimate put the true cost of a burger made from beef raised on recently cleared forest land at US\$200.

Our failure to put a proper value on our food affects more than the cost of a burger; it destabilises our value systems as a whole. By

treating food as though it were cheap, we live in denial of our lives' true cost, which in turn blinds us to the value of life itself. We strive for prosperity and growth, ignoring that the foundations upon which such constructions are made are unsound.

What we need most urgently in response to global threats is not technology, money, or physical resources, but philosophy. We need a vision of the sort of life we are trying to create or adapt. Only then will we be able to act effectively, for only then will we see climate change and peak oil for what they are: material threats to our material existence, not existential ones that threaten life itself.

Creating a social vision is where food can help us most. Since we must all eat, the question of how we should eat approximates that of how we should live. Through food, we can judge whether or not the life we lead is 'good', in every sense. By acting upon such judgements, we can start to build sitopia (food-place): a society in which food-based values are commonly shared and practised.

What, exactly, is a food-based value? Nothing less than the acknowledgement that, in a world of temporally finite resources, our most vital common necessity is a good measure by which to live. The temporal qualification is significant, because the sun's energy means that the earth's resources are not absolutely finite. Our challenge is therefore not to mete out dwindling resources, but of managing renewable ones: a feat well within our reach. Our social vision must therefore encompass the element of time. A good life must not only be equitable and spiritually satisfying, but one lived according to the rhythm of the earth.

The relationship between food and the sun is obvious: perhaps too obvious for us to notice in the modern world. Yet our innate sense of time and space derives from it. It drives the rhythm of our daily life and links us to the universal; a double meaning captured whenever we talk of our mundane existence. By paying greater attention to the mundane, we can regain a sense of ourselves, and of the right way to live.

Understanding life through food creates a background against which we can think and act. It orientates us and shows us our boundaries. We are, for example, used to recognising our limits whenever we share a meal. Table manners are rituals designed to preserve our sense of fairness and to strengthen social bonds. In a global society, the sharing of food takes on a new significance. We must extend our table manners to those we have never met, and to species the existence of which we can only imagine. Sharing food in this sense becomes a means to living well, both physically and metaphorically.

Perhaps the greatest potential of food as a tool is as a means of addressing the urban paradox. Ten thousand years ago, when urbanity and agriculture first evolved, the relationship between cities and their hinterlands was clear. Early city-states were communities in which city and country were socially, physically and conceptually bound together. Today, the situation is very different. Most of us live hundreds, if not thousands of miles from the sources of our sustenance, know little about the industry that feeds us, and exert little or no control over it. How many Londoners are aware of

the speed with which the city's supermarkets would run out of food if the Port of Rotterdam were to stop operating for even a week? And what alternative food sources would they have at their disposal in today's urbanised environment?

Cities, the size and shape of which was once limited by geography, are now growing at the rate of 1.3 million new migrants every week. A billion people worldwide live in informal shanty towns and slums without access to fresh water, power or sanitation. Opinions are divided as to whether or not this headlong rush to cities is a good thing. Some argue that squatter cities are breeding grounds for the sort of human ingenuity that will lift their inhabitants out of poverty, while others find the mass abandonment of the countryside tragic. Either way, what is clear is that the relationship between non-food-producing communities and food-producing ones (aka 'city' and 'country') is hopelessly out of kilter, and billions of people in urban and rural areas alike lead lives that are far from ideal.

What lies at the root of this mass exodus to cities? The pursuit of social opportunity, certainly, but also the fact that small- and medium-scale farmers are driven off the land by a global food system geared towards the production of cheap food for cities; a system in which only the largest, most efficient farms can survive. Cities, and the food systems that feed them, are making rural life untenable. In order to create a balanced society, it then follows that we must address the power structures governing food. Only then can we restore the urban-rural relationship upon which civilisation rests.

Connecting producers to consumers is where all food-based profits lie, which is why distribution is the key to food power. A glance at the global food system soon reveals where all those profits currently go. The system resembles a tree, in which the nutrients from many roots (producers) are channelled through a narrow trunk (supermarkets) to feed many branches (consumers). In such a system, the trunk exerts a stranglehold over the entire food chain. But what if those of us living in cities were to forge direct relationships with those who grow our food? Then we might create something very different: a complex network of flexible, personal connections.

Park Slope Food Coop in New York City is one such system. Established in 1973, the Coop now has 14,000 members, each of whom works a few hours' shift every month in exchange for substantial savings on their groceries. The Coop maintains long-term relationships with forty small-scale local farms and has a strong ethical code, enforced through monthly members' meetings. Its members are what Slow Food founder Carlo Petrini calls 'co-producers': knowledgeable consumers who actively promote ethical food networks through their actions.

Democratising food in this way creates new possibilities for rural communities: opportunities that are greatly increased by communication technologies. For the first time in history, social advantage is not limited to those living in cities: access to markets, news and knowledge are now available online. The effects can already be seen in Kenya, where cattle-ranchers now share information about market trends before deciding when and where to go to



Randstad's massive industrial greenhouses are at the forefront of the mechanisation and globalisation of agriculture (a greenhouse outside Rotterdam)



Community-owned and -run allotments continue to be part of London's local food culture (Lee Valley, East London)

market. Such communicative networks are vital, because they shift power away from large-scale corporations.

The social and ecological benefits of having more, rather than fewer, people working on land and sea are many. In contrast to the slash-and-burn approach of global agribusiness, small-scale farmers and fishermen take the long-term view of food production. Stewardship of land and sea is inherent in what they do. With good access to markets, life as a small- or medium-scale food producer can be a good one. But in order to make such a way of life possible, the rest of us must become co-producers, reinvesting food with its true value.

By acting together, we can create democratic food networks: what Julie Brown, founding director of London organic box scheme Growing Communities calls 'community-led trade'. Like Park Slope, Growing Communities began as a volunteer organisation, supplying East End families with organic produce sourced from a local farm. In order to fill the 'hungry gap' in April and May, Brown began sourcing some produce from further afield, as well as developing a patchwork of local growing sites, including urban gardens, to fill her weekly boxes. Today, 600 members pay GBP50 a month to receive fresh produce, delivered to seven pick-up points by Maisie, an electric milk float decorated to look like a cow.

In building up her business, Brown realised that her greatest challenge was not in finding farmers willing to supply Londoners with organic produce, but finding Londoners who cared enough about good food to make the effort to source and pay for it. Her focus began to shift away from the specifics of her business towards its wider implications. In order to develop an ethical, sustainable food system, she reasoned, people need to understand the full effects of their diet. Only then will they be willing to adjust the way they eat, moving towards more local and seasonal food, importing only what cannot be grown locally. The outcome was her Food Zones model: it shows how London could feed itself from a global patchwork of farms, some local, some European, and some tropical (no one, even Julie Brown, expects Londoners to give up coffee or bananas).

Recently, the Randstad has also started to rethink the relationship between food producers and consumers. In both Amsterdam and Rotterdam, plans are afoot to revitalise urban food markets, restoring their original role as dynamic spaces in which city dwellers and farmers can meet. Amsterdam's wholesale food market, renamed Food Center Amsterdam, is up for redevelopment by the city council, with proposals to convert the 23.5 hectare site into a mixed-use scheme with a restored central market hall open to the public, together with new residential, commercial and leisure facilities. The market hall will remain at the core of the scheme, and the city council plans to distribute food from it by canal, just as was originally intended. Meanwhile the city council in Rotterdam is planning a new covered market, something unique in the Netherlands, where people will come together not just to exchange food, but also ideas and values surrounding it.

Food retail chain Marqt is another model that shows how alternative ways of provisioning cities can boost independent

regional food networks. Founded in 2007 by Quirijn Bolle and Meike Beeren, Marqt sells mainly seasonal and locally sourced food from independent organic producers, with the emphasis on ethics and quality. It already has three branches in the northern Randstad, with several more due to open soon. Styled like markets, the shops aim to reconnect city and country by keeping supply chains short, and by helping customers to appreciate the benefits of tasty, seasonal, sustainable food. For Bolle and Beeren, both former employees of the supermarket chain Ahold, education is integral to what they do. 'We want to encourage people to think about what they are eating and their philosophy,' said Bolle in a recent interview. 'There are plenty of growers and farmers who produce authentic products but who can't find the consumers. We bring them together in the marketplace in a new fashion, tailored to the day and age we live in now'.

Successful models such as Growing Communities and Marqt demonstrate food's potential to shape a better world. But as their founders Brown, Bolle and Beeren recognise, we are still far from acknowledging the true scale of food's potential, not just to shape local networks, but society as a whole. Putting food back at the heart of our lives implies a major cultural shift. It suggests new political and economic structures, new planning models, a new social order: away from neoliberalism towards community-based trade, from urbanisation towards urban-rural regionalism. Most of all, it suggests a shift away from consumerism towards more mundane pleasures: the sensuous delight of changing seasons, the smell of wet earth, the taste of good food, the company of friends, the joy of gaining knowledge and using judgement, of working skilfully with one's hands, and being appreciated for it.

If all that sounds hopelessly idealistic, it is because sitopia, at its best, is utopia. The difference between the two is that sitopia can be bad as well as good: the way we shape the world through food is up to us.

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REGIONS REVISITED

Atakan Guven, David Hamers, David Evers

In this era of rapid global integration and disintegration of traditional socio-political structures, the regional scale has taken on increased significance. It is the locus of global competition, the scale at which major planning challenges become manifest and where identities coalesce. At the same time, regional boundaries are fuzzy and vary according to the issue at stake. This has far-reaching implications for regional planning and governance in South East England and the Randstad.

In his acclaimed and hugely influential trilogy, *The Information Age*, Manuel Castells outlines the most important forces transforming our world at the dawn of the new millennium: the unstoppable penetration of information technology into every aspect of society and economy, the collapse of traditional power structures (nations and empires) and the rise of new ones (European Union, World Trade Organisation) and the reshuffling and reaffirmation of identities. In the process, 'the region' has emerged as the most important scale at which human activities are taking place, but not necessarily at which they are organised. This mismatch, and the resulting 'regional gap', have been bemoaned for over a decade in urban studies and public administration scholarship and prompted a plethora of – usually unsuccessful – governmental reforms. The Randstad and South East England are no exceptions; both are struggling with reinventing themselves in a rapidly changing environment. Perhaps more important than regions' political significance is their cultural one as a source of identity. When sitting in a neighbourhood café, surfing the worldwide web on a local Wi-Fi network, drinking a smoothie made from New Zealand kiwis, one may be inclined to ask: does regional identity even matter? And yet, some aspects of regions are extremely resistant to change and greatly influential. The morphology of a region is historically given and determinative: the monocentric structure of South East England versus the polycentric Randstad, for example, continues to play a part in shaping regional identities.

In the former, regional identity is not just affected by the existence of London as dominant core city. 'Londonism' is not confined to peculiarities in the English vocabulary, but it marks an identity and an ideology of embracing innovation, private enterprise, multi-nationality, and cultural diversity in a context of a free global market environment. To define a wider regional identity that emanates from its centre is a challenging task. Yet, South East England does have a geographical identity that is used widely at the domestic level when addressing anything from economic performance to weather reports.

What about a Randstad identity? Compared to South East England, the Randstad is a relatively new and relatively artificial creation. It was during the first efforts to legitimise the regional scale in the

1930s that KLM director Albert Plesman coined the term 'Randstad Holland' – allegedly when airborne. Randstad, literally 'Rim City', describes the configuration of urban settlements bordering a relatively open area, later called the Green Heart. Although Plesman argued for a regional government at the Randstad level, it was only in the late 1950s and 1960s that policy makers, planners and designers converged in their support of strategic planning at this scale. Even so, planners did not envisage a need for a regional identity or government. On the contrary, they worked hard to prevent the cities and towns from growing into one another and to protect the Green Heart from urbanisation. The result is clear today: the four major Randstad cities have each retained their unique identity and history, despite the fact that 'Randstad' is no longer a mere planning term, but has entered common use.

In retrospect, neither identity seems fully consolidated. South East England possesses a dual identity: a strong core identity of London as an economic powerhouse and an identity of rural tranquillity derived from the surrounding countryside. The polycentric Randstad, with its four fiercely independent and culturally well-defined cities, would be hard pressed in convincing its citizens that they were 'Randstadites'. Although the Randstad identity can be at most considered the sum of each of the independent identities rather than a single shared one, its scale is becoming increasingly important in political and global economic terms.

Both regions are finding themselves in the midst of fundamental political restructuring. We are now witnessing the disintegration of a global order based on 'atomistic' nation states and the emergence of a new one consisting of a complex mosaic of institutions, organisations, affiliations and network relations, such as the United Nations, NATO and the World Trade Organisation (WTO). Emblematic of this process is European integration in which countries can 'opt in' for legal/political (European Union), monetary (European Monetary Union, or EMU), trade (European Economic Area, or EEA), human rights (Council of Europe) or immigration (e.g. Schengen) purposes. For countries belonging to one or more of these entities, it means that some sovereignty has been relinquished to – or, in more positive terms, is shared at – the transnational level. The European Union has been particularly effective in accelerating and amplifying this process, both by extending its policy reach ('competencies' in Euro-speak) as well as by building up a direct relationship with the sub-national level through its regional policy. This allows some regions to bypass the national level in decisions regarding its economic and spatial development. Others are less lucky and find themselves drawing the short straw in a power struggle between municipalities and higher tiers of government. These and other aspects of multi-level governance are perceptible in

South East England and the Randstad: both are moving towards more localised planning strategies with decreased budgets, a strategy which may exacerbate problems related to public-sector fragmentation, and raise the question if the current administrative structure is able to deal with regional challenges.

The main reason why it is so hard to realign the mismatch between socio-economic dynamics and governance at the regional scale is probably that 'the regional scale' is determined entirely by the issue at hand. For the commuter, the region is the Daily Urban System (DUS), for the firm it is the supply chain and consumer market, for the local wildlife it is where it can find its means for survival, and for the hedonist it is the sum of the recreational, cultural and shopping opportunities within reach. At the same time, the metabolism of the region – that is to say, the sum of the multifarious and continuous streams of consumer goods, services, energy, food, human capital, information, foreign investments in and out of the region – creates new, competing and very tangible demands for land-use planning. Traditional systems of governance have proven themselves to be ill-equipped to deal with the challenge of balancing these demands against wider goals of competitiveness, sustainability and social justice. Therefore, administrative borders and concepts such as South Holland, Randstad, England and Greater London Authority seem ultimately arbitrary when considering the range and scope of these autonomous forces.

As a result, governing the region is no easy task. The challenge at hand is to bring about a level of coordination that takes into account the regional movement and flow of goods, services, energy and human capital in the context of regional spatial patterns of different land uses and regional identities. We will now take a closer look at how the Randstad and South East England are coping with the challenge of governing their respective regions.

ONCE MORE THE REGIONAL SCALE

As far as the economy is concerned, large urban regions like the Randstad and South East England are increasingly considered the foci of the global economy. Contrary to beliefs that improved logistics and information technology would bring about a 'death of distance' and a flattening of economic activity, it seems increasingly concentrated in 'World Cities', 'Global Cities', 'Mega-Regions', 'Conurbations', 'Metropolitan Regions', and 'City Regions' and the like. Whatever the nomenclature, these areas have emerged as hotbeds of global economy, host key economic institutions (stock exchanges, financial headquarters), and through sheer mass of people and urban functions enjoy and (re) produce agglomeration effects.

Who governs these dynamic regions? Can they and should they be governed? What can governments do to improve their competitiveness further? In some cases governments can stimulate the development of prestigious off-centre business districts, such as London's Canary Wharf and Amsterdam's Zuidas. Most of the time, however, there is often little coherence between the globally oriented activities and the local (usually municipal)

policies imposed to influence them. Local authorities often attempt to boost economic development through infrastructure improvements or prestige projects, but soon become mired in competitive struggles with other governments in the region attempting to do the same. This is visible in the Randstad, with the rivalry between Amsterdam and Rotterdam with regards to harbours, airports and cultural facilities. It is also visible in the way in which one of the most important unifying elements – the transportation system – is being dealt with.

To a certain extent, an urban region is defined by its patterns of mobility and transportation infrastructure. The vast majority of transport in large urban regions, including commuting, takes place within a Daily Urban System. Although these relationships usually transcend the municipal level, they generally fall short of the level of the Randstad or South East England as a whole. Both regions are composed of a series of overlapping Daily Urban Systems – few, if any, commute from one side to the other – and key links to national and international destinations that function as pipelines in the global economy.

Both regions are struggling to improve the quality of their transportation system, particularly regional rail, to improve accessibility and hence competitiveness. Both their approach as well as their starting point is rather different however. South East England is characterised by a radial rail system with extremely high ridership levels centred on London. In this context, creating tangential connections has proven extremely challenging, despite the existence of a regional transport authority, not in the least because the large number of operators complicates coordination efforts. Still, the progress being made on Crossrail is encouraging. The polycentric structure of the Randstad has also proven challenging for high-quality rail transport as all links are essentially tangential. Partly for this reason, rail ridership levels for commuting fall far below those of South East England. At present, the national railway network functions as a de facto regional transportation system. Recently, some progress has been made at the Daily Urban System level in the South – RandstadRail – but has yet to link up with the other parts of the agglomeration.

The different morphology of the two regions has also profoundly affected the nature and use of open space. London's inner-city residents may have to travel for nearly an hour to reach open countryside, while other parts of South East England are very rural and sparsely populated by Randstad standards. In the Randstad, open space is almost always within cycling distance – this is due in part to the smaller size of cities compared to London, but also to national policies (buffer zones between cities, national landscapes) and local planning policies to retain green 'wedges' into cities. At the same time, there are marked similarities. Both regions are under intense urbanisation pressure and both have large-scale planning policies in place to deal with this (Green Heart/Green Belt).

The relative success of these policies to preserve open space is largely dependent on the level of local support. The Green Belt policy is generally supported by the aversion to growth of the municipal governments



Stebe Swart / fotografie Stebe Swart

Dutch identity is strongly associated with specific urban contexts, cultural histories of sense of place (aerial view of 'Oud Zuid', the old part of southern Amsterdam)



Jason Hawkes

London's cultural values transcend the uniformity of its built form (aerial view of Knightsbridge, London)

in the area. In contrast, many Green Heart municipalities are development-oriented and resist the imposed rules. One of the reasons is the ambivalence regarding the spatial mismatch between more 'distant' objectives designed to protect open space and comply with strict European rules (habitats directive), and more immediate concerns of socio-economic vitality.

A similar tension between spatial scales is perceptible concerning energy. Urban regions have a big role to play in energy transition. As the largest energy consumers, these areas also have the most to contribute in terms of conservation and savings. The urban environment contains potential for energy production too, such as offering surfaces for solar panels and industrial heat. At the same time, the issue of sustainable energy provision reaches beyond the city, into the region and beyond. This will probably require some form of regional cooperation, if not planning, to deal with the land-use issues involved with the placement of windmills, biofuel production and the like.

Ambitious European and local targets regarding emission reduction and a green economy have already stimulated innovation in various urban regions, including the Randstad and South East England. Several UK cities have made leaps in the promotion of carbon-neutral homes and green public procurement, while Rotterdam has facilitated partnerships between producers of industrial heat and potential consumers, and by supplying excess CO₂ to greenhouses – transforming a climate-change problem into a food-production solution.

The supply of food to large urban regions is another issue that cuts across all levels of scale. Much of the food produced in the Randstad is not consumed there, but exported. Feed for cattle is imported, the livestock in turn exported, and the meat imported again. Obviously the laws of economics governing food are often at odds with sustainability.

Some regions are fighting back. Regional products are being promoted, farmers' markets reintroduced to the urban environment and some businesses – like the Randstad's Marqt – are carving out a niche in the competitive supermarket business by offering a more sustainable alternative to consumers. So far, most of these initiatives have come from civil society or the business community rather than government. This is encouraging given the institutional changes taking place with regards to spatial planning in the Netherlands and the UK.

Both countries have recently introduced policy changes that have led to innovations in spatial planning. In the UK this is manifesting itself in terms of the Conservative government's policy of a 'Big Society' and devolution of many planning powers and budgetary measures to local authorities.

As stated, this is not the first time that the notion of 'Region' is debated. The term has been a source of contention among successive governments. Similar to recent policies, and in line with the free-market ideal and a push for localism, the UK saw a substantial decrease in aid to regions in the 1980s, which had from the 1930s onwards been available in various forms. This policy turn ushered in a period of

'economic-localism', in which overarching planning policy decisions at the regional scale were deemed ineffective to address challenges faced by local governments. The regeneration of regions was put in the hands of competing local councils, which in turn took the initiative to instil a sense of place as defined by their own cultural, economic and spatial identity. In the late 1990s, Regional Development Agencies (RDAs) were created to implement regional policies focusing on indigenous growth. The regional spatial components were identified for housing needs with the Planning and Compulsory Purchase Act of 2004 and led by the Regional Spatial Strategies. These were met with strong criticism for their lack of accountability and effectiveness. This was mainly due to the fact that catchment areas and functional economic areas defined by commuter flows go beyond city and local authority boundaries.

The current UK government is again in the process of removing regional level organisations. The Localism Bill moved through Parliament in May 2011, and is expected to receive Royal Assent in November. This new legislation will revoke the Regional Spatial Strategies, stating that local authorities are no longer required to adhere to regional housing figures. The proposed legislation will authorise local authorities to decide on their own needs, without considering the regional demand. Further devolved planning responsibilities will give communities power to draw up Local Plans that could eventually be part of a given local authority's 'Local Development Framework'. In the absence of the regional tier, the newly introduced, self-selecting, Local Enterprise Partnerships (LEPs) will focus on economic development sub-regionally. It remains to be seen whether this new entity will have the capacity to plan with local authorities and business partners while remaining sensitive towards the bigger scale, the wider regional implication and the global impact. In their current form, LEPs have no statutory powers or planning responsibility for the built environment, though they have been recognised by some as a potential vehicle for cross-boundary collaboration on housing demands.

A similar policy turn is perceptible in the Netherlands. The current Dutch cabinet is busy devolving national spatial planning policy to provinces and municipalities and de-institutionalising (sub)regional municipal collaborations. Meanwhile, more is left to market forces too. In the context of increasing budget cuts, private developers are expected to take the lead.

Like in the UK, the problem of the region has been debated for decades, and various policies have been implemented to deal with it. In the 1990s, a law was enacted to promote grassroots regional coordination by granting a legal status to municipalities united in a cooperation agreement. This was seen as providing a flexible answer to the acknowledged mismatch between urban spatial challenges and governance structures. The provincial governments were viewed as being too weak to impose top-down coordination, especially those containing big cities. In the course of about a decade, various regional bodies were set up and evolved (sometimes witnessing the arrival or departure of municipalities). The national government made agreements with

these bodies regarding housing targets and urbanisation policies. These regional bodies soon encountered a major setback when the citizens of Amsterdam and Rotterdam voted against a proposal to grant them the status of 'city-provinces', as neither conformed to the more localised identity of their residents. Despite this, these regional bodies continued to draw up economic and spatial plans well into the new millennium.

Another blow came with the new Spatial Planning Act. This act reallocated statutory planning powers and instruments among the three traditional governance tiers (national, provincial and municipal), without making provisions for the regional bodies. In the new system provinces were expected to take on the role of coordinators. The current government has continued in this vein, effectively abolishing the regional bodies and delegating most planning matters to provincial governments. It has also announced its support of a merger of all Randstad provinces into a single entity and the creation of a Randstad transport authority. It remains to be seen whether or not these proposals succeed, or whether the individual provinces can deal effectively with regional challenges of economic development, transportation, food, energy transition and the protection of open space.

Obviously, there is no such thing as a quick fix or one-size-fits-all way to deal with regional planning issues: they are too diverse and disparate in scale for that. Instead, each of these will have to be approached on its own merits: pragmatically and incrementally. The age of grand design is behind us, and, moreover, ill-suited to the amorphous regional scale. For this reason alone, one should be wary of politicians urging governmental reform as a panacea for these kinds of challenges. Besides the fact that the size of 'the region' differs between regional problems, every administrative solution will inevitably create new problems and coordination issues across the new borders.

As stated, both the United Kingdom and the Netherlands are devolving spatial planning powers to the local, rather than the regional, level. In this more fragmented policy environment, it is important that local governments do not lose sight of the regional spatial effects of locally driven decision making. The regional scale remains critical to keeping our cities robust and competitive engines of the global economy, ensuring the efficient flow of resources and people, safeguarding the quality and accessibility of natural and recreational landscapes, and taking advantage of potentials for renewable energy generation and food production. At the same time, rather than lamenting the fragmentation brought about by devolution, it could turn out to be a blessing in disguise, because it creates room for experimentation, and with it, innovation.

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NLCITY

Winy Maas

The Netherlands has a long tradition of planning on a heroic scale: from the polders of old, to the Delta Works, land reclamation in Flevoland, the VINEX suburbs, the new towns, and the high-speed Betuwe railway line. These examples illustrate a firm belief in the idea that people can create their own topography. The Dutch even have their own word for it: *maakbaarheid* (makeability).

These planning activities have helped fuel the economy, ensured water safety and boosted the country's competitive position. It could be argued that planning has stimulated, or even created, national cohesion; without planning, there would be no Netherlands at all.

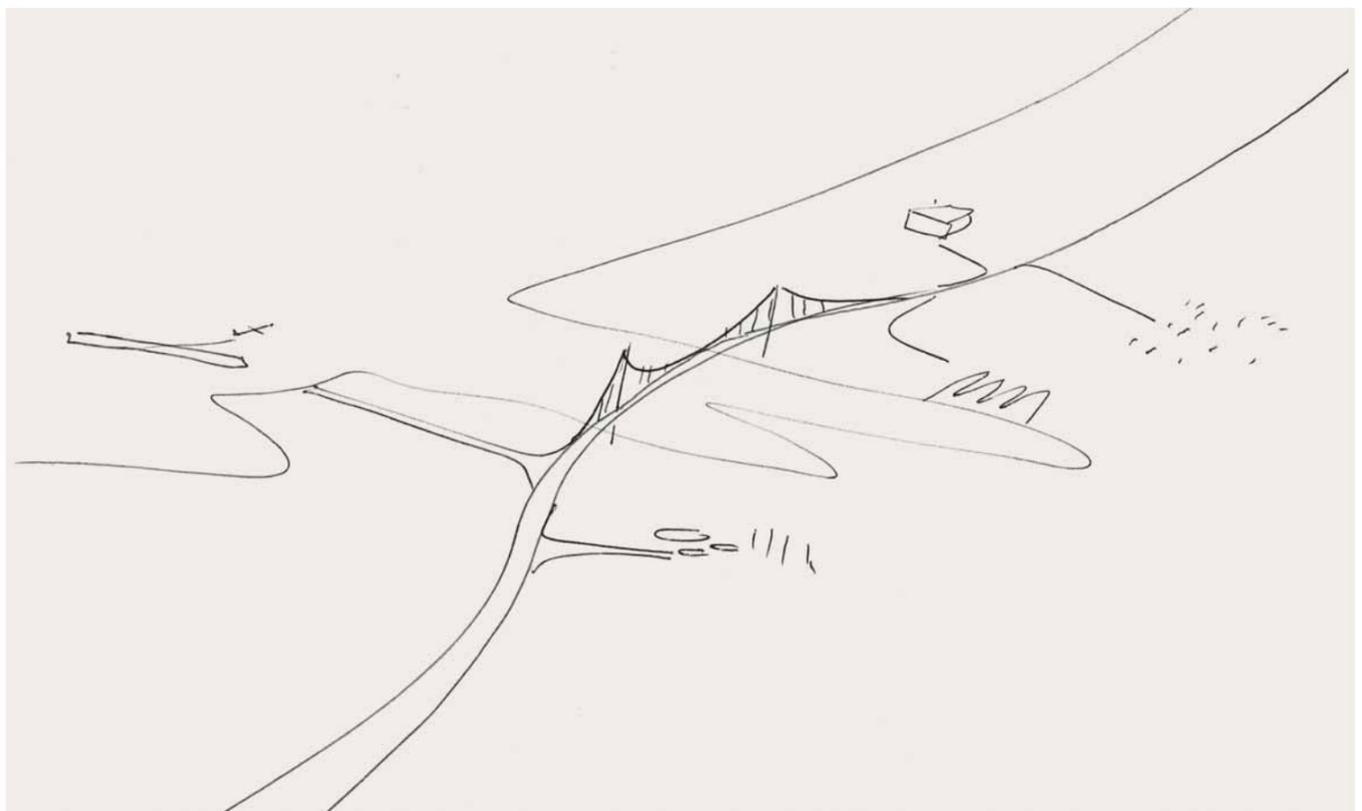
There are doubts, however, about the usefulness of these efforts. Given side effects such as plagues of blue-green algae, were the Delta Works really such a good idea? Wouldn't a different, more 'spongy' coastal protection system have been a better way to cope with the anticipated rise in sea levels? Similarly, don't all the efforts to rationalise agriculture seem a bit pointless now that globalisation is decimating Dutch farming?

As planning has created a sense of cohesion, recent doubts surrounding planning have had the opposite effect. Nowadays, people see it as a rigid and sluggish discipline. The result of the current period of financial cutbacks, protectionism and political individualism, could be the demise of planning and large-scale planning projects. One could imagine a dark scenario in which an endless archipelago of competing cities, provinces, regions and official bodies are staffed by a cacophony of individuals, snared together by a tangled jungle of planning procedures. How could this mass of meddlers and obstructers ever respond effectively to large-scale issues? Wouldn't the whole territory sink into quicksand and planning inertia in which the tyranny of the individual sets the standard for all?

The erosion of cohesion and autonomy is further enhanced by interference from Europe. Decisions about energy, mobility, green spaces and cities are increasingly taken at a European level – and perhaps rightfully so. The Dutch energy resources are considerable, but will soon be dwarfed by those of Russia, Iceland or Norway. The Netherlands exports agricultural produce on a large scale, but is now feeling the pinch of the global marketplace. Rotterdam is one of the world's largest ports, but still depends on Europe to survive. Now that the Netherlands has become so thoroughly European, the hallmarks of an autonomous country have been effaced.

NL CITY

Embedded in the word 'country' is a suggestion of autonomy. But what makes the Netherlands so autonomous? Physically speaking, the Netherlands comprises part of an elongated, evenly distributed and essentially undivided urban field that



All images: Winy Maas

extends in a band from the English Midlands to the Po Valley in northern Italy. In this light, we may well wonder what aspirations the Netherlands ought to have. Can we go on considering it as a country? How can Dutch planning respond to this reality?

Given its high density, it makes more sense to consider the Netherlands as a city of some 16 million inhabitants. It may have a different size and shape, but as a country it has a similar scale to São Paulo, London, Tokyo or New York. The Netherlands is also peculiar because it doesn't have the real surrounding countryside that London, Paris or Madrid have, nor does it have their density. In recent years the Netherlands has developed into a single, tight cluster of urban patterns. It has become a coherent network city, with all the concomitant advantages (absence of hierarchy, flexibility) and disadvantages (congestion, indifference, sprawl, lack of a central identity). Embracing this reality could lead to new, fruitful planning vistas.

Treating the whole region as a city with a well-defined civic government would allow us to conceive its future in a more comprehensive and persuasive way. It would boost efficiency and enable it to tackle problems centrally and undertake relatively large-scale projects. The national government would be transformed into a city government that only handles a small number of thematic issues in a small number of programmatic regions. This focus would help tackle the major issues confronting the Netherlands in a more transparent and persuasive way. For instance, in this nationwide city, motorways would become city streets and therefore take on an entirely different character. Areas of natural landscape would become city parks. There would be several water districts and a power-generating zone. In short, we would have NL City.

The notion of NL City allows us to formulate concrete regional plans. We can explore a number of projects based on existing trends and urgent necessities. These projects help transform the complexities of spatial planning into digestible units that can be implemented within a reasonably short timeframe. They 'sort' and 'group' interests, so that synergy, intensity and quality become possible. They form a strategy for transforming public-sector lethargy into effective action. They compensate for the fragmentation of spatial planning with common qualities. They establish identity in an international generic context and counteract the vulnerability of regions. They help regions to specialise and compete effectively.

RIVER ZONE

Climate change, the canalisation of rivers and increasing urbanisation all contribute to higher peak discharge levels. So it is essential to raise the capacity of the continent's rivers.

In NL City the 'Green Heart' – a rather grand name for a rather nondescript landscape – will be transformed into a new and diverse wetland area. A 'Blue Heart' would underpin the coherence of the ecological infrastructure. The new water structure would expand beyond the existing city parks and nature reserves, connecting both people and wildlife.

Existing settlements in the widened floodplains will have to be dismantled

and moved to higher ground and areas surrounded by dykes, or jacked up to a safe height (using state-of-the-art technology). Dykes will have to be displaced, earth excavated and bulldozed into new dykes and mini islands. The resulting elevated areas could be used immediately for the construction of housing. Sale of this land would help finance the whole operation. In addition, the expanded river floodplain would provide water storage and water purification facilities.

Within the River Zone, we can designate various specialisations. The Kagersplas, a splendidly located lake between Leiden and Amsterdam, could, for example, expand to become a sports paradise for sailing and waterside dwellings. The village of Nieuwkoop in the east of the Randstad could transform into a huge housing archipelago – for first, second and floating homes – and canoeing. The Rottermeren lakes cluster, north of Rotterdam, could be given a proper recreational destination; they could develop into a continuously inhabited 'Wetlands' of European proportions.

COASTAL ZONE

Europe's coastlines are under pressure. Rising sea levels necessitate stronger protection for the lower lying parts of the landmass. At the same time, the warmer climate makes the seaside even more attractive for tourists and retirement communities, resulting in massive linear cities stretching from Portugal to Denmark. The vulnerable line of coastal sand dunes is protected by barbed wire fences against the growing hordes of cyclists and walkers, town dwellers longing for solitude and the masses of beach aficionados. The coast is turning into a fiercely defended strip: a littoral fortification.

Is there a way to build upon the coast's present qualities to deal with this human encroachment? Radically thickening the coast would produce more space for sea defences, recreational and residential uses, and nature. Seabed reclamation and the construction and formation of artificial islands could provide land for recreation, energy farming and nature development. The result could be a Dutch 'Istrian Coast'.

Additional gullies could be constructed to increase shoreline length, extending the diversity of natural habitats and forming buffers to enhance sea defences. Polders in the former Middelzee and similar areas could once again become part of the 'Wild' seacoast climate.

Improved coastal traffic routing could enhance access, and the existing infrastructure could be upgraded to produce a scenic coastal motorway running from Portugal to Scandinavia, on a par with the Pacific Coast Highway 1 in the United States.

FOREST ZONE

International comparisons show that the Netherlands suffers from a shortage of high-quality open areas. Although the Netherlands has plenty of agricultural land, this does not produce the impression of being an open counterpart to the city. This is mainly due to the small size of the fields and the advancing tentacles of residential building that invade the landscape. In open meadows, you can always see houses on the horizon,

hear cars approaching, and notice packs of cyclists whizzing past.

In NL City, a sense of emptiness can be engineered. Open landscapes could be converted into woodlands. Buildings could be tucked away behind trees without destroying the impression of tranquil natural surroundings. This could be a symbiotic relationship: the buildings are necessary to finance the forest, and the forest enhances the environmental quality of the buildings. Could we use these ideas to improve the quality of existing forests like the Veluwe?

The Veluwe isn't a real forest after all. It is a patchwork of former commercial woodlands, owned by different proprietors and divided by roads and built-up areas. This is evident in towns like Ede, Wageningen, Veenendaal and Barneveld. Combined, they have some 300,000 inhabitants, with a reasonably good access to infrastructure.

Demolishing fences, turning paved roads into footpaths, and moving recreational facilities elsewhere would transform the Veluwe into a single, real, huge forest. It would allow for the free movement of fauna, for camping in wild surroundings and for a practically endless network of footpaths.

GLASS ZONE

The Westland area has traditionally been dedicated to growing fruit, flowers and vegetables in greenhouses. This economically buoyant sector plays a significant part in Dutch exports and has made Westland a world centre of excellence in horticulture. Development has slowed in recent years because of the limited scope for expansion, poor infrastructure and the government's policy of allowing greenhouses to be built in other parts of the country. Demand for land for housing and recreation has only exacerbated this process. Westland is in danger of moving to the 'B Triangle', to the north of Rotterdam, West Brabant and Flevoland.

But is it wise to displace these food producers? In NL City the horticulture industry is ideally located: close to the port (for export) and the city (consumers). The location of this region and its road and rail connections to the port could help its expansion into an integrated agricultural cluster that brings together all kinds of export-oriented agricultural industries: horticulture, pig farms, fisheries, et cetera.

That would generate knowledge and specialisation. Glass Zone could become Europe's intelligent experimental farm. Could it combine its knowledge cluster with the universities of Delft and Rotterdam? Shouldn't Wageningen University also have a site here? Perhaps it could signal a renaissance of Dutch agriculture. Many of the products could be cultivated to produce much higher levels of added value. We should accommodate them in stacked cultivation levels – greenhouse skyscrapers whose proximity would form a climate dome, which would in turn foster growth of the produce.

The result would be a bio-dome, like a fantastic glass city, an icon on the coast, a lantern in the night, visible across the Channel from England, if not from the moon. Old villages would be embedded in this 'city' like little gems. The produce exchanges would also become multi-storey towers, accessible directly from an improved

transport link, 'The Extended Auction Route,' connected to the A4 motorway.

PORT ZONE

The seaports of Europe are at the threshold of high-level collaboration, aimed at cost-cutting through up-scaling. Rotterdam can clearly take the lead here. It would make further investments in Amsterdam and other cities superfluous, with as a result that their harbour areas could be used for other urgently required functions.

Moving some of the harbour activities offshore would give activities that generate nuisance or risks a suitable location, away from residential areas. Increasing economies of scale ties in with developments in shipping practice and allows larger ships to be served more quickly. It also opens the way to more intense and effective collaboration with Antwerp, Hamburg and Le Havre.

Rotterdam would undergo a change in this respect; a realignment of its port activities is to be expected. Space would become available for new processing industries and other activities. The upshot would be a new symbiosis between the port and city.

REST ZONE

And what about the rest? Why not let it be a true antithesis? Not thematised, not regulated: a zone with complete freedom and randomness. No planning procedures, no aesthetic committees, no supervision. Everything left to local preferences. A free play of local entrepreneurship. A fantastically colourful palette. A sublime suburbia. Allotments, agriculture, free-range land, laissez faire, and freedom.

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The four Randstad and South East England workshops, held between December 2009 and November 2010, focused on the following issues: Defining Metropolitan Regions; Linking Living and Working; Linking People and Nature; Utility of the City Region: Renewable Energy. These workshops were attended by an array of academics, practitioners and policy specialists, each offered valuable insight and approaches to challenges facing the Randstad and South East England.

WORKSHOP ATTENDEES

DEFINING METROPOLITAN REGIONS ROTTERDAM, 7 DECEMBER 2009

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UTILITY OF THE CITY REGION: RENEWABLE ENERGY LONDON, 10 NOVEMBER 2010

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Government Office for South East England
Greater London Authority
GreenSpace
Lee Valley Regional Park Authority
Natural England
Sustrans
The Woodland Trust

In addition to the workshop series, the results of the research were presented at the 2011 Apeldoorn Conference as organised by the British Council Netherlands, British Foreign and Commonwealth Office and the Netherlands Ministry of Foreign Affairs. <http://www.britishcouncil.org/netherlands-networks-apeldoorn.htm>