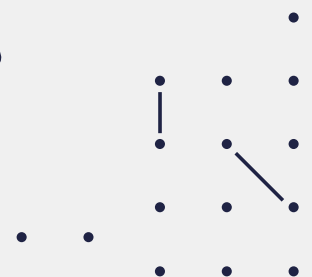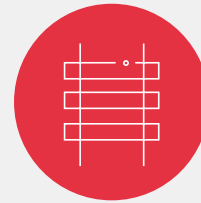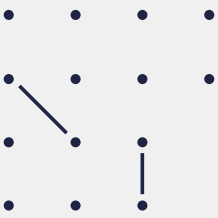# A One Powerhouse framework for national convergence and prosperity A Vision for Britain. Planned.

Important Note from Authors

You will have noticed that this report is dated 2020.

The delay in publishing has been brought about by the Coronavirus lockdowns.

Any issues that might necessitate allusion to Coronavirus do not, we feel, have a profound impact on the factors that underpin the approach, findings, plans or recommendations contained in our reports.

Indeed, our view is that the likely negative effects of the lockdowns and social distancing, combined with the cross-party aspirations for levelling up, make our draft Spatial Plans even more relevant as a very practical and transparent road map to delivering an equitable, sustainable future for the Regions of England - in the shortest possible time.

One Powerhouse Consortium Board and RSA
January 2021

About the One Powerhouse Consortium

The One Powerhouse Consortium, supported by The Sir Hugh and Lady Sykes Charitable Trust, believes that a substantial part of the problem of regional inequality can be solved not just by money, but by the transformative potential of spatial planning. Working with recognised leaders in the field, the consortium is creating draft spatial plans for the 'mega regions' of England to sit alongside the existing spatial plans for Wales, Scotland and Northern Ireland.

About the RSA

The RSA (Royal Society for the encouragement of Arts Manufactures and Commerce) believes in a world where everyone is able to participate in creating a better future. Through our ideas, research and a 30,000 strong Fellowship we are a global community of proactive problem solvers. We unite people and ideas to resolve the challenges of our time.

Acknowledgements

Contents

0.0 Executive summary

Regional inequality and the need for a new approach to spatial planning

Today, just under half of the UK population lives in regions with a comparable productivity to the poorer parts of the former East Germany. The One Powerhouse Consortium, supported by The Sir Hugh and Lady Sykes Charitable Trust, believes that a substantial part of the problem of regional inequality in the UK can be solved not just by money, but by the transformative potential of spatial planning.

Adopting such a spatial planning approach will give the new government better economic decision making and the ability to prioritise where and what type of investment is needed in each region with the aim of helping the UK develop as a whole.

Spatial plans focus political will, draw in economic activity to great effect and in turn build stronger communities and support beneficial social reforms. This is not a return to regional development agencies or statutory regional spatial strategies. By building from the bottom up using detailed local plans, which sit alongside a series of coherent regional plans, all under a light-touch national framework, significant progress can be made to narrow those inequalities.

Deploying a modern approach to large-scale spatial planning has had undoubted success in the Rhine-Ruhr region of Germany, in Randstad in the Netherlands and the five state Regional Plan Association focused on New York City.

England's Local Enterprise Partnerships (LEPs) will be greatly enhanced by a coherent national approach to economic spatial planning. The clear gap is at the level of the English regions which are already coming together in four distinct areas.

Regional blueprints and collaborative leadership

The One Powerhouse Consortium has worked with three major planning consultancies and the RSA (Royal Society for the encouragement of Arts, Manufactures and Commerce) to develop draft regional spatial blueprints for the North of England, the Midlands, The South East and the South West. These could sit alongside existing spatial plans for the devolved nations and demonstrate the potential of regional planning in action - how it could lead to better decision-making and the prioritisation of investment across the country.

The choice of four megaregions reflects a global trend towards economic planning around closely networked clusters of cities and towns at a scale of 6-12 million people. This 'new regionalism' takes a bottom-up approach prioritising collaborative leadership and bringing together public, private and voluntary sector interests around a small number of themes and strategic interventions. Regional spatial plans are non-statutory and have open forms of accountability.

The four draft regional spatial blueprints published alongside this report exemplify the critical economic and environmental assets that exist in every region. They provide a framework such that villages, towns and cities of all sizes can find their place in the wider economy and they provide a clear rationale for housing development, major infrastructure investment and key environmental assets. Each of them identifies a small number of themes or workstreams of regional significance together with several critical interventions that would transform regional economic productivity and inclusive growth.

Recommendations to government

As the UK leaves the European Union (EU), now is the time for the new government to bring forward a clear and coherent programme to tackle widening regional inequalities and provide a substantive basis for extensive infrastructure spending. Levelling-up is more than a matter of investment.

To this end the One Powerhouse Consortium makes six recommendations to government:

01 Adopt the principles and processes of regional spatial planning that have proved so successful in other developed nations and can complement industrial strategy, infrastructure planning and local economic development.

02 Make the move to megaregions – not as top-down regional agencies but as bottom-up collaborations between regional leaders in the Northern Powerhouse, the Midlands Engine and 'super-LEP' areas in the South East and South West.

03 Put in place a regional investment pipeline alongside a fiscal framework for change which involves changes to Green Book appraisal, lifting the cap on capital investment, long-term investment allocations with full delegation of decision-making, a network of regional investment banks and a pathway to greater fiscal devolution.

04 Provide greater support for emerging institutions at the megaregional scale, building the capacity of megaregional co-ordination agencies like NP11 and Midlands Engine and creating appropriate Boards or other bodies to hold such agencies to account.

05 Task and resource the National Infrastructure Commission with responsibility for overseeing and supporting the development of regional spatial strategies and an over-arching UK spatial framework.

06 Introduce four regional ministers, one for each of the English megaregions, whose primary role is to represent the region to government and who will form a committee for regional rebalancing attended by Secretaries of State for Business, Energy and Industrial Strategy (BEIS), Housing, Communities and Local Government (HCLG), Department for Transport (DfT) and Department for Environment, Food and Rural Affairs (DEFRA) and chaired by the Chancellor of the Exchequer.

1.0 Introduction

A vision for Britain. Planned.

The One Powerhouse Consortium, supported by The Sir Hugh and Lady Sykes Charitable Trust, believes that a substantial part of the problem of regional inequality in the UK can be solved not just by money, but by the transformative potential of spatial planning.

Spatial planning is the 'where' of decisions. It looks at a defined geographical area and makes an assessment of everything contained in that area – towns, cities, housing, schools, universities, roads, rails, airports, offices, factories, hospitals, energy sources, museums, parks, leisure activities, environmental and biodiversity assets - and makes a plan to develop those assets for the benefit of the people who live in that region, now and for the future.

It is well understood that countries and regions around the world have used spatial planning to focus political will, economic activity and social reform to great effect. Notable examples include Germany's Rhine-Ruhr, the Netherlands' Randstad and New York City's Regional Plan Association, as well as London and Scotland.

Regional inequality in the UK

Today, just under half of the UK population live in regions with a comparable productivity to the poorer parts of former East Germany – and comparable living standards are worse.[1] According to the recent UK2070 Commission, the UK today is more intraregionally unequal than Germany was in 1995.[2] Since reunification, Germany has since pulled itself together, through decisive investment programmes underpinned by visionary spatial planning. In contrast, during a similar period, the UK has fragmented.

The nature and extent of the so-called North-South divide can be presented in many forms. Maps showing economic productivity, educational attainment and poor health all present sharp disparities between regions and nations. Current forecasts suggest the situation will only get worse and that in fact the economy of London and the South East is 'decoupling' from the rest of the UK.[3] The repercussions are stark and grow more evident all the time.

While bemoaning the growth of regional inequality in the country, successive governments have extolled the virtues of spatially blind investment in the best performing sectors and projects. The adherence to current appraisal mechanisms, codified in the Treasury's Green Book, has been to channel investment to the most prosperous places, reinforcing geographical divides.

Spatially-sensitive policy is not simply a matter of social justice and political prudence. Regional prosperity drives national prosperity and so regional imbalance constrains overall performance. Accommodating agglomeration in some places while servicing mounting welfare bills in others damages the UK's fiscal balance and exacerbates wthe underlying problem.

The value of place and scale

There is evidence that spatial planning has already begun to deliver results in the UK. We are not alone in recognising that the two 'regional economies' that have the highest levels of productivity are those where there are coherent regional spatial economic plans: London and Scotland.

Indeed, in England, there is good work taking place through some Local Enterprise Partnerships (LEPs) and Combined Authorities and Mayoralties but not all. In strategic planning and investment terms, these tend to have a rather small footprint and the overall outcome is rather patchwork and lacks coherence.

Our plan

The clear gap in terms of economic planning in the UK, therefore, is at the level of the English regions. Any spatial strategy needs to bring together the best local industrial strategies and plans within a wider regional strategy framework. The foundations of how this can be achieved are already present. The regions of England are already coming together: The Northern Powerhouse, The Midlands Engine, The Great South West and The Wider South East all exist as functional identities.

Our ambition is, in short, to work with these regional networks to prepare a series of that will demonstrate the potential of regional planning in action and show how it could lead to better decision-making and prioritisation of investment across the country. These will better enable the UK to develop as a whole over the long term – creating opportunity for all, jobs for al and prosperity for all.

A substantial part of the problem of regional inequality in the UK can be solved not just by money, but by the transformative potential of spatial planning.
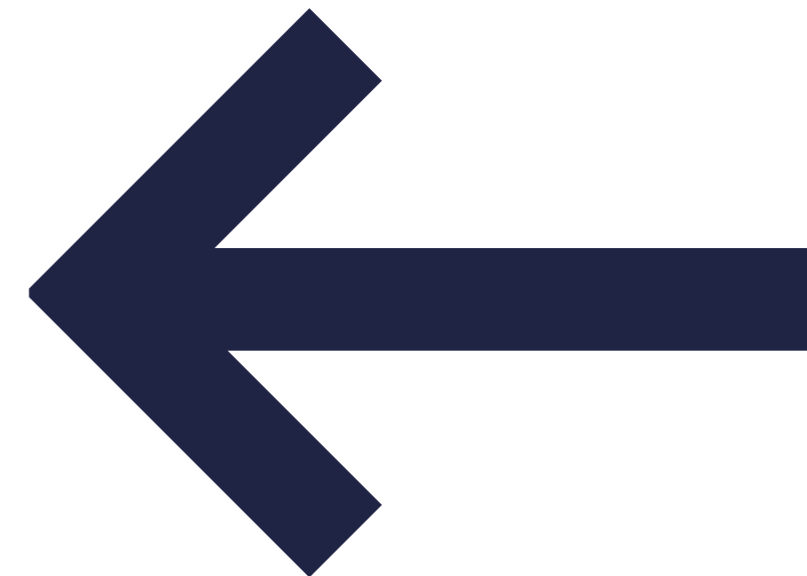
Draft blueprints

The definition of a blueprint that the One Powerhouse Coalition has adopted is that of *'an early plan or design that explains how something might be achieved.'*[4] While based on thorough analysis and evaluation, our draft blueprints are not the finished product, but they point to what could be achieved with better resourcing, co-ordination and support.

The technical work has been led by planning consultancies linked to the regions: Atkins in the North, Barton Willmore in the Midlands and the South West and AECOM in the South East. The One Powerhouse Consortium has also worked hand-in-hand with the UK2070 Commission and drawn upon the support of the RSA.

This report complements the regional blueprints. It provides a more detailed account of the importance of spatial planning and makes the case for four English megaregions. It includes a summary of the regional blueprints and it identifies some significant cross-cutting issues and themes. It also sets out those aspects of the spatial economic planning process that remain best developed at the national level.

2.0 The power of spatial planning

The One Powerhouse Consortium believes adopting and implementing a broad notion of spatial planning is critical to the future of the UK economy. For some, the discipline of planning involves a limited set of narrow statutory functions regulating the use and development of land.

Increasingly, however, planning is conceived more holistically, as a creative process of envisioning and delivering places and regions fit for the future. This broader conception often goes by the name of spatial planning.

Defining spatial planning

At its most basic, spatial planning is the 'where' of decisions. A spatial plan is the visual illustration of the potential future of an area. It maps out all the assets within a given area – the towns, cities, houses, schools, universities, roads, rails, airports, offices, factories, hospitals, energy sources, leisure activities, environmental and biodiversity assets – and, using the available evidence, suggests how best to arrange and develop them to achieve stated policy goals. Spatial planning is the practice of producing these maps and the associated coordination of different activities and decisions that influence spatial organisation. In its 2004 plan, the Welsh Government defined spatial planning simply as the "consideration of what can and should happen where".[5]

Spatial planning tends to be multi-agency, long-term and strategic. It encompasses wide-ranging economic, political and environmental functions and incorporates projections for the future, aiming to proactively shape change and improve investor confidence. In many parts of the world the discipline of planning spans the spatial elements of multiple different policy streams.

The UK government itself has previously defined spatial planning as something that "goes beyond traditional land use planning to bring together and integrate policies for the development and use of land with other policies and programmes" – such as environment, transport, economy and culture – "which influence the nature of places and how they function".[6]

Spatial planning in England

Since the turn of the millennium spatial planning has been best embraced in the devolved nations. It has helped the newly devolved nations to express their cohesiveness and their distinctiveness and to coordinate their different policy programmes in service of common aims.

Alongside this, in the 2000s the New Labour government oversaw the creation of 9 regional development agencies in England tasked with developing Regional Spatial Strategies (RSS) in 2004. These ostensibly bridged the gap between local planning policy and national objectives, in many cases allowing for more effective development and infrastructure decisions. But after 2008 planning was widely blamed for harming the post-crash recovery and some strategies were mired in debates about housing numbers. In 2010, the new coalition government abolished the regional strategies as part of its move towards localism in planning.

Since 2010, there has been little or no spatial planning at the regional scale, leaving a patchwork and uncoordinated system of local planning at various scales. At the time, the all-party Commons Communities and Local Government Committee warned that "the intended abolition of regional spatial planning strategies leaves a vacuum at the heart of the English planning system which could have profound social, economic and environmental consequences set to last for many years".[7]

Since then, the government has extolled the virtues of 'spatially-blind' planning, making its investment decisions according to the current performance of industries and sectors and deliberately ignoring place – while simultaneously bemoaning the stubbornness of spatial inequality and the poor productivity of large parts of the country. In 2012, a University of Manchester study for the Royal Town Planning Institute showed that only 39 percent of UK government policy documents had an explicit spatial dimension, despite having manifest spatial repercussions.[8]

Perhaps the one place in England that does have a comprehensive spatial plan is London – unsurprisingly, this has supported it to become uniquely coordinated and productive. Elsewhere, there is insufficient focus on how policies and interventions interact and sometimes contradict in a given place. Restrictive land use planning at the local level remains the norm across much of the country, preventing the development of strategic responses to many future challenges.

Case Studies: spatial plans from the UK and elsewhere

Devolved nations

Scotland

The National Planning Framework (NPF), Scotland's spatial plan first published in 2004, built upon a long tradition in Scottish spatial planning. It spanned economic, social, environmental and infrastructural matters and it was promoted as a tool for achieving the independent, prosperous and low carbon Scotland that the Scottish National Party (SNP) envisioned for the future. It was created on the back of extensive consultation and inspired a more general embrace of long-term strategic thought in Scotland.[9]

Critics felt the plan was too abstract and scant on practical guidelines for implementation and from 2007 onwards the emerging austerity agenda generated a more general suspicion of planning and regulation, which were held responsible for the sluggish economic recovery.

But such criticisms often overlook the positive contributions of spatial planning in Scotland. Each iteration of the NPF has connected planning with other progressive policy objectives, especially where it has enjoyed broad-based support in the local policy community.

In these places, the NPF has provided a platform for dialogue, consensus-building and the coalescing of strategies around a common vision. The collaborative routines, cultures and practices that have emerged will continue to support successful delivery in the future.[10]

The Scottish experience helps to highlight the value of high-level strategy, even if the criticisms of NPF do result in a weakening of its strategic spirit as some have predicted.[11] With sufficient funding and a continued emphasis on high-level strategy, the NPF can serve a consistent and long-term approach to inclusive growth and sustainable development in Scotland.

Wales

The Wales Spatial Plan (WSP) was published in 2014, following an extensive period of stakeholder consultation. Coordinating transport, economy, environment and culture was considered crucial to achieving the Welsh Government's stated objectives post-devolution: promoting sustainable development, tackling social disadvantage and ensuring equal opportunity.[12]

Within the plan, these objectives are expressed as 'five guiding themes' – each with their own associated actions and sub-objectives – which are in turn applied to six functional subregions with 'fuzzy boundaries'. Many feared the break from traditional planning geographies would limit the plan's on-the-ground influence, especially given that Local Development Plans simply had to pay 'regard' to the plan.
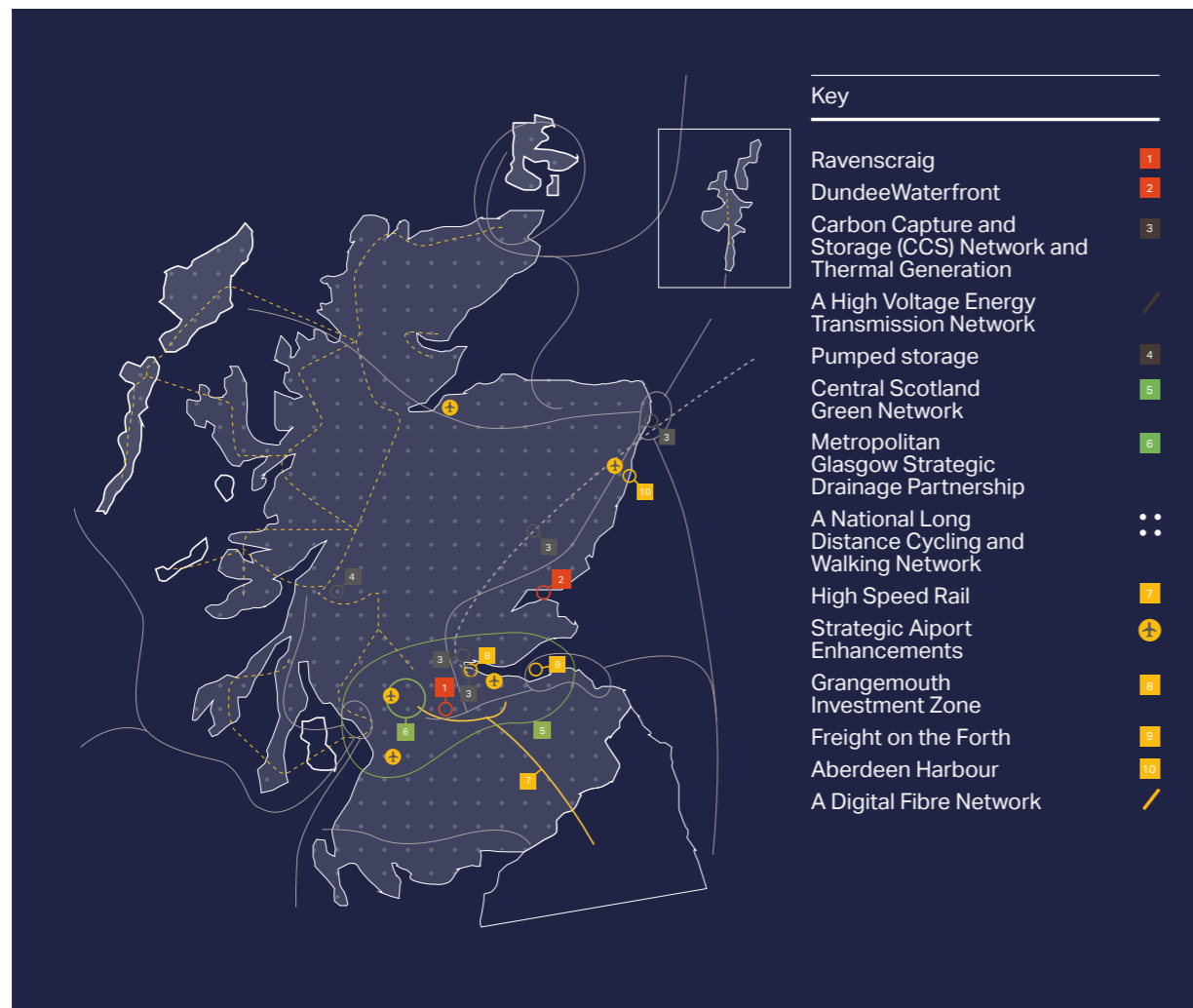
These concerns triggered an independent review of the WSP, the result being that it will be replaced with a National Development Framework (NDF) in 2020 which will have more power to decisively steer land use policy.
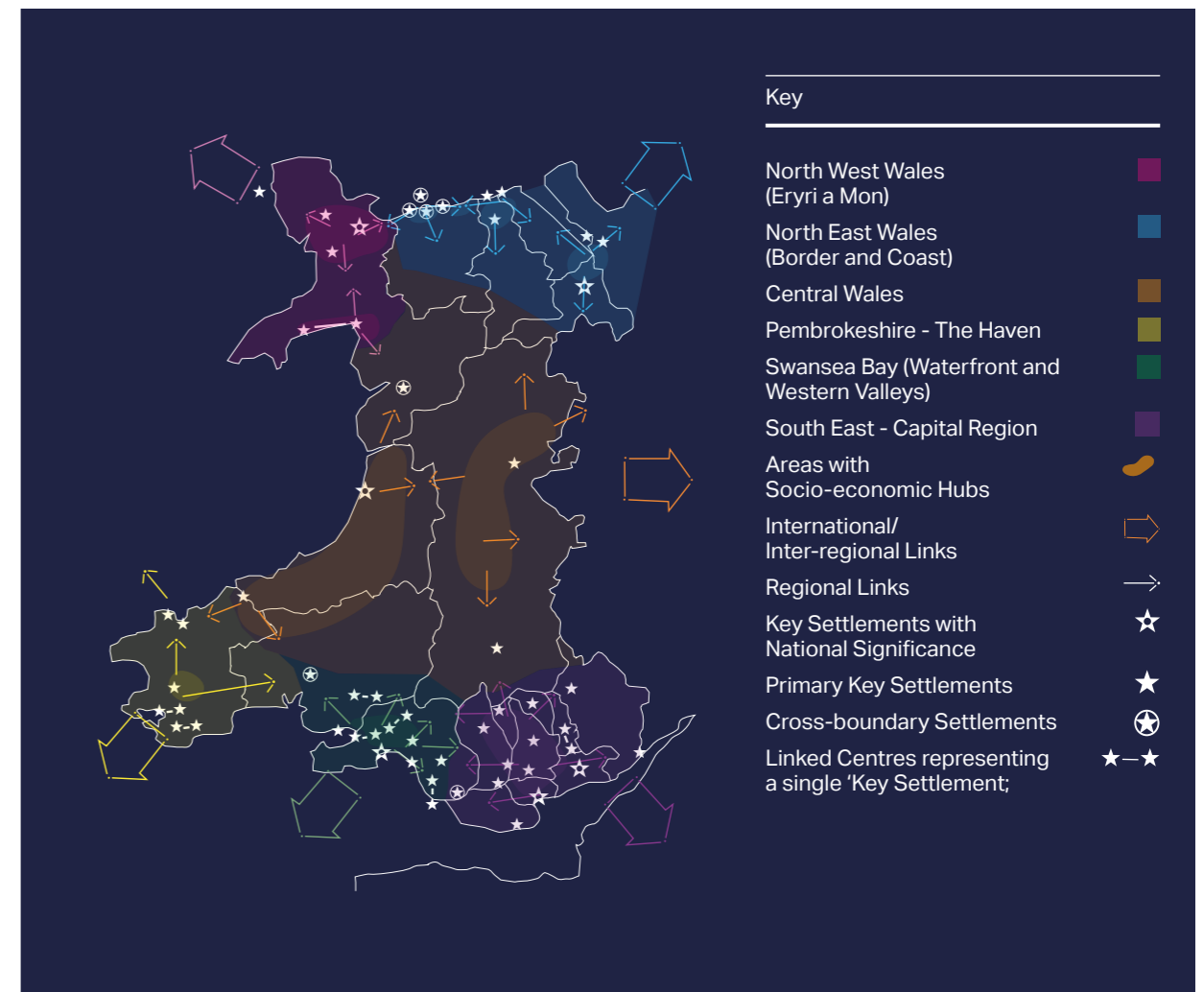
However, the narrower focus on land use planning in the NDF risks isolating planning from other areas, undermining its role as a driver of holistic change. Although not perfect, the WSP supported a process of dialogue and negotiation through which various local public and private institutions could reach agreement on a broad direction of travel, which was no small achievement. By contrast, the NDF might well result in more top-down decision making.[13]

If the NDF does end up taking the form we expect then it would be complemented by a parallel reboot of holistic spatial planning. This dual-purpose document would offer more clarity for land use planners, while continuing to coordinate places and policy sectors in service of an environmentally sustainable and economically progressive agenda.

Scotland's spatial plan. Scottish Government (2014)[52]

Key

Ravenscraig	1
Dundee Waterfront	2
Carbon Capture and Storage (CCS) Network and Thermal Generation	3
A High Voltage Energy Transmission Network	/
Pumped storage	4
Central Scotland Green Network	5
Metropolitan Glasgow Strategic Drainage Partnership	6
A National Long Distance Cycling and Walking Network	⠿
High Speed Rail	7
Strategic Aiport Enhancements	✈
Grangemouth Investment Zone	8
Freight on the Forth	9
Aberdeen Harbour	10
A Digital Fibre Network	/

The Wales spatial plan. Welsh Assembly Government (2008)[53]

Key

North West Wales (Eryri a Mon)	▪
North East Wales (Border and Coast)	▪
Central Wales	▪
Pembrokeshire - The Haven	▪
Swansea Bay (Waterfront and Western Valleys)	▪
South East - Capital Region	▪
Areas with Socio-economic Hubs	⬭
International/ Inter-regional Links	⇨
Regional Links	→
Key Settlements with National Significance	☆
Primary Key Settlements	★
Cross-boundary Settlements	✹
Linked Centres representing a single 'Key Settlement;	★—★

Northern Ireland

Post-devolution, Northern Ireland was the first of the constituent countries of the UK to fully embrace spatial planning and – unsurprisingly given its context – its vision was highly distinctive.

The Regional Development Strategy 2035 (RDS 2035), published in 2001, engaged with the realities of geographical segregation and contested identity. Community cohesion was established as one of the plan's guiding development principles and the use of extensive consultation was considered important for brokering agreement between groups (the same judgement made later in Wales and Scotland, albeit in less acute conditions). RDS 2035 is an instructive, if extreme, example of how spatial planning can be used to manage territorial and identity divisions.[14]

Setting planning within a social and environmental framework, the RDS 2035 primed the ground for the sustainable development strategy that emerged several years later. It was also a marked departure from previous Belfast-centric strategies, flagging various gateways, hubs and corridors in a push for balanced development. A further framework published in 2013 mapped cross-border commitments between Northern Ireland and Ireland, arguably giving rise to a broadened whole-island perspective for previously blinkered policy-makers in the North.[15]

Unfortunately, some of the more progressive commitments of the RDS 2035 were replaced in the most recent version by a narrower focus on economic competition and growth. This limits the scope for Northern Irish planning to harness ambitious and diverse place-based agendas. This is of particular concern in the context of Brexit and the associated political and geographic uncertainties: Northern Irish planning cannotafford to lose its strategic spirit.

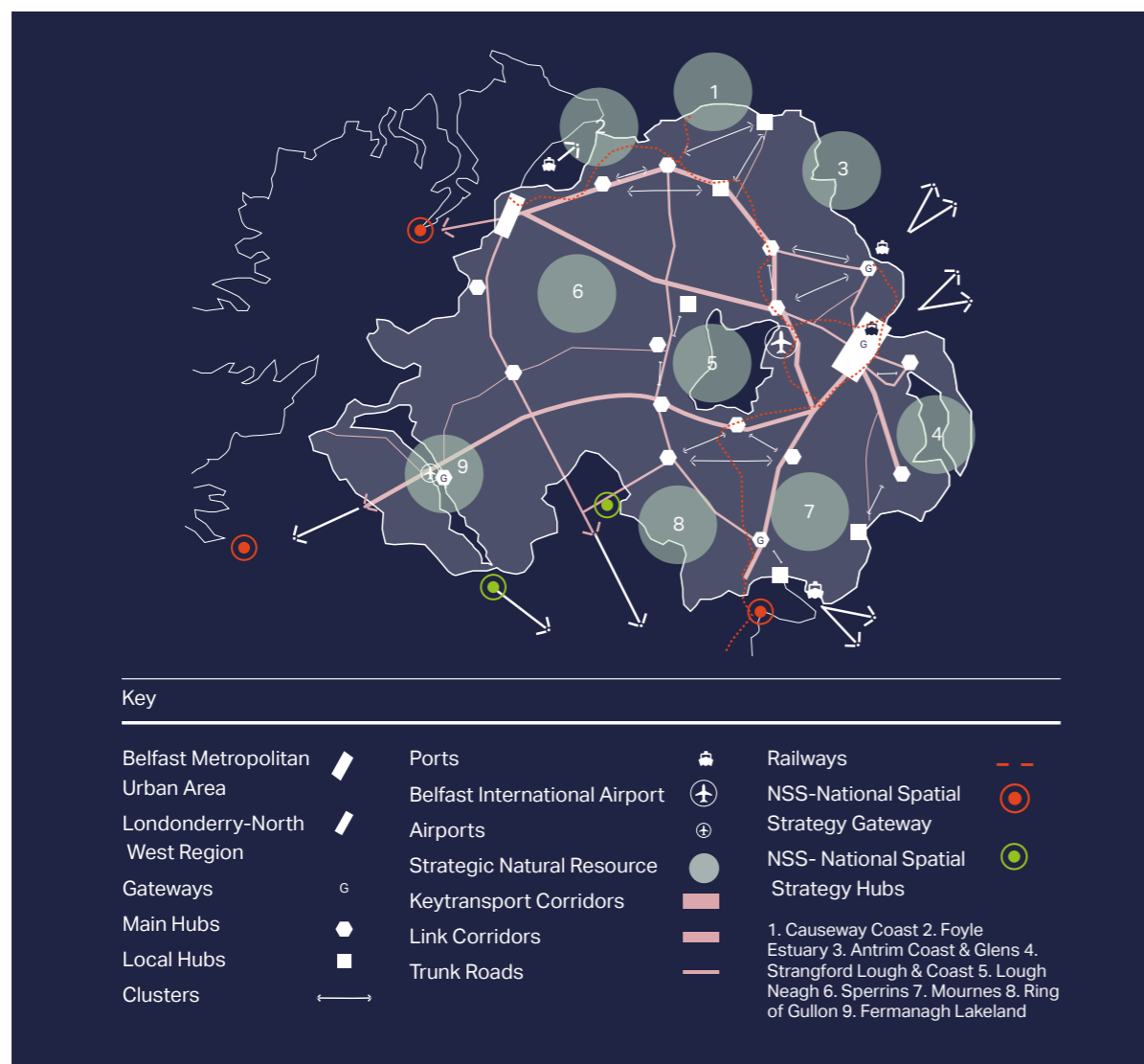# International cases

The Randstad

The Randstad, or 'ring city', is the name given to the horseshoe-shaped urban conurbation consisting of the four largest Dutch cities (Amsterdam, Rotterdam, The Hague and Utrecht) and several interconnected secondary cities. The term Randstad was supposedly coined by the founder of KLM airlines as he looked down at the area from the window of a plane in 1938,[16] but it was formalised as a spatial concept in a government report in 1958 and has been integral part of Dutch planning ever since, in which time it has set a compelling precedent for large polycentric regions around the world.[17]

Strategic planning has supported the emergence of an interconnected urban network in the Randstad that can arguably compensate for the lack of a single Dutch world city.[18] The Randstad's rail system "almost functions as a metro-system" and transport-oriented development[19]
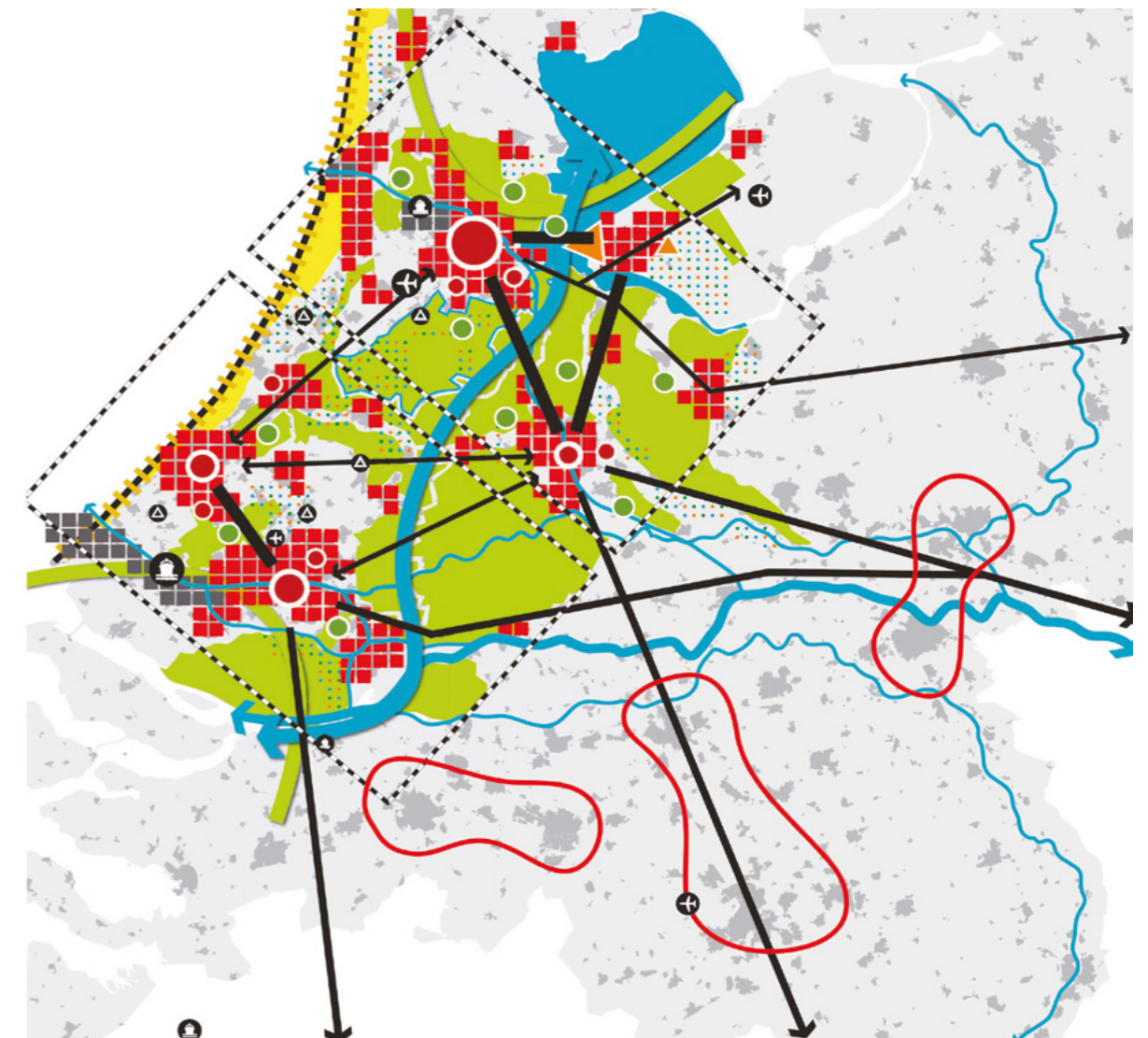
principles have underpinned dense urban development, while ensuring the maintenance of green belts, bodies of water and agricultural land in the country's 'Green Heart'. The Randstad region demonstrates the importance of transport to the prosperity of polycentric regions – something Transport for the North has taken on board.

Despite there being no exclusive tier of governance in the Randstad, there are several platforms for coordination through which authorities and developers can coalesce around strategic regional visions. This has helped to connect a set of specialised cities so that together they can constitute a diversified and successful regional economy.

The Northern Ireland spatial plan. Department for Regional Development (2010)[54]

Key

Belfast Metropolitan Urban Area	Ports	Railways
Londonderry-North West Region	Belfast International Airport	NSS-National Spatial Strategy Gateway
Gateways	Airports	NSS- National Spatial Strategy Hubs
Main Hubs	Strategic Natural Resource	
Local Hubs	Keytransport Corridors	1. Causeway Coast 2. Foyle Estuary 3. Antrim Coast & Glens 4. Strangford Lough & Coast 5. Lough Neagh 6. Sperrins 7. Mournes 8. Ring of Gullon 9. Fermanagh Lakeland
Clusters	Link Corridors	
	Trunk Roads	

Simplified spatial development perspective of the Randstad. Randstad 2040 Structuurvisie (2008)[55]

The New York Metropolitan Region

The Regional Plan Association (RPA) emerged in the wake of the landmark Regional Plan of New York and Its Environs which was published in 1929. The association was unprecedented at the time; a body of business, professional and civic leaders from greater New York seeking to develop a long-term vision spanning administrative boundaries, political cycles and policy domains.

This ambitious regional plan was the first of four by the RPA, the most recent of which was published in 2017. Empirically-based and underpinned by high quality evidence, the plans have consistently demonstrated the positive economic contribution of strategic planning and corralled strong partnerships at this scale. They have shown how effective non-statutory plans can be when underpinned by strong evidence, relationships and ambition: reflecting the credibility of the plans, most of the RPA's recommendations over the years have been adopted.[20]

New York, like London, depends on interaction and exchange with surrounding cities. By highlighting cross-regional opportunities that bridge New York, New Jersey and Connecticut, the RPA plans have helped to alleviate some of the typical issues associated with monocentric regions – high levels of inequality, pockets of deprivation, overstretched infrastructure - while also exposing the simplicity of this characterisation in the context of the New York Metropolitan Region.

Alongside economic growth, the regional visions have consistently highlighted the problems of economic inequality and racial segregation and the importance of wellbeing and sustainability. The most recent plan centres on four 'action areas': transportation, climate change, affordability and the region's insufficient governance capacities.

In recent years, the RPA has been researching the replicability of their current model, having identified 10 other functional megaregions across the United States.
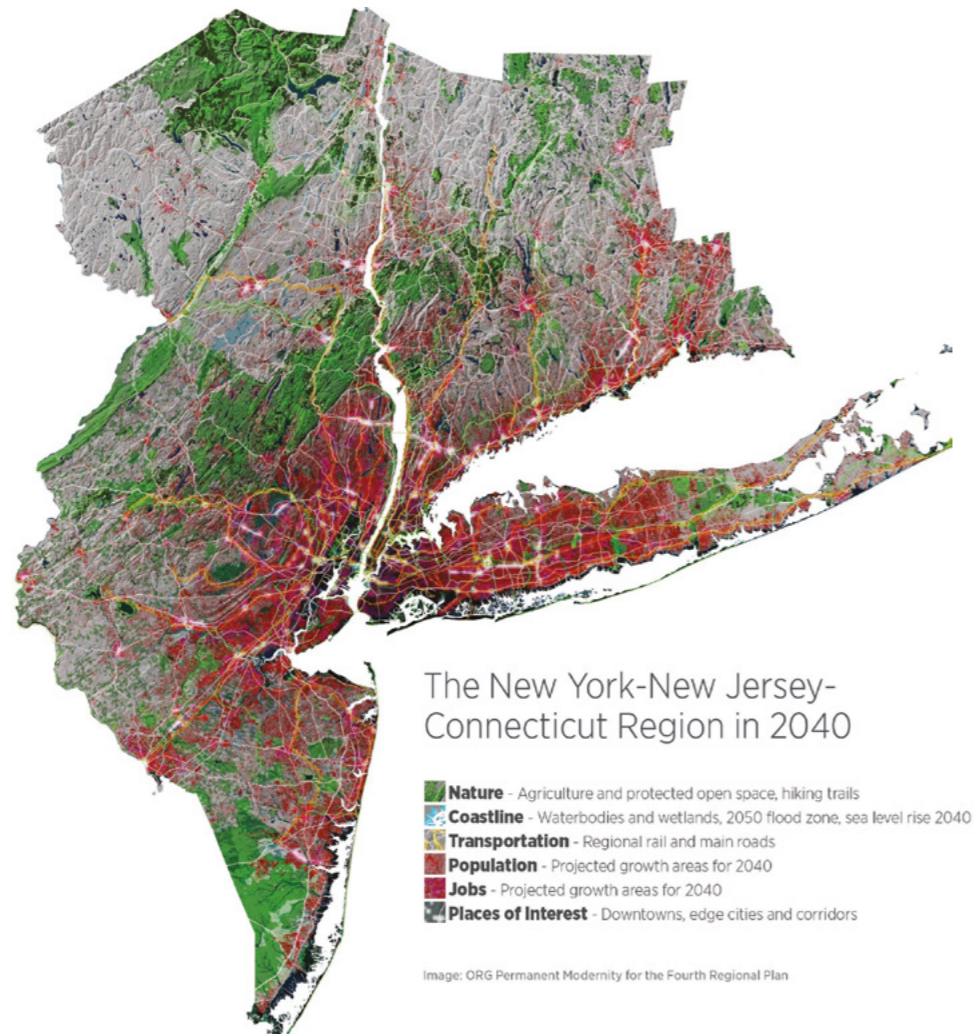
German metropolitan regions

Over the past few decades, driven by the dual pressures of globalisation and parochialism, German spatial planning has been subject to comprehensive reform and a new strategic paradigm has taken shape centred on metropolitan regions as 'communities of responsibility'.

Following reunification, the German planning process aimed to rebalance the country through inter-regional resource transfers and focused infrastructure investment in less developed regions. This was in many ways a very successfully project, but at the turn of the century certain structural realities continued to constrain the German economy: comparatively low growth rates, rising unemployment and declining export competitiveness.
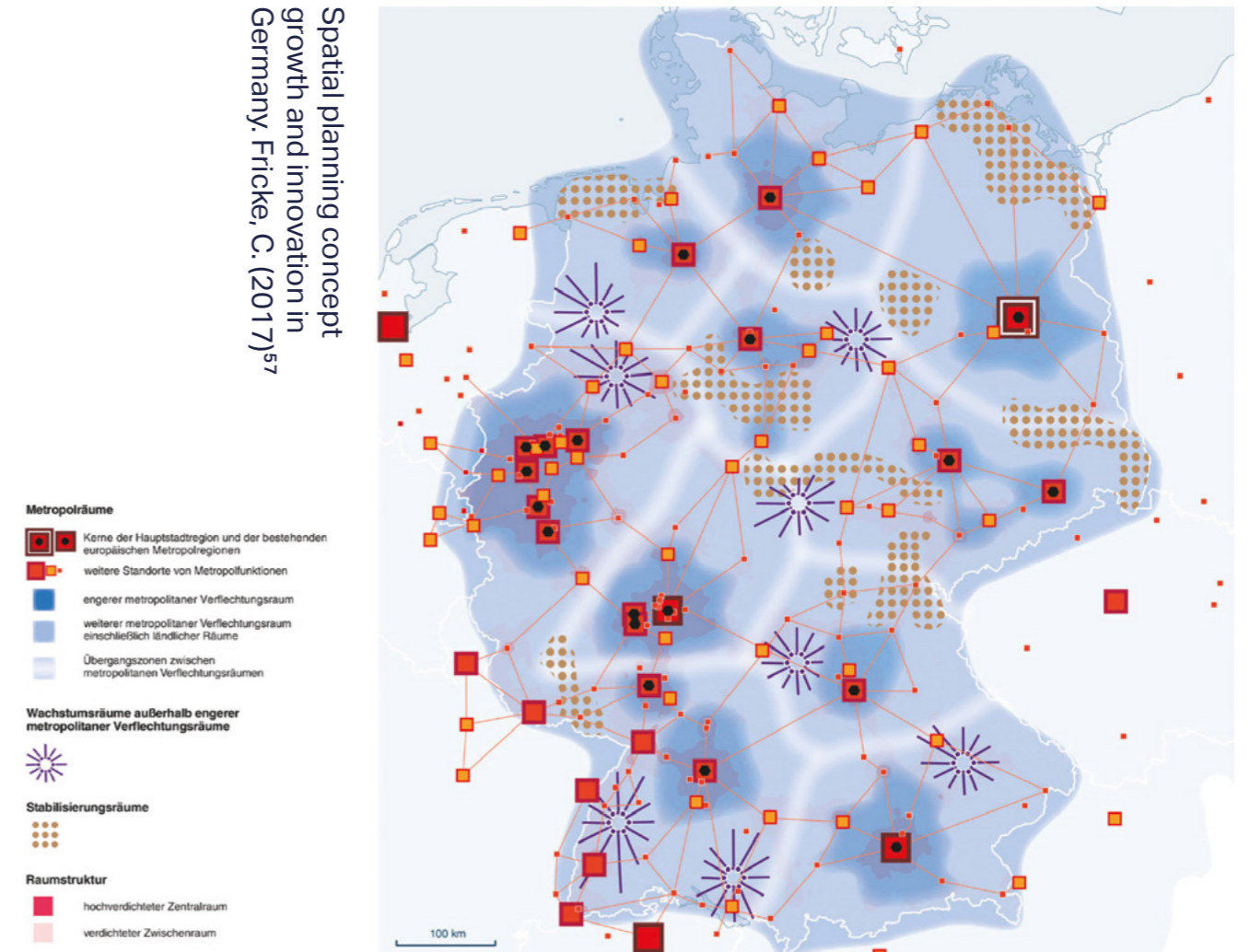
To reverse these trends, metropolitan regions with unrealised potential for productivity and innovation were prioritised as growth poles. In an age of economic globalisation, metropolitan regions were considered more competitive than any single city in Germany and it was thought that cultivating partnerships and creating capacity at this scale would help to transcend the parochial disputes that had previously derailed many planning initiatives in the German Länder, where statutory powers still lie.[21]

In 2006, after a period of preparatory work, the Ministerial Conference on Spatial Planning published the new Concepts and Strategies for Spatial Development in Germany (since updated) which highlighted the economic potential of metropolitan regions distributed across Germany's polycentric territory. These metropolitan regions coexist with the statutory Länder and coalesce under a light-touch national framework. They do not constitute additional administrative units but are rather platforms for regional cooperation. The precise nature of this cooperation varies in the different regions, but there have been consistently high levels of coordination and collaboration in the last two decades.[22]

During the same period, Germany has become Europe's best-performing economy. Although the emphasis on growth, innovation and competitiveness in metropolitan regions was highly controversial, the strong performance of the regional growth poles has continued to finance large-scale transfers within and between regions. The overall result is plain to see in UK2070 research. While the UK has fragmented economically, Germany has pulled itself together with great success.

The New York Metropolitan Region in 2040. Center for Architecture (2014)[56]

The New York-New Jersey-Connecticut Region in 2040

Nature - Agriculture and protected open space, hiking trails
Coastline - Waterbodies and wetlands, 2050 flood zone, sea level rise 2040
Transportation - Regional rail and main roads
Population - Projected growth areas for 2040
Jobs - Projected growth areas for 2040
Places of Interest - Downtowns, edge cities and corridors

Image: ORG Permanent Modernity for the Fourth Regional Plan

Spatial planning concept growth and innovation in Germany. Fricke, C. (2017)[57]

The benefits of spatial planning

To varying degrees, spatial planning in the devolved nations and across Europe has helped policy coordination, strategic decision-making and balanced development.

It has also spurred ambitious policy-making and stakeholder participation. There are several general benefits of spatial planning that can be drawn from these experiences.

Promoting greater spatial awareness

Spatial plans can spread a greater spatial awareness and understanding among policymakers and members of the public seeking to understand the places and regions in which they live and work. This can lead to:

→ Better decision-making and more effective, sustainable and just outcomes as a result

→ Greater investor confidence

→ The identification of the most appropriate locations for economic development, housing growth and transport infrastructure.

→ The protection of valuable environmental assets.

→ Better understanding of the cross-cutting consequences of different investment decisions.

At a regional scale spatial planning enables more holistic approaches to economic development, better connecting smaller towns and rural communities to recognised or established economic hubs. Energy assets are often situated in peripheral areas, but they are crucially important to the continued productivity of cities – where, in turn, the financial and professional services which support the rural assets are situated. Apparently peripheral areas can be reimagined as crucial connectors within their wider regions and provide vital goods and services for urban areas.

Promoting horizontal integration

Coordination and integration are almost universally understood to contribute to effective policymaking. An evidence-based spatial map can clarify spatial challenges and opportunities and thereby serve as a locus for more joined-up governance, reconcile different policy objectives and reduce duplication – this is known as 'horizontal coordination'. Spatial plans not only provide a common framework for different policy objectives but can also support dialogue and negotiation between various actors.

In Scotland, the NPF helped to reconcile economic, social, environmental and infrastructural objectives in service of the SNP's stated goals of balanced prosperity and sustainable development. In Northern Ireland, the RDS 2025 primed the ground for the formal sustainable development strategy which only emerged several years later. Evidence from the devolved nations and elsewhere also shows that regional spatial planning processes can mobilise citizens, public agencies and private investors behind a shared place-based agenda.

Promoting vertical information

Vertical integration is the coordination of activity between different spatial scales around a common vision and shared processes. Evidence from Scotland shows that there has been a translation of objectives from the European level right down to the level of local regeneration projects.[23] While regional, national and transnational plans set a broad direction of travel, ideas about place can also bubble up. Spatial planning allows for a greater appreciation of subsidiarity, by which different decisions are made at different levels depending on which scale is most appropriate.

Spatial planning can incorporate resilience and sustainability principles

Resilience principles are increasingly being incorporated into many European countries' spatial planning frameworks, helping them build more resilient places for the future. With the right evidence base, spatial plans can promote the sustainable use of land and infrastructure.

If the UK is to achieve its target of net zero emissions by 2050, demand management will play a vital role. Spatial planning can support this goal by, among other things, promoting compact urban development (to reduce congestion times) and arranging infrastructure in ways that reduce car dependency altogether. Very often 'energy economies' operate at a regional scale and can again be maximised through good spatial planning processes.
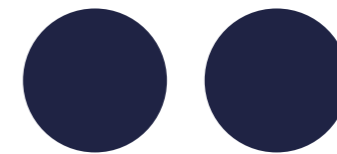
Spatial plans can spread a greater spatial awareness and understanding among policymakers and members of the public seeking to understand the places and regions in which they live and work

The principles of regional spatial planning
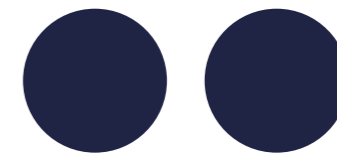
The One Powerhouse Consortium has sought to develop draft regional blueprints according to series of principles. These can be described as follows.

Strategic and not statutory

Spatial plans in the devolved nations have sometimes been criticised for lacking detail but this is to misunderstand their role. Spatial planning is meant to facilitate discussion, be a focus for collaboration, reconcile competing objectives, accommodate unintended consequences and open the door to progressive change – all of which calls for a long-term, strategic approach. If they are too prescriptive, plans can be derailed by parochial disputes which is why difficult decisions about housing allocation and land-use are usually better made as part of a statutory local planning process. Regional spatial plans are not intended to be statutory.

Ambitious and distinctive

There is a risk that high-level strategic planning becomes vague or bland. Regional spatial plans should identify the distinctive economic contributions of different places and the relationships between them. They should reveal economic interdependencies and synergies that can be obscured by narrow competition-based local economic planning. But spatial planners cannot dodge all contentious matters and some difficult spatial trade-offs do have to be addressed in regional spatial plans. They must also be highly distinctive and characterise the distinct challenges, assets and opportunities of a region. They must add value to existing local plans or local and combined authorities and LEPs. More visionary blueprints are more likely to capture the minds of investors and those living in the regions.

Long-term and evolutionary but action-orientated

Regional spatial plans must allow time for genuinely transformative change across a range of areas, as well as for the shifts in culture, attitude and engagement that will support different ways of working and collaborating. Our blueprints have taken a horizon of 2070 which means they can accommodate the macro-trends – positive and negative – that all regions will have to reckon with in the future. It should be conceived and constructed in a way that enables it to withstand changes in government and policy. That said, it must be evolutionary and permissive, adapting to changes in evidence and activity. And it must be supported by a series of clear, concrete steps to be taken in the short and medium terms. These will demonstrate the achievability of the overall vision and create regular milestones against which progress can be measured.

Collaborative and inclusive

In the interests of legitimacy and effectiveness, planning processes must involve a wide range of voices. Through citizen and stakeholder consultation, plans can secure wide-ranging buy in and better identify the distinctive needs and contributions of different communities. Planners should not rely solely on technical data and instead should expand their pool of evidence to include the strategies, plans and ambitions of more local actors including local and combined authorities, LEPs, private, voluntary and other strategic bodies. They should also find ways to engage with and reflect upon the lived experience of residents. Ongoing consultation should form part of a strong evidence base that supports regular updates, helping a plan to accommodate changing circumstances and new expressions of place. Plans must recognise the complementary contributions of different parts of the region and the contributions and needs of smaller cities, towns and rural areas must also be considered.

Evidence-based and open source

Despite the need for evolution and collaboration, regional spatial plans should be evidence-based and serve as a reassuring reference point for all. This shared knowledge base should be built from agreed datasets, forecasts and assumptions at the regional level to support better decision making and more aligned investment priorities and local visions. Ideally, spatial plans should exist as interactive online platforms with several manipulable layers of data – in a Geographic Information System (GIS) format where data is open source giving developers the ability to enhance and engage more deeply with the regional planning process. With the right systems in place, spatial modelling of public information could be highly collaborative and sophisticated.

England is unusual in the developed world in not having any mezzanine tier of regional governance or strategic planning at significant scale.

Regional policy in the UK has always been something of a Cinderella discipline in comparison with other aspects of economic policy.

The most recent efforts to galvanise regional economies came at the turn of the century when the New Labour government invested significantly in regional development agencies (RDAs) which did have some effect in stalling further growth in regional disparities.[24] Since RDAs were abolished in 2010, the approach has been limited to piecemeal investment through a patchy network of 39 Local Enterprise Partnerships who bid competitively for relatively small amounts of government funding and devolution deals with combined authorities in a handful of cities.

England's lack of regional governance is all the more unconventional given the increasing interest being given to the role of megaregions by organisations such as the Organisation for Economic Co-operation and Development (OECD). A recent OECD paper explores "the rise of the megaregion".[25] Responding to the emerging evidence of burgeoning growth in smaller towns and cities in many parts of the world, and the apparent slowdown in the growth of global megacities, Daniela Glocker outlines how high-speed rail, digital connectivity, spatial planning and other factors are enabling clear economic advantages to groups of towns and cities where politicians and policy-makers learn to collaborate effectively over large, interconnected megaregions. Glocker cites successful examples such as the Randstad in the Netherlands and the Rhein-Ruhr region of Germany (the cluster of smaller cities around Dortmund, Essen, Cologne, even extending now to Frankfurt).

The UK as a whole is not entirely without the concept of megaregions. It is interesting to reflect that the nations of Scotland, Wales and Northern Ireland do have many of the devolved powers that are assumed by territorial regions in countries like Germany and Spain or in US and Canadian states. This is also true of Greater London which, since 2001, has exercised significant autonomy through a Mayor, the Greater London Authority and, perhaps most significantly, the best endeavours of a dynamic team of civil servants in City Hall. Indeed, there is much evidence to show that London and Scotland have been far more successful economically than any other parts of the UK over the past two decades which is likely to be due to their greater levels of autonomy and institutional capacity at scale.

The value of a mezzanine tier of economic planning and coordination is evident in so many developed nations – all of which seem to manage regional inequalities more effectively than is the case in the UK. Although there is no clear causal link between the level of regional disparities experienced in England and the lack of any consistent regional policy or governance, academics and others have highlighted the apparent failure of centralised decision-making to generate a more equitable distribution of wealth. In one of the most significant contributions to this topic in recent years, Phil McCann's detailed systematic analysis of regional economic development in the UK concludes that the fundamental problem facing the UK economy is that with high levels of regional divergence and inequality caused by the differential effects of global shocks, there is insufficient regional autonomy in order to mobilise the appropriate local players, institutions, knowledge and capital in order to develop effective responses.[26]

But if a 'new regionalism' is to gain credibility in England, five key issues need to be addressed.
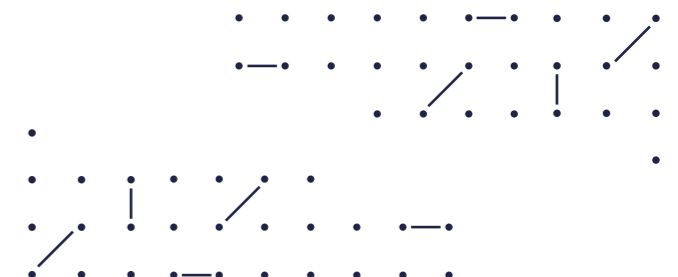
a. Function and vision

Any reimagination of English regions must begin with an understanding of their rationale. To be clear, in a highly centralised country there is unlikely to be a strong case for drawing powers away from local government or combined authorities. Instead, any new regional powers are more likely to be devolved from national government and, in fact, the real potential for a new regionalism concerns the opportunities that exist for horizontal and vertical co-ordination. In other words, the highest function of any new regional bodies in England must be to enable co-operation between neighbouring local and combined authorities, LEPs and their partners and the integration of strategic planning between national government and subnational agencies.

In other European countries, there is significant variation as to the competencies exercised at the regional level but the number of countries with significant regions is growing and their powers are diversifying.[27] Where in countries such as Germany and Spain, health, education, justice and other aspects of social policy are governed at the regional level, in England, we propose that – like France and Italy – regional competencies are confined to more economic affairs.

Drawing upon the work of the One Powerhouse regional blueprints, there would appear to be five main functions where regional collaboration and integration could be most vital. These are:

→ **Inter-city connectivity** – regional transport bodies such as Transport for the North are already showing the benefits of a clear focus on the development of 'transport corridors' which cut across local authority boundaries and take into account both rail infrastructure and managing the major road network. In future, these powers could also make provision for increasing control over rail franchising as in the case of Transport Scotland. Regional geographies might also prove to be the optimal basis for rolling our broadband enhancements and addressing other digital connectivity issues.

→ **Innovation, research and development (R&D) and supply chain development** – most regions have key economic capabilities which do not necessarily feature as sectoral strengths in a national industrial strategy and yet extend well beyond what might be considered local specialisms. Where clusters and supply chains exist that extend beyond LEP geographies there is a strong case for regional collaboration to support innovation, to attract R&D funding and to nurture supply chain development.

→ **Trade and inward investment** – within global markets, even the assets of some of England's larger cities may appear relatively small and underpowered. It is no surprise then that increasingly LEPs are co-operating together when it comes to foreign trade missions or in seeking to attract inward investment. There is significant scope for
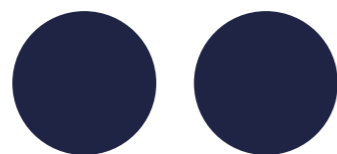
such collaboration to expand and for English regions to enjoy the autonomy experienced by Wales and Scotland in such affairs.

→ **Natural capital, carbon reduction and biodiversity net gain** – national parks, water resources, flood management schemes and major energy assets all cut across local authority boundaries and have clear regional dimensions. There would appear to be significant virtue in regional coordination, particularly in regard to energy and water management where agencies tend to operate across quite wide geographies, and scope for the devolution of carbon emissions targets and incentives.

→ **Spatial economic planning** – combining all of the above, regional bodies should facilitate the close co-operation of local planning bodies as well as public agencies and private sector bodies with responsibilities for strategic investment in infrastructure and other economic development initiatives with a view to developing high-level spatial blueprints for each region. These could align key priorities such as innovation assets and transport corridors, energy assets and inward investment.

Perhaps the over-arching function for any exercise in regional co-ordination and economic plan-making is in the articulation of some form of 'vision' or of one or more 'missions' that give a regional economy a certain character or personality within the global economy. Articulating this vision might be vital in mobilising the general public and local business as well as attracting new investment.

> The real potential for a new regionalism concerns the opportunities that exist for horizontal and vertical co-ordination

b. Scale

Having considered the primary functions for English megaregions it becomes clear that they need to be of sufficient scale to maximise their benefits and avoid treading on the toes of combined authorities and LEPs. In many respects the problem with the nine regional development agency areas that were present in the decade to 2010 was that they were too small and could not transcend relatively parochial issues that existed between nearby cities and towns.

To this end, the One Powerhouse consortium has opted to explore the idea of four megaregions. There is always scope for discussion about boundaries, butw to be very practical we propose four English regions as follows:

→ The North – comprising three former RDA areas and 11 LEPs and what is now referred to as the Northern Powerhouse area

→ The Midlands – comprising two former RDA areas and nine LEPs and which covers that is sometimes referred to at the Midlands Engine area

→ The South East – comprising three former RDA areas and 15 LEPs and which includes the Greater London area; this is sometimes known as the Wider South East area

→ The South West – the area identical to the old South West RDA but which has a more fragmented subregional geography including a 'Great Western Gateway' area which extends into south Wales which is separate from Devon and Cornwall.

These regions are quite large, even by OECD standards, but that is not to say that they are too big. Globally, the concept of megaregions is gaining traction. In comparison with other similar-sized EU nations, the average spatial area of four English regions would not differ greatly from those in France, Germany or Spain. In terms of population, the South East and the North would be two of the biggest regions in Europe though not a great deal larger than Nordrehin-Westfalen and Bayern in Germany or Île-de-France. The Midlands would be of average size and the South West – as with Scotland – would be relatively small but still in the top 25 regions in the EU.
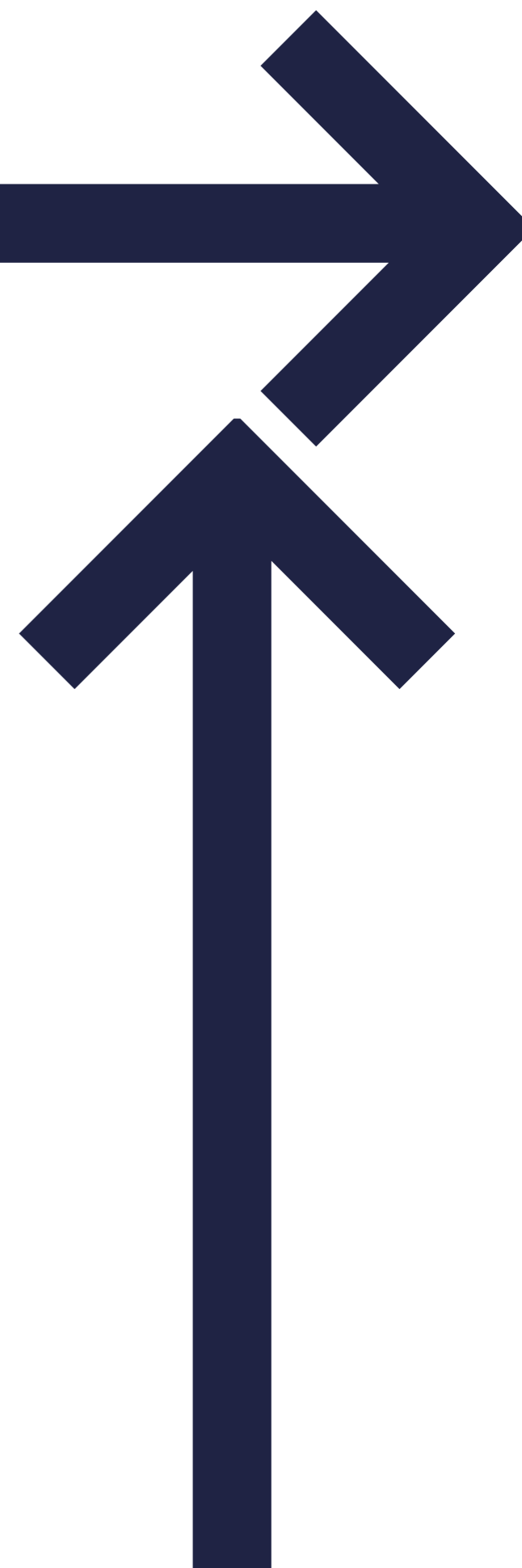
It is also interesting to note that of the top 25 most populated regions in the EU, France would have seven, Germany six, the UK five (the four English regions and Scotland), Italy four and Spain three. It is also significant that France, with the highest number of regions with a population of over five million, has quite deliberately amalgamated smaller regions as part of the global trend towards establishing megaregions.

The academic literature on the optimal size for economic governance in the global economy is inconclusive, but there is an increasing emphasis on larger economic scale enabling greater agglomeration effects and more diverse labour markets and the evidence suggests that some of the most successful global regions are at or above the 10 million mark.[28] The larger the area, the more scope there is for fiscal autonomy (see section below).

c.   Identity, inception and cross-boundary issues

Some have argued that a key reason why attempts at English regionalisation have failed in the past is that the new geographies lack a sufficient sense of cultural and political identification. People do not naturally see themselves as 'North Western' or 'East Midlanders'.

At face value there is some truth in this argument. It is certainly true that effective regional governance would require some level of popular support but there is something of a chicken-and-egg circularity to this argument. In Italy, for example, regional identification has grown significantly following the introduction of regional governance in the 1970s.[29] Closer-to-home, there has some ambivalence about the introduction of the metro-mayors in Greater Manchester and the West Midlands and yet even after just two years it would be hard to imagine any government arguing to abolish the role.

Commentators often cite the 2004 referendum on a North East regional assembly as evidence for a lack of regional identification and yet academic evaluation of the referendum shows that public objection to the assembly was due to its lack of genuine powers rather than any antipathy towards its geographical scope.[30]

It might also be true that people adopt more local rather than regional identities. But to deny the possibility of regional identification on such grounds is to misunderstand the nested nature of individual and group identity. Place attachment theory shows that as individuals we can identify with multiple places and geographical scales at the same time and that we tend to name our identification depending upon the context

There are ways to build accountability without additional democratic institutions and at a lower cost

in which our identity is questioned. Place attachments can be both physical and - as in the case of nationalisms – imagined but normally they require some kind of institution or instantiation around which to form.

There have been relatively few studies of regional identification but in the handful of studies that have compared regional and national identities, people in both Cornwall and in Yorkshire have privileged their regional identity over any sense of Englishness or Britishness.[31]

Some of the concern about regional identity is associated with the inception of regions. There is a popular narrative that there is little public appetite for top-down bureaucrats drawing lines on maps from their offices in Whitehall. This is undoubtedly true but few within the planning community would advocate such an approach. The alternative approach, set out in the section above, is much more collaborative and organic.

As has been seen with the steady development of the so-called Northern Powerhouse region, an approach based on a clear functional remit – transport, economic clusters, trade – has led to the steady development of institutional capacity and cross-sectoral collaboration such that in economic planning terms, the North is increasingly seen as a legitimate unit of subnational organisation. Furthermore, as institutions such as Transport for the North and the Convention of The North have developed profile, so business interests and public opinion have come to acknowledge their respective legitimacy and value. The extent to which these developments translate into a wider cultural or political regional identity remains contested but whether the process is seen as top-down or collaborative and organic, few could argue that it has been ineffective.

Finally, it is important to recognise that such regions have significant cross-boundary economic flows and that no particular land boundary will ever satisfy the diversity of subregional dynamics. However, as is the case with any jurisdiction, regional boundaries can be incredibly helpful for effective decision-making providing they allow for cross-boundary interaction.

d.   Capacity and resourcing

Another issue that is commonly raised in relation to regions is the concern that they will generate a new layer of bureaucracy. It is unlikely that people would doubt the importance of bureaucracy in carrying out the basic functions of central or local government. That said, it is important that the capacity needed to support English regions is efficient, effective and proportionate to the functions that regions need to perform.

At a simple level, it could be argued that central government bureaucracy is presently top-heavy and that the solution to building regional capacity could be the redistribution of central government capacity to

focus on regional affairs. New regional agencies like Transport for the North were initially developed through secondments from the Department for Transport and local transport authorities. But realistically, regional capacity-building will require proper resourcing.

This is where scale issues are once again important. In most developed nations, regions are resourced through different forms of subnational taxation. Like most other matters, England is highly centralised when it comes to fiscal affairs and there is a strong case for much greater fiscal devolution than exists today. This is particularly problematic in England given the small size and very different levels of prosperity that exist between local authority areas.

In theoretical terms, the larger the state, the greater the ability for governments to pool risk and to redistribute tax revenues in order to address economic shocks and regional imbalances. However, when interregional divergence means that significant parts of the population feel that they are not being treated equally – not least in circumstances in which government investment appears more concerned with net aggregate growth than rather than any sense of fairness – then the theory begins to break down. In England, various exercises to explore the potential for fiscal devolution have shown that any attempt to devolve at the local authority level requires such significant checks and balances that it renders the exercise pointless. At a megaregional level however, fiscal devolution becomes much more plausible as risk-pooling and redistribution can take place withinregional geographies.

e.   Accountability and governance

If megaregions are going to have any significant capacity and clout then they will need a suitable level of accountability and therefore governance. However, this is where former RDAs became unstuck: proposals to introduce regional assemblies invoked concerns about a gravy train of new politicians and costly elections.

Once again, elected regional assemblies seem to be affordable, indeed necessary, in most other developed nations and if they are to have the fiscal powers we suggest they need there seems no good reason why four new regional assemblies wouldn't be entirely appropriate as with Greater London, Scotland, Wales and Northern Ireland.

That said, there are ways to build accountability without additional democratic institutions and at a lower cost. Committees of indirectly elected mayors and council

leaders together with LEP chairs have fulfilled this role in relation to regional transport bodies and in the North of England moves are afoot to develop some form of economic council that would have a wider remit. Regular conventions can be used to bring regional leaders together from across sectors and places in order to agree over-arching priorities and plans as has happened with the Convention for The North and its recent manifesto. And there is scope to consider unelected regional citizens' assemblies to address key issues of concern as in the case of each of the devolved nations and to hold elected leaders and officials to account as is beginning to happen in places like Madrid and East Belgium.

Regional governance needs to be commensurate with the powers vested in any new regions but, as with most other aspects of regionalism, there are numerous well-established models and ideas across the developed world.

04. The One Powerhouse approach

In chapter two we set out a series of principles that the One Powerhouse Consortium believes should guide a regional spatial planning approach. By necessity, the form and content of each blueprint is regionally specific, but the process of drafting each was guided by a technical brief and a common set of assumptions about the future.

These are set out here. Technical brief for preparing economic spatial blueprints for England's regions

From the outset, One Powerhouse technical partners were given a technical brief - an illustrative outline of the potential form and content of each megaregional plan. It suggests certain common components for the regional blueprints: a) a rigorous analytical framework; b) a series of compelling visions; c) a strategic investment framework; and d) an analysis of institutional capacity and strategic partnerships for delivery. The full version of the technical brief is included as an annex.

It was proposed that each blueprint might consider:

⟶ The region's economic, social and spatial morphology

⟶ Demographic trends

⟶ Economic interdependencies and synergies within functional economic areas

⟶ Existing and potential aggregate capacity for development.

1. Analytical frameworks

Building on these analyses the blueprints should set out a compelling vision – perhaps organised thematically - identifying key opportunities for regeneration and economic development, including:

⟶ Critical economic assets (existing, latent, new and emerging assets, as well as key innovation opportunities)

⟶ Other major areas for development (including projects with potential for land value capture and particularly vulnerable communities in need of support)

⟶ Areas for major infrastructure development (transport and digital infrastructure, energy generation, environmental capital, land reclamation and coastal defence).

2. Compelling Visions

Each blueprint should make some general consideration about:

⟶ What resources might be required to translate the compelling visions into reality

⟶ A rough timetable over which they might be deployed

⟶ What funding arrangements, incentives or mechanisms might support strategic investment.

3. Strategic Investment framework

Each partner should reference relevant local plans and engage with existing authorities in the region, while also considering the institutional capacity and related delivery mechanisms required to secure and accommodate their vision. This might include:

⟶ The role of Local Enterprise Partnerships and their local industrial strategies

⟶ The role of combined, local or other strategic authorities

⟶ The role of large employers in the region

⟶ The role of public institutions including environmental agencies

⟶ The role of civil society organisations.

4. Institutional capacity and strategic partnerships

UK2070 scenarios

In its first report Fairer and Stronger, the UK2070 Commission identified 3 future scenarios regarding long-term economic trajectories.[32] These scenarios were produced using the LUISA recursive spatial equilibrium model that has been based on recent research at the University of Cambridge.[33] The scenarios were forecasted according to high and low levels of growth. The high scenario predicts a greater economic output, higher productivity, more jobs and net in-migration; the low growth scenario considers the same variables but at lower levels of growth. [34] What is clear is that without proactive policy intervention, regional inequalities are set to grow in both high- and low-growth scenarios, creating a host of problems across the country. The scenarios can be summarised as follows:

⟶ **Attacking the problem** of regional inequality, leading to: rates of job creation in the currently low growth parts of the UK picking up sooner and gradually outstripping rates in high growth areas. This means that over time the distribution in jobs (particularly good quality jobs) would increase outside the areas that are currently experiencing fast growth. This scenario also considers enhanced connectivity between the core cities. In this scenario, future job growth in London and the Wider South East could be accommodated by the housing delivery rate of the last two decades and there would be a reduction in commuting pressures and congestion.

⟶ **Holding the line** on regional inequality (all regions grow at the same average rate to 2071) – rates of job growth would converge, reducing the rate of growth of commuting across local authority boundaries, particularly in areas that are suffering from severe bottlenecks and congestion (predominantly London and the wider south east). This scenario is predicated on a high growth scenario, but even in these circumstances growth would be focused on areas that are already doing well rather than more deprived communities. Furthermore, under this scenario, rises in average housing rents in the Wider South East still outflank the expected rises in wage earnings in the region.

⟶ **Business as usual** – continuation of the status quo. This would lead to greater job concentration in London and the wider south east in both high- and low-growth scenarios. The rate of the growth of commuting would rise in London and wider south east, causing greater levels of congestion and average housing prices in the Wider South East would rise above average earnings. There would be a continued high land take in London and the Wider South East. These imbalances could be exacerbated due to the withdrawal of EU regional development funds.

One Powerhouse technical partners were encouraged to work on the basis of the first scenario. More detailed propositions about future scenarios are considered overleaf.

One Powerhouse 2070 scenarios

Given the long-term, visionary nature of these spatial plans, we have had to make several further assumptions about potential future scenarios based on the available evidence. As argued in the previous section, spatial plans should evolve over time to incorporate new evidence, but it is equally important that spatial frameworks are transparent about the assumptions being made at any given time. That way, these forecasts can become part of the common evidence base around which different activities are coordinated, but they can also be challenged and adjusted in future blueprint iterations.

01

Urban life

Short term: Congestion is due to get worse in the UK over the next 30 years. The degree of intensification will be determined by rates of population and economic growth, costs of driving, demand for freight and several other variables. High demand could lead to the introduction of capacity management systems such as tolls and segmentation, as well as smart traffic management systems, such as driverless cars and the use of big data in transport systems.

Longer term: Towards the end of this period however, congestion might start to ease, as workers leave the biggest cities, driven away by rising house prices, declining air quality and traffic. Digital substitution for travel will facilitate this shift and the robotisation of city-centre jobs will contribute to a reduction in the amount of people travelling to city centres.

02

Energy

Achieving net zero by 2050 will necessitate a combination of local community solutions (such as low carbon heat solutions in homes, electric vehicles, decentralised wind generation, micro-generation and reduced energy demand) and large-scale centralised solutions (such as offshore wind generation, hydrogen for heat, carbon capture and potentially new nuclear energy production by the mid-2030s). Low levels of policy support, GDP growth, consumer engagement or technology development might prevent us from achieving net zero by 2050.[35] Issues of energy poverty must be addressed, as must the potential increased demand on the energy system as a result of technological innovation.

03

Climate change

A changing climate is likely to bring significantly increased risks of extreme weather events such as flooding or droughts, which will impact transport infrastructure, agriculture and other vital economic sectors. Without intervention, it is estimated that floods and droughts will become more severe. Kent, Lincolnshire, Yorkshire and the Humber are high flood risk areas, while drought will likely hit hardest in the South East.

04

Large-scale infrastructure projects

Despite delays and concerns about costs, High Speed 2 (HS2) will go ahead, connecting London and Birmingham by 2031. Notwithstanding current equivocation, One Powerhouse supports the extension of tracks to both Manchester and Leeds by 2040. This will boost rail capacity and ease road congestion. It is possible that by 2070, HS2 will have been extended to Glasgow and Edinburgh. By the end of this period, hyperloop might be used to transport freight and possibly passengers, most likely following existing motorways.

05

Greenbelt and agricultural land

Greenbelt policy will not be abandoned, but there will be a gradual and incremental loosening of restrictions as pressure for house building grows and more councils find ways to ease restrictions. In the short term, population increases will result in an increase of homegrown food production, but in the long-term changing diets and regenerative agricultural methods will change how land is used.

06

Devolution

Incrementally, powers will be devolved to cities and regions in the UK, including over public services and some fiscal matters (perhaps beginning with some kind of tourism tax). This will advance the furthest in existing combined authorities but will eventually be the case across the board.

5.1 Planning England's regions - The North

This section summarises some of the content included in the four regional spatial blueprints developed by the One Powerhouse technical partners.

It describes the distinct economic geography – or 'morphology' – of each of the four megaregions which determines to a large extent the character of each regional blueprint and the spatial aspirations contained therein. Different regional morphologies call for different spatial planning approaches. It also spells out some of the most significant themes and interventions that each blueprint has identified.

05 Release the economic potential of the North's freight and logistics sector through investment in its network of multi-modal and strategic employment hubs.

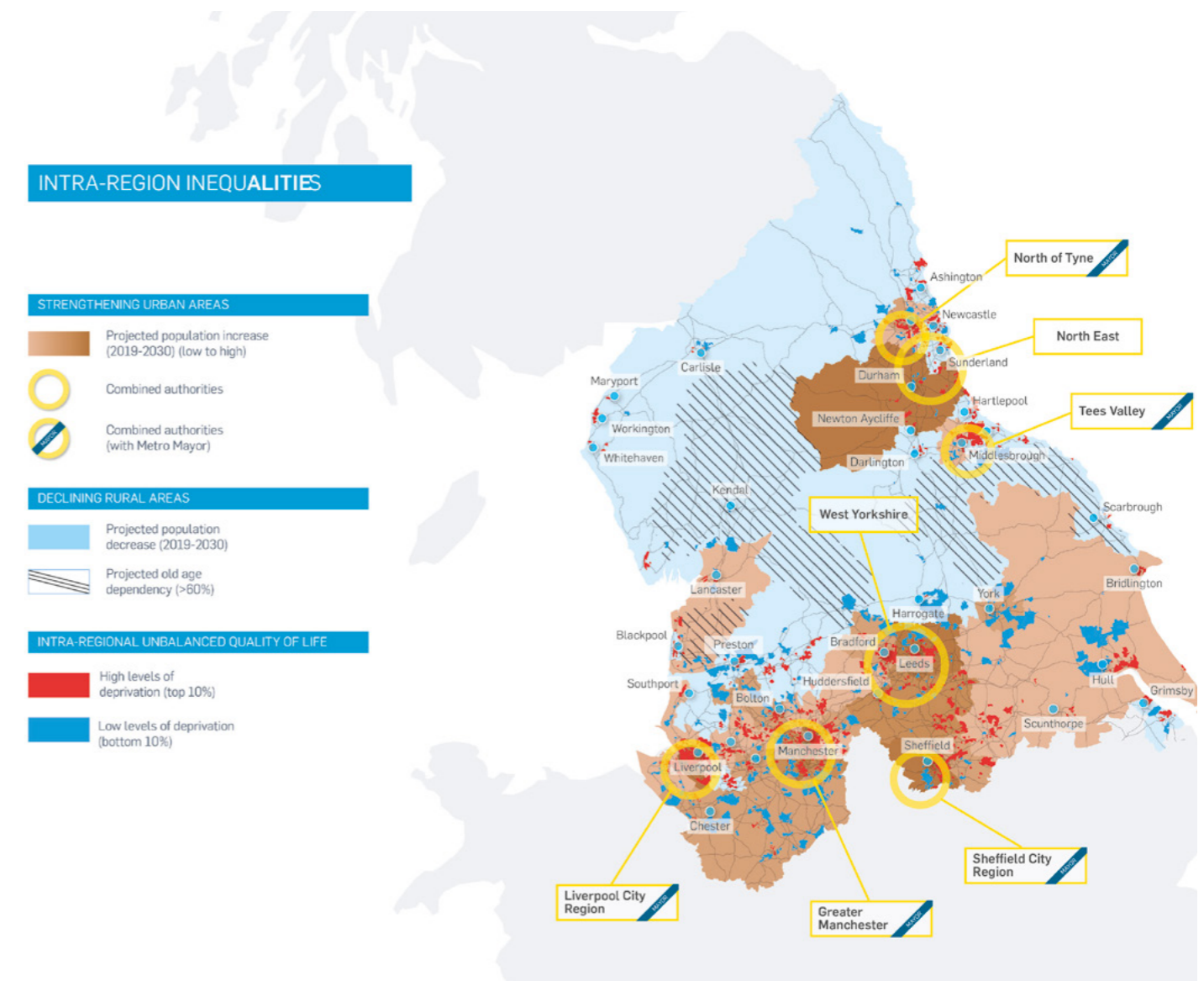**06** Develop and deliver a pan-Northern spatial low-carbon energy strategy.

07 Develop a spatial management plan for the North's natural capital assets.

08 Investing in a pan-Northern water supply and demand strategy and delivery plan

09 Deliver a spatial investment strategy for the North's prime capabilities in innovation-intensive industries..

10 Establish a spatially integrated network to focus investment in the North's established and growing clusters of universities, research centres, innovation hubs and R&D assets.

The North

The original Northern Powerhouse agenda was unambiguously urban. The devolution of key economic responsibilities to city regions and the creation of directly elected metro mayors in Manchester, Liverpool, Sheffield, the Tees Valley and the North of Tyne has been a central component, alongside the improvement of transport connections between these cities. The hypothesis is that urban agglomeration in the North will drive growth, the proceeds of which can be shared with the region's 'left behind' towns and ageing rural populations.

It is certainly right that the major urban centres in the North are central to any regional strategy. Manchester, Newcastle, Sheffield, Leeds and Liverpool collectively account for over a third of the North's 15.5 million residents. The two largest cities in the North, Manchester and Leeds, contain 24 percent of regional jobs and 35 percent of knowledge-intensive business services despite accounting for just 4.3 percent of land in the region and other major cities have enjoyed impressive rates of employment growth in recent years.[36] Unlike the Wider South East where London is the dominant economic centre, the Northern economy is polycentric, relying on a network of different metropolitan centres.

However, the Northern Powerhouse 'agglomeration' narrative underplays the interdependencies that exist between core cities and non-urban localities within a complex economic geography. Smaller cities, including Warrington, Wakefield and Durham have higher growth rates than their neighbouring metropolises. Wigan and Burnley are more productive than Manchester and productivity growth in the region is being lifted by high-tech manufacturing in Tees Valley, Cumbria and Lancashire economies.[37] These places compliment the larger urban economies while benefitting from their non-metropolitan locations.

The supply chains and functional economic relationships in the North regularly span larger geographies than the city regions.[38] In fact, the economic health of the North relies largely upon complimentary specialisms of different places: the enabling financial and professional services in Manchester, Leeds and other major cities; the energy assets and advanced manufacturing centres concentrated outside the main cities in the Tees Valley, the Humber, Sunderland, Burnley and rural locations in the North West; the health innovation clusters that spread across the region.

This economic geography calls for coordination and planning beyond the city regional scale. A pan-regional approach to planning could accommodate the distinctive contributions and vital interdependencies of different places and assets in the North.

Top Priorities for The North

01 Establish an integrated, inclusive and connected urban ecosystem in the North.

02 Delivering housing investment to support transformational growth.

03 Invest in strategic development corridors through on-going pan-Northern collaboration.

04 Facilitate a step-change in the growth and diversification of the North's export economy.

Map of northern inequalities. One Powerhouse (2020)[58]

INTRA-REGION INEQUALITIES

STRENGTHENING URBAN AREAS

Projected population increase (2019-2030) (low to high)

○ Combined authorities

⊘ Combined authorities (with Metro Mayor)

DECLINING RURAL AREAS

Projected population decrease (2019-2030)

Projected old age dependency (>60%)

INTRA-REGIONAL UNBALANCED QUALITY OF LIFE

■ High levels of deprivation (top 10%)

■ Low levels of deprivation (bottom 10%)

5.2 Planning England's regions - The Midlands

The Midlands

The Midlands has a relatively dispersed population of over 10 million people, with the highest concentrations of people residing in the central cities of Birmingham, Coventry and Leicester. Urban centres and transport corridors are separated by large stretches of agricultural and green belt land.

The megaregion is to some extent partitioned by the A5. The East and West Midlands have notably different economies and east-west connectivity problems have long undermined intra-regional economic collaboration. It is unsurprising, therefore, that strong functional relationships exist between the Midlands and surrounding regions. For instance, the Constellation Partnership connects LEPs and local authorities across the Staffordshire-Cheshire boundary, which many traverse on their daily commutes. Lincolnshire and Nottingham have historic links with Yorkshire and the Humber, while Northamptonshire has strong functional links with the South East. The South East Midlands Local Industrial Strategy attempts to make Northamptonshire part of the

'connected core' of the Cambridge-Milton Keynes-Oxford (CaMkOx) Arc to stimulate growth in the coming years.

Cross-boundary collaboration will continue to be important to the Midlands economy, without obviating the need for greater intraregional collaboration. For the time being, however, this is somewhat disrupted by the mismatched economic geographies of the East and West Midlands and the historical political divisions accentuated by the election of the West Midlands Mayor in 2017.

The West Midlands economy is dominated by a large urban conurbation which encompasses Birmingham, Coventry and Wolverhampton and accounts for approximately half of the West Midlands population. There are successful manufacturing facilities across the West Midlands, including a world-class automotive cluster around Coventry. Growth initiatives are generally urban-centric and pipeline infrastructure projects, predominantly HS2, look set to reinforce this trend.

By contrast, the East Midlands is polycentric in character: Derby, Leicester and Nottingham – the main urban centres - are separated by more rural swathes of land. Nottingham has a service sector focus, Derby has a rich manufacturing base and – alongside a historic textiles industry - Leicester contains a relatively high proportion of small and medium-sized enterprises (SMEs) with associated high business formation rates. The A46 and A1 connect Lincoln, Newark, Gainsborough and Grantham to the rest of the region and are an important route for freight coming from the ports of Grimsby and Immingham, as well as for the energy and food industries in the East Midlands.

The complex, subdivided nature of the Midlands economy presents both a challenge and a powerful rationale for greater cross-regional coordination, which is crucial if the 'Midlands Engine' is to be more than a branding exercise. The Midlands Blueprint identifies a number of promising synergies and interdependencies that could form part of a whole-Midlands approach to economic development.

Top Priorities in the Midlands Blueprint

01 Establish sector-specific Centres of Excellence and Innovation Boards.

02 Strengthening Key Investment Corridors and Identifying new Inclusive Growth Corridors.

03 Undertaking a Strategic Green Belt Review.

04 Implement a Mixed Strategy for Housing Growth.

05 Delivering adaptable places.

06 Establishing the Midlands Automotive Arc (AA) and Eastern and Western Energy Innovation Zones.

07 A holistic approach to flood defence and water management to protect the UK's national food security.

08 Investing in the Midlands motorways and rail hubs.

09 Using Development Corporations/Special Purpose Vehicles to optimise Strategic Gateways.

10 Using Development Corporations/Special Purpose Vehicles to optimise Strategic Gateways.

Growth hubs in the Midlands (only capitalised if part of proposed scheme in blueprint). One Powerhouse (2020)[59]
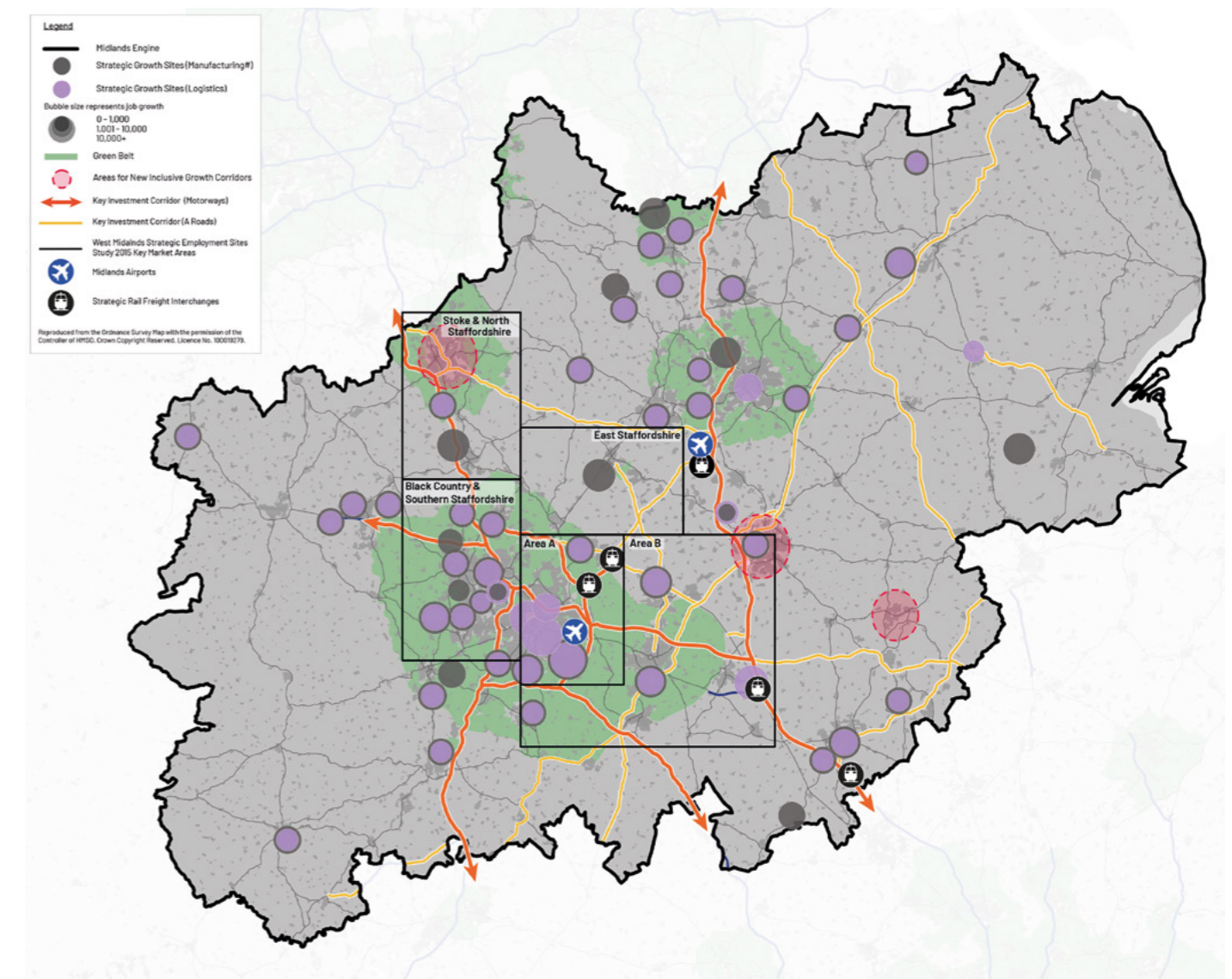
5.3 Planning England's regions - South West

South West

The population of the South West is over 5.5 million - around 8 percent of the UK's total population. The region's core cities, which together comprise approximately one million people, are Bristol, Plymouth, Bournemouth and Swindon, followed by several other major settlements, the largest of which are Poole, Torbay, Exeter, Gloucester and Cheltenham. GDP per capita in the region is slightly below the UK average, but there is a high level of inequality.

Bristol is the key city region in the South West located and a crucial hub on the M4 - a growth and transport corridor along which many successful technology, knowledge-based and advanced manufacturing firms are based.

The West of England Combined Authority (WECA) and the South East Dorset conurbation are the most productive parts of the region, each buoyed by proximity to the South East and West Midlands. Swindon is auspiciously located at the region's gateway to the CaMkOx Arc. To

the North West, there are cross-boundary housing, employment and infrastructure links between the Bristol region and Newport. In recent years there has also been substantial growth in Exeter which has a large employment catchment area.

At the other end of the spectrum, in the peripheral areas of Cornwall and the Isles of Scilly and Torbay, the GDP per capita and productivity levels are substantially below the national average. More so than the North and the Midlands, the South West is a monocentric economy with concentric arcs of declining economic performance spreading out from the East towards the Western periphery.

This geographic divide is reinforced by subregional sectoral specialisms. The South and West are narrowly dependant on tourism and agriculture, while the North and East of the region have more diversified economies including advanced manufacturing, electronics and knowledge-based industries such as digital media and financial services. The more prosperous

regions attract and retain a skilled workforce while rural areas between the settlements and to the west of the region have ageing populations and low workforce retention.

Nonetheless, there are significant opportunities in the west of the region, particularly in the medical research, high-tech manufacturing, marine, clean energy and agritech sectors. The Cornwall and Isles of Scilly LEP has also drawn up plans for the expansion of the space industry which includes a research and training centre, a deep space communications centre in Goonhilly and a proposal to create a UK spaceport at Cornwall Airport Newquay for human spaceflight.

Regional strategic planning is a promising mechanism for realising these opportunities and delivering the necessary infrastructure to buttress more peripheral regional activity. It could help to spread the region's prosperity and mitigate some of the prevailing externalities of more monocentric growth – the increasing house prices, congestion and pollution currently facing the Bristol city region.

Top Priorities in the South West Blueprint

01 Prepare a digital infrastructure plan for the whole South-West region.

02 Host an annual digital infrastructure summit, focused on transformative social and economic change in vulnerable localities.

03 Plan for strategic infrastructure connections beyond the region, to Newport, Oxford, Southampton and Birmingham.

04 Prioritise infrastructure-led housing and employment development in towns with hidden strategic potential, for example Weston-super-Mare, Cheltenham-Gloucester, Plymouth, Tiverton and Taunton.

05 Establish a diverse 'places of learning network' involving colleges and universities in towns and cities of all sizes throughout the South-West.

06 Create a public value business plan to underpin inward and government investment in infrastructure and skills, channelled across urban and rural localities in the South West.

07 Promote the public value business plans under the banner 'One Voice for the South West'.

08 Create cross-boundary, 'zonal' evidence bases for, in broad terms, the peninsula, West of England, Gloucestershire/ Cotswolds and Wiltshire/Dorset subregions.

09 Align zonal evidence bases with planning frameworks that match quality of place and design to the quality of the South West's landscape, cultural and heritage assets.

10 Establish a collaborative network that supports intelligent long-term investment into the natural environment to achieve local and subregional biodiversity and environmental net-gain including regional forests, eg Forest of Avon.

11 Develop a South-West Coastal Strategy, that strategically blends natural, heritage, recreational, maritime, sustainable energy and tourist assets to enable diverse coastal communities to maximise their assets and opportunities.

12 Develop a complementary carbon strategy to become a net-exporter of zero-carbon energy, combining energy assets and opportunities including coastal, nuclear and onshore developments.

Map of South West Population Plan, One Powerhouse (2020)[60]
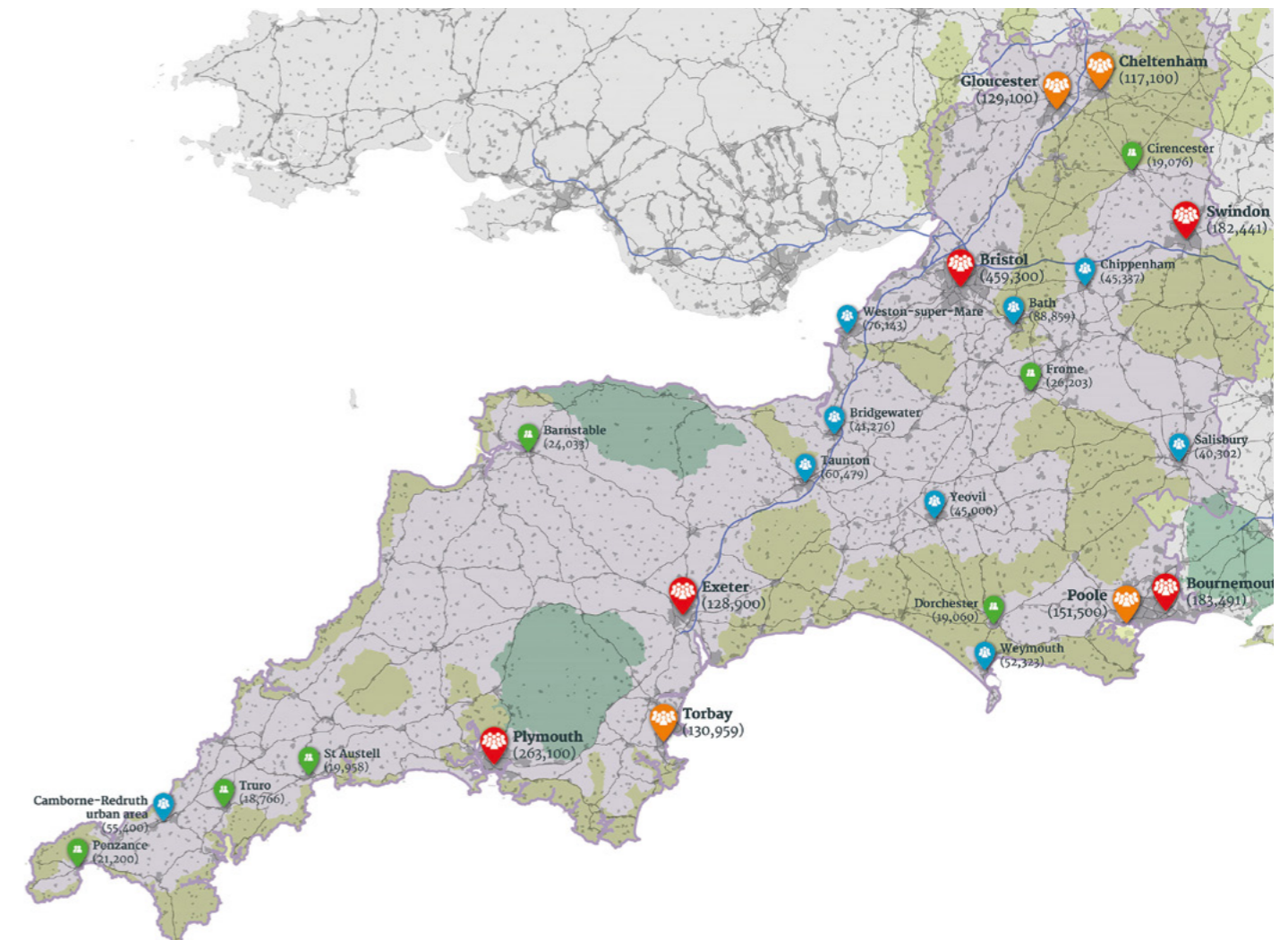
5.4 Planning England's regions - South East

South East

London and the Wider South East accounts for over one third of England's population and over 55 percent of all Gross Value Added. The Wider South East is to a large extent characterised by monocentricity: the agglomeration benefits in London's Central Activities Zone and the Northern Isle of Dogs have resulted in unrivalled levels of productivity and the inflow of approximately 900,000 commuters each day from the wider megaregion and further afield.

London's continued success is vital to the future prosperity of the megaregion, but its privileged position in the regional economy can undermine attempts to densify economic relationships elsewhere in the Wider South East and across the UK. Its sustained growth has also resulted in high levels of congestion, pollution and rising house and land prices, which risk tarnishing the city's future prospects without proactive management.

Nonetheless, the agglomeration narrative only tells part of the story in the region. Though business start-up rates in London are far higher than the national average, recent data shows

a net exodus of firms from London to other towns in the Wider South East such as Milton Keynes, Reading and Brighton. This has likely been driven by the increased cost of living and industrial land in the capital.

Outside of London there are thriving independent economic centres, such as Milton Keynes, Brighton, Reading, Newbury, Oxford and Cambridge. The CaMkOx Arc is the fastest growing economic corridor in the country supporting new 'orbital' east-west collaborations that cut across the 'radial' centre-periphery links emanating from London. Oxford and Cambridge are world-leading research centres receiving higher levels of R&D expenditure than anywhere else in the country and yet are hampered by poor connectivity and infrastructure.

The agglomeration narrative also obscures cross-boundary associations with surrounding regions. Northamptonshire – part of the 'Midlands Engine' geography – has strong economic, employment and infrastructure links with CaMkOx Arc, especially Milton Keynes. Felixstowe, the largest container port in the UK and major international gateway is linked by the A14 to the Midlands, from where

goods and services are distributed further afield. These linkages and many more exist independently of London, not least the channel tunnel to continental Europe.

It is also not clear that aggregation of economic activity in London and the CaMkOx Arc is producing benefits across the whole region. In terms of productivity, the East of England trails the national average and Cambridge's recent growth is not radiating far into East Anglia. The South East performs better, but this masks substantial disparities between Kent and rural Sussex and the higher performing areas to the north and west of the region.

The economic geography of the Wider South East is complex and in flux. Wider economic, environmental and social shifts in the UK will have additional spatial impacts. To manage this change, the South East needs coordination and spatial planning at scale. London is no island and strategic planning at the megaregional scale should assist in protecting the capital's success, managing the resulting externalities and supporting the rest of the mega region through a period of rapid change.

Top Priorities in the South East Blueprint

01 Embrace the Fourth Industrial Revolution through investment in physical and digital connectivity that opens up potential across the polycentric megaregion and ensures all residents can participate in the new economy.

02 Focus infrastructure investment, skills development and community growth around the Priority Economic Clusters (located within the seven Inclusive Growth Corridors) to ensure sustainable and integrated growth.

03 Deliver existing planned and proposed transport projects within Greater London that unlock strategic opportunity areas (ie Bakerloo line extension and upgrade and DLR river crossings); projects which unlock the potential of the wider megaregion for sustainable growth (ie Crossrail 2, East West Rail, A1 and A27); and prioritise HS2 to promote national connectivity and add capacity to the London and wider South East network.

04 Invest in new urban integrated transport systems that deliver reliable and frequent public transport within the major towns and cities of the megaregion to reduce dependence on car-based travel.

05 Transform the way we live through investment in Mobility as a Service (MaaS) technology and the development of community hubs as part of the enhanced role of high streets and town centres.

06 Tackle the housing crisis through transit-oriented intensification of existing urban areas and development of well-connected inclusive new settlements at scale, aligned with employment growth clusters and urban transit systems.

07 Adapt and mitigate impacts of climate change by creating strategic areas for biodiversity and environmental net gain to go hand-in-hand with designation of new settlements and infrastructure.

09 Enable investment in utility infrastructure that will underpin resilient and sustainable growth. Accelerate the programme of water supply availability through new local sources and catchment transfers. And, super-charge renewable energy supported by a network of decentralised grid-scale battery storage. Both investments will support security of supply and add confidence to investors.

08 Pursue a comprehensive review of the Metropolitan Green Belt that reflects its regional role in the 21st century as a green infrastructure and environmental capacity resource, strategic location for transit-oriented communities, as well as reinforcing its role as an urban growth boundary for the megaregion.

10 Bring these priorities together within a regional spatial plan for the megaregion that will align and prioritise long-term investment in infrastructure and environmental assets, accelerate delivery of sustainable new communities and underpin resilient economic growth through a long-term investment strategy in places where coordinated investment will have the greatest impact.

## South East resilience regional framework. One Powerhouse (2020)[61]
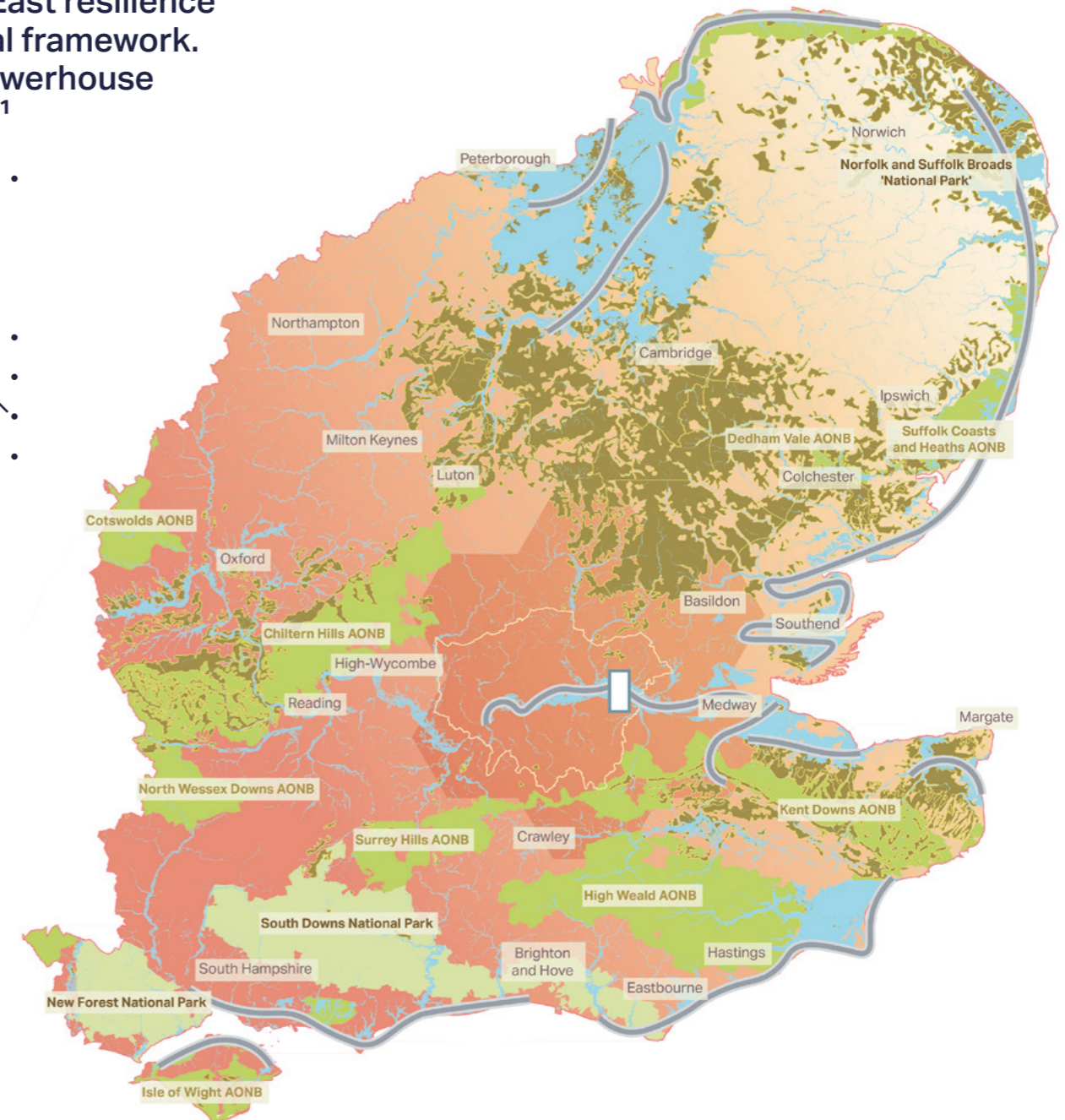
6.0 Cross-cutting themes

Each of the four regional blueprints is clearly specific to the geography of its own region

However there are several cross-cutting linkages spanning megaregional and national boundaries and as we have explained elsewhere, boundaries are always artificial. Spatial plans should not therefore reductively carve up space, but rather highlight and promote activity that spans

'fuzzy' territorial boundaries. There should be a significant emphasis on collaboration at all spatial scales and perhaps non-statutory frameworks for cross-boundary coordination as exists on the island of Ireland. This section draws out some of the most important cross-cutting themes.

Housing delivery regional blueprint for the South East. One Powerhouse (2020)[62]
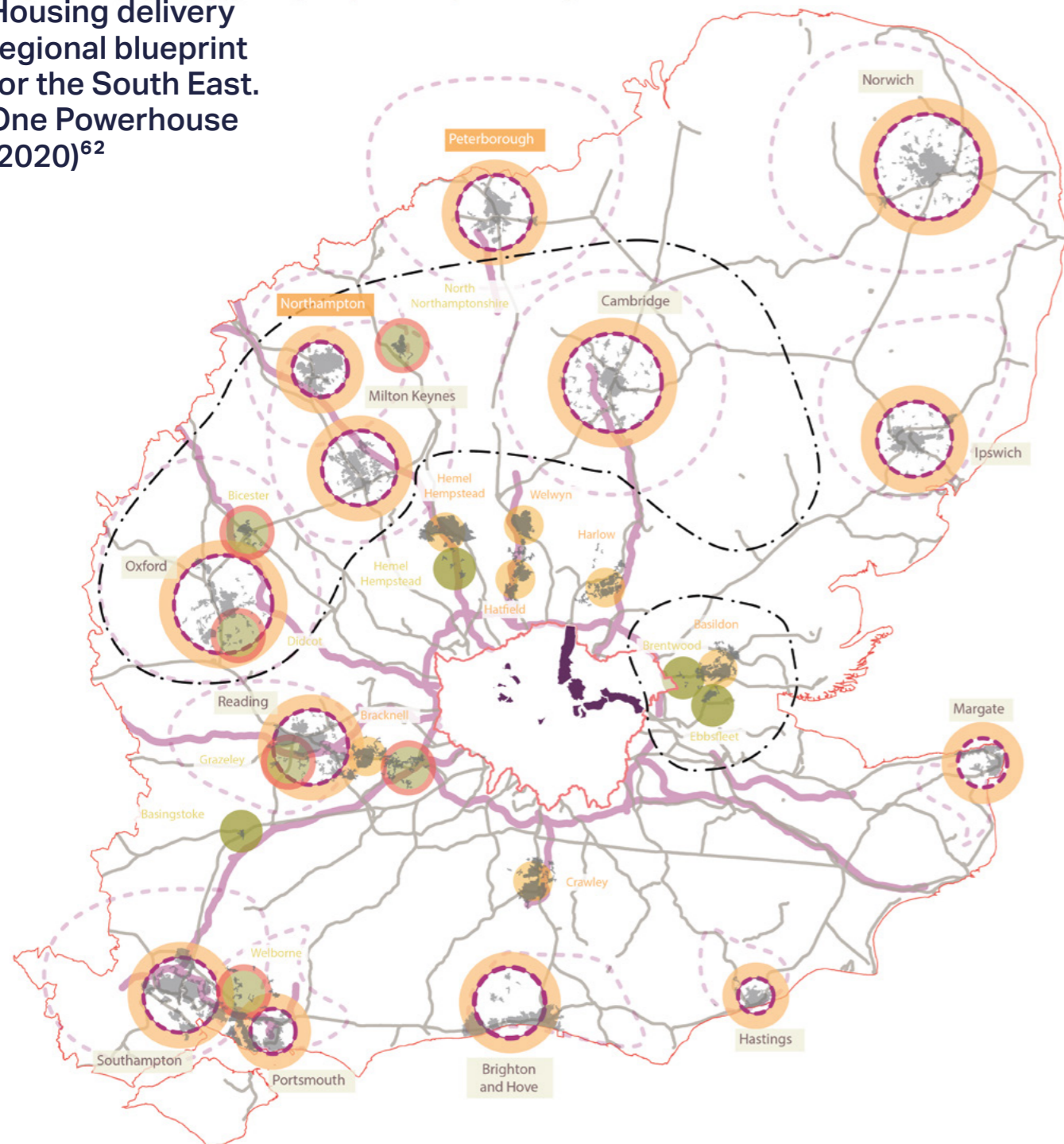
6.1 Strategic land use

The UK is currently in the throes of a housing crisis and an intensifying climate crisis. Both call for a reassessment of existing land use practices, which is a prominent theme in all four regional blueprints.

The densification of towns and cities is a common priority to counter urban sprawl, mitigate social isolation and reduce commuting distances. This is partly why national planning policy has prioritised the reuse of brownfield sites in past decades. It will continue to be the case that many local planning authorities depend on brownfield land to deliver their housing and employment growth targets.

However, brownfield capacity varies by region. 46.5 percent of brownfield stock is concentrated in London, the South East and the North West, far exceeding capacity in the less industrialised South West, East Midlands and East of England.[39] A high proportion of brownfield land in the North East is inappropriate for residential reuse, partly because of its concentration in ex-mining areas. Public funding can be used to remediate and prepare new brownfield sites but high lead-in times and insufficient overall stock (especially in certain regions) mean that greenfield development is also necessary to accommodate potential housing and employment growth.

This will include the expansion of existing settlements and formation of entirely new settlements, ideally within current transport corridors and the travel to work areas of existing towns – for instance North

Northamptonshire, Hemel Hempstead, Bicester and Didcot in the case of the Wider South East (see map overleaf). There is a strong case for new towns and expanded towns to be built in high growth corridors and designed to ensure they complement neighbouring settlements. In some regions there is also a case for re-evaluating existing green belt policy as there are already examples of green belt loosening in a haphazard and fragmented way. Any green belt loosening that does occur should be guided by principles of environmental and biodiversity net gain, preserving and enhancing areas of highest environmental value.

There is a need for a coordinated and high-level approach to land use in the context of the housing crisis. Notwithstanding the duty to cooperate, isolated local authorities will struggle to undertake ventures of this size. Such an uncoordinated approach risks undermining the aim of such initiatives: to build dense urban spaces with access to green space and vital infrastructure.

6.2 Sustainability, resilience and the environment

Clean energy assets

Making good on the government's commitment to reach net zero carbon emissions by 2050 will require drastic changes to economic management and public spending appraisal. The transition will be extremely disruptive but provides a unique opportunity to rebalance and restructure the UK's economy within and between its regions and across multiple sectors. There is the possibility of booming clean energy hubs emerging in Humberside and East Yorkshire, in Cornwall and Cumbria, potentially transforming local economies. The transition might also stimulate new functional relationships between energy-producing peripheries and the energy-consuming cores, which will in turn provide professional support to the former.

The North is responsible for half of the renewable energy currently generated in England and most of this production takes place in rural or marine areas near relatively deprived and peripheral communities. There are potential tidal lagoon sites in West Cumbria and opportunities to grow the hydrogen output, most of which is concentrated in the Tees Valley, where there is also a carbon capture cluster. There is the potential for a further 22.5GW of offshore wind energy capacity in the North, largely concentrated in Yorkshire and the Humber.[40] With the right infrastructure and enough grid capacity, the renewable energy sector could create up to 46,000 jobs in the North by 2030.[41]

The story is similar in the Midlands, where most of the renewable energy assets are concentrated in the east, including: onshore wind farms (Bicker Fen and the Heckington Fens), offshore wind farms (Lynn and Inner Dowsing Wind Farms and the Humber Gateway) and solar farms (Wymeswold Airfield). The energy

sector in Greater Lincolnshire already generates £1.2bn per annum and employs over 12,000 people and there is scope for substantial future growth of the sector.[42] With the right encouragement, including the appropriate transport infrastructure, the green energy sector could boost the East Midlands economy (which has fallen behind the West Midlands in recent years) and stimulate stronger east-west economic ties. Cross-regional collaborations are starting to emerge with Birmingham's Thermal Energy Demonstrator acting as a test bed facility for solar and wind farms located in the rural parts of the East Midlands. Further collaboration could be catalysed through two new Energy Innovation Zones, as proposed in the≈Midlands Blueprint.

As in the Midlands, there is the need fo a pan-regional strategy in the South East to identify locations for new land-hungry energy facilities which are both acceptable to local communities and connected to the National Grid. While there is less wind power capacity in the Wider South East than the Midlands there is a glut of wood biomass fuel assets and potential for new solar farms in Kent. The University of Southampton and Checkmate Sea Energy based in Sheerness are running advanced tests on wave and tidal power, which will likely grow as a sector.

Similar growth will be driven by the South West Marine Energy Park, an advanced R&D partnership spanning the area between Bristol and Cornwall. Possessing some of the best wind and solar resources in the UK, the Cornish coast is integral to the South West's energy prospects (the South West blueprint envisages the region exporting excess zero-carbon energy in the future). Additionally, the Nuclear South West Strategy is projected to be worth £50bn to the regional economy in the next two decades

and, like the marine energy park, will embed skills and facilities that permit further expansion of the region's non-carbon energy production.
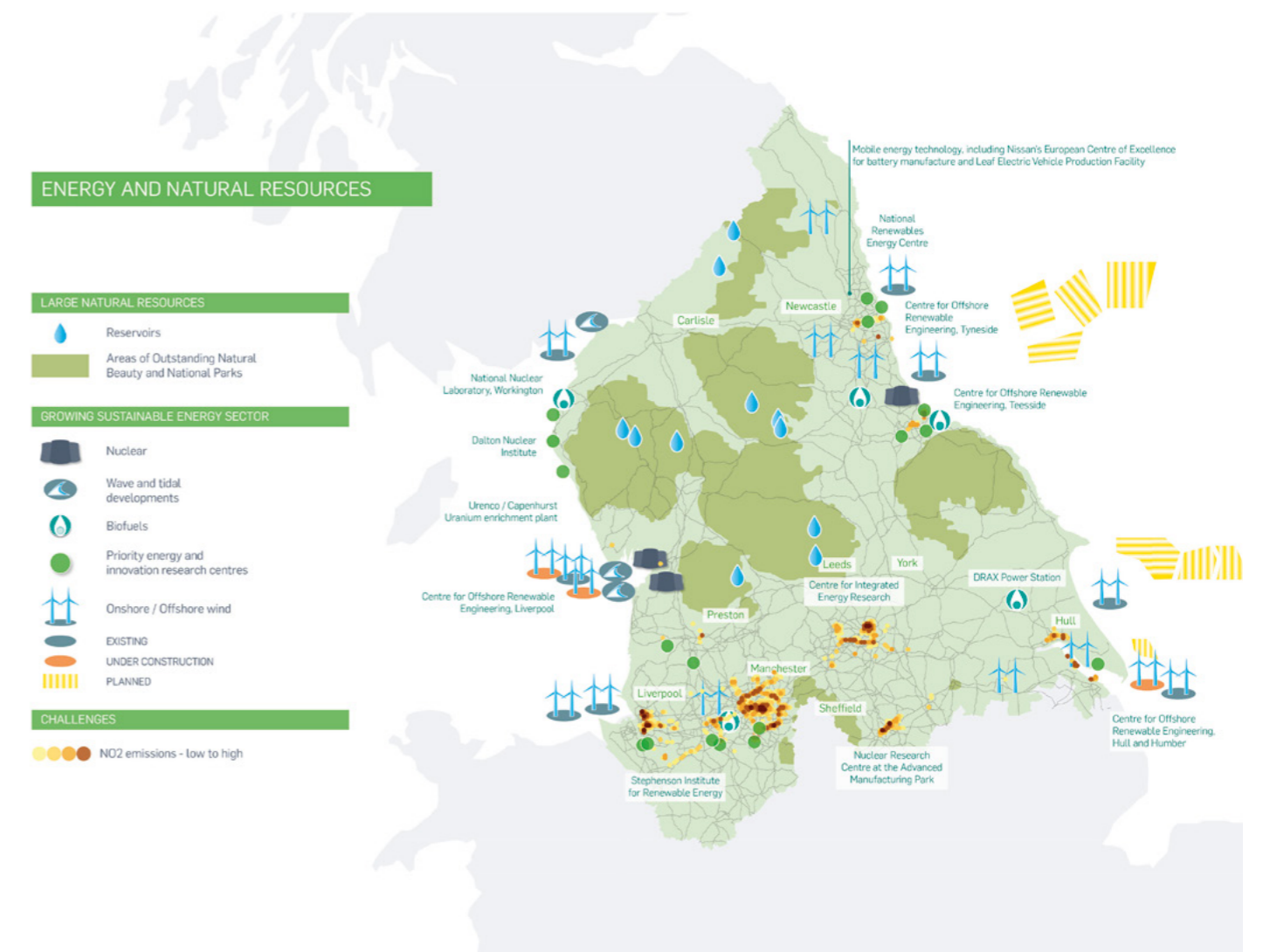
Agriculture and resilience

The changing climate will have far-reaching repercussions for the UK's food system.

In the short term, population increases - combined with the potential need for greater self-sufficiency post-Brexit - will strain the system, perhaps steering resources to food hubs and agritech industries in the East Midlands, the Fens, Cornwall, Shropshire, North Yorkshire and other rural areas. Flood defences will need strengthening around at-risk population centres and key farming lowlands - primarily the Fens, Lincolnshire and Kent. As droughts become more common and severe, the major water resource zones in the North and South West will need extra built-in resilience and strategic water transfers to drought prone areas – primarily in the South East - will need formalising.

In the longer term, resilience measures food innovation and regenerative agricultural methods will grow in importance, but changing diets and environmental damage might bring about a reduction in agricultural land, creating new possibilities for regenerative land use - in the semi-wild Pennines and southern woodlands, for example, and in drained agricultural land in the east, where rewetting would allow the sequestration of carbon emissions and support enhanced biodiversity. To safeguard livelihoods and food supply, this process must be iterative and subject to evidence-led spatial planning, starting with unexploited pockets of land and coordinated with both food policy and the provision of new economic opportunities for impacted communities.

Energy and natural resources in the North. One Powerhouse (2020)[63]

ENERGY AND NATURAL RESOURCES

LARGE NATURAL RESOURCES
- Reservoirs
- Areas of Outstanding Natural Beauty and National Parks

GROWING SUSTAINABLE ENERGY SECTOR
- Nuclear
- Wave and tidal developments
- Biofuels
- Priority energy and innovation research centres
- Onshore / Offshore wind
- EXISTING
- UNDER CONSTRUCTION
- PLANNED

CHALLENGES
- NO2 emissions - low to high

6.3 Transport infrastructure

Reliable transport and digital infrastructure are fundamental to the success of regional economies, enabling job access, productivity growth, regeneration and agglomeration.

Important synergies and economies of scale within regions will be lost in the absence of dependable infrastructure, which is a common theme across the Blueprints. Ambitious regional infrastructure strategies should be integrated with strategies for spatial rebalancing, both of which will depend upon the pan-regional delivery partnerships forming at different rates in each megaregion.

In each of the regional blueprints, transport and digital connectivity have been highlighted as critical in delivering economic transformation.

Transport for the North has identified a series of seven strategic development corridors including: improved connectivity between the non-carbon energy assets on the East and West coasts; enhanced east-west connectivity across the central and southern Pennines, with more rail-freight interchanges and intermodal terminals at key strategic locations; and upgraded North-South connectivity between economic centres on the west coast, the east coast and in West Yorkshire.[43]
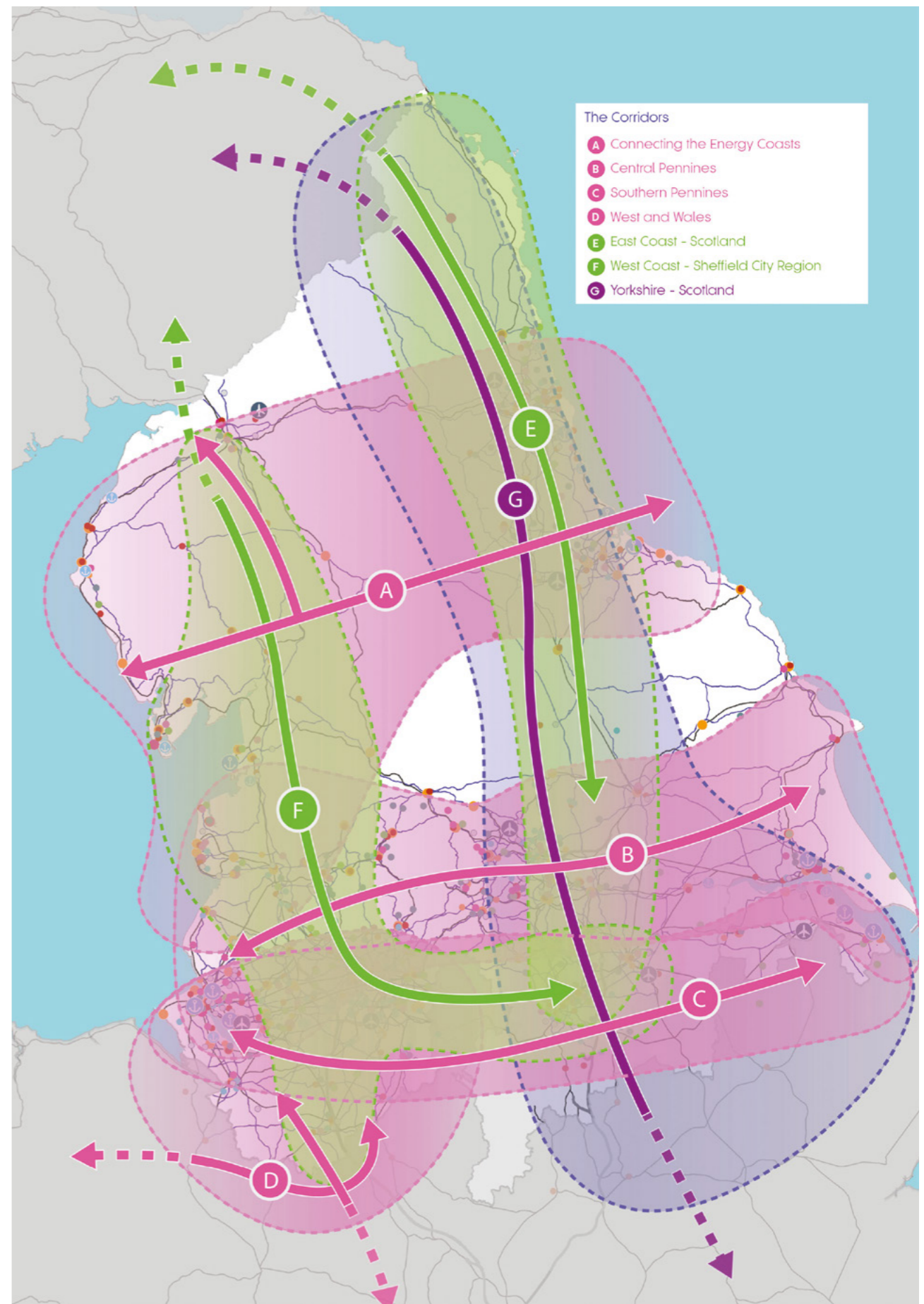
The Midlands has a dispersed population and its advanced manufacturing, automotive, distribution and food production industries in the region rely on a dependable road and freight network. Improved east-west connectivity – over and above what is already planned - would enable new functional relationships between the Midlands and the major ports on either side (the Humber and the Bristol Channel). Better links between major economic centres and with the HS2 will support the growth of 100,000 planned new jobs.[44]

In the South West, two new subnational transport bodies, Peninsula Transport and Western Gateway, have been formed and will develop transport strategies for the Western Peninsula and the east of the region respectively. These bodies are still young, but as they mature and hopefully collaborate, they could become the vehicles for an integrated transport strategy for the megaregion enhancing growth in the WECA and unlocking nascent assets in≈the peripheral west.

Transport investment should also promote regional balance in the South East rather than simply reinforcing monocentric agglomeration. Strategic rail and road networks in the region radiate from the capital, but London is among the most congested cities in Europe and there are opportunities for new 'orbital' linkages. For instance, electrifying connections from Norwich and Felixstowe Port into the new East-West Rail and Expressway projects would help spread the benefits of the CaMkOx Arc horizontally and support new economic interactions that do not radiate from London, reinforcing the polycentricity of the Wider South East.

There are three main subnational transport bodies in the megaregion. Transport for London was the first regional statutory transport body in the UK. To the south, there is Transport for the South East and to the north there is the Economic Heartland Strategic Alliance Transport Forum. However, the emergence of a pan-regional transport body – which is proposed in the South East blueprint – seems a long way off. Its absence will continue to inhibit regional balancing.

The Corridors
- A Connecting the Energy Coasts
- B Central Pennines
- C Southern Pennines
- D West and Wales
- E East Coast - Scotland
- F West Coast - Sheffield City Region
- G Yorkshire - Scotland

6.4 Innovation and inclusive growth

Innovation and R&D
is crucial to long-term
economic success.
It futureproofs major
regional industries
against disruptive
technological, climate
and political change and
thus safeguards future
growth prospects.

Innovation

But the form it takes differs, according to the distinctive strengths of each region.

The South East Blueprint identifies seven priority economic clusters that need to adapt to the Fourth Industrial Revolution: the advanced manufacturing clusters; the creative industry clusters; the agritech clusters; future energy assets; life sciences clusters; future logistics clusters and the financial services cluster in London.

The Northern Blueprint takes a similar approach, focusing on the region's 'prime capabilities' (as identified in the Northern Powerhouse Independent Economic Review): advanced manufacturing (which is spread across the North with a

particular cluster in the North West); health innovation (which is prominent in Greater Manchester, the Cheshire East Corridor, Liverpool, Leeds and Sheffield); the digital sector (predominantly in Manchester but also in Newcastle, Liverpool and Sheffield); and energy (clustered in the Humber, the North East and to the North of Manchester). Cross-pollination with the northern research universities enhances the region's R&D potential.

This collaboration is formalised in the N8 partnership of universities, which is emulated in the South West's GW4 Alliance between Bristol, Bath, Cardiff and Exeter universities. Like the NP8 partnership, GW4 aims to maximise the impact of academic research by establishing links with decision makers, communities and businesses, including the advanced manufacturing clusters in Gloucester and Bristol and the clean energy and aerospace opportunities to the west. The South West Blueprint recommends the expansion of this alliance into a diverse 'places of learning network' spanning towns and cities of all sizes throughout the South West. The Midlands Blueprint also highlights collaboration between university research centres and industry; predominantly - and unsurprisingly – the automotive and agriculture industries. There are particularly strong automotive R&D facilities at the University of Warwick and along

the A5, and important innovation clusters in Birmingham, Coventry and Wolverhampton. In these Centres of Excellence, Innovation Boards could be established to explore opportunities for transformative innovation and collaboration. The legacy of the Midlands' automotive industry depends upon R&D charting a smooth transition to new production methods and vehicle types.

Inclusive growth

However, high performing sectors and places should not be isolated in megaregional strategies. Spatial plans tend to convey a rounded approach to economic development, recognising the distinctive contributions of different places and the case for intentional spatial rebalancing.

The other cross-cutting themes - environmental sustainability, region-wide connectivity and health-conscious land use - are constituent parts of an inclusive agenda, as are good public services, local training opportunities and a collective sense of purpose. If smaller and more isolated places have the right infrastructure, services and strategy, they can start to capitalise on their basic advantages – lower land and property prices, cleaner air and emptier roads – to spur wider regeneration.

Advanced manufacturing in the Midlands. One Powerhouse (2020)[65]
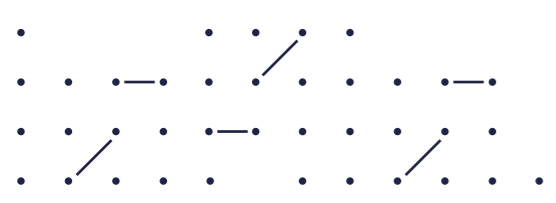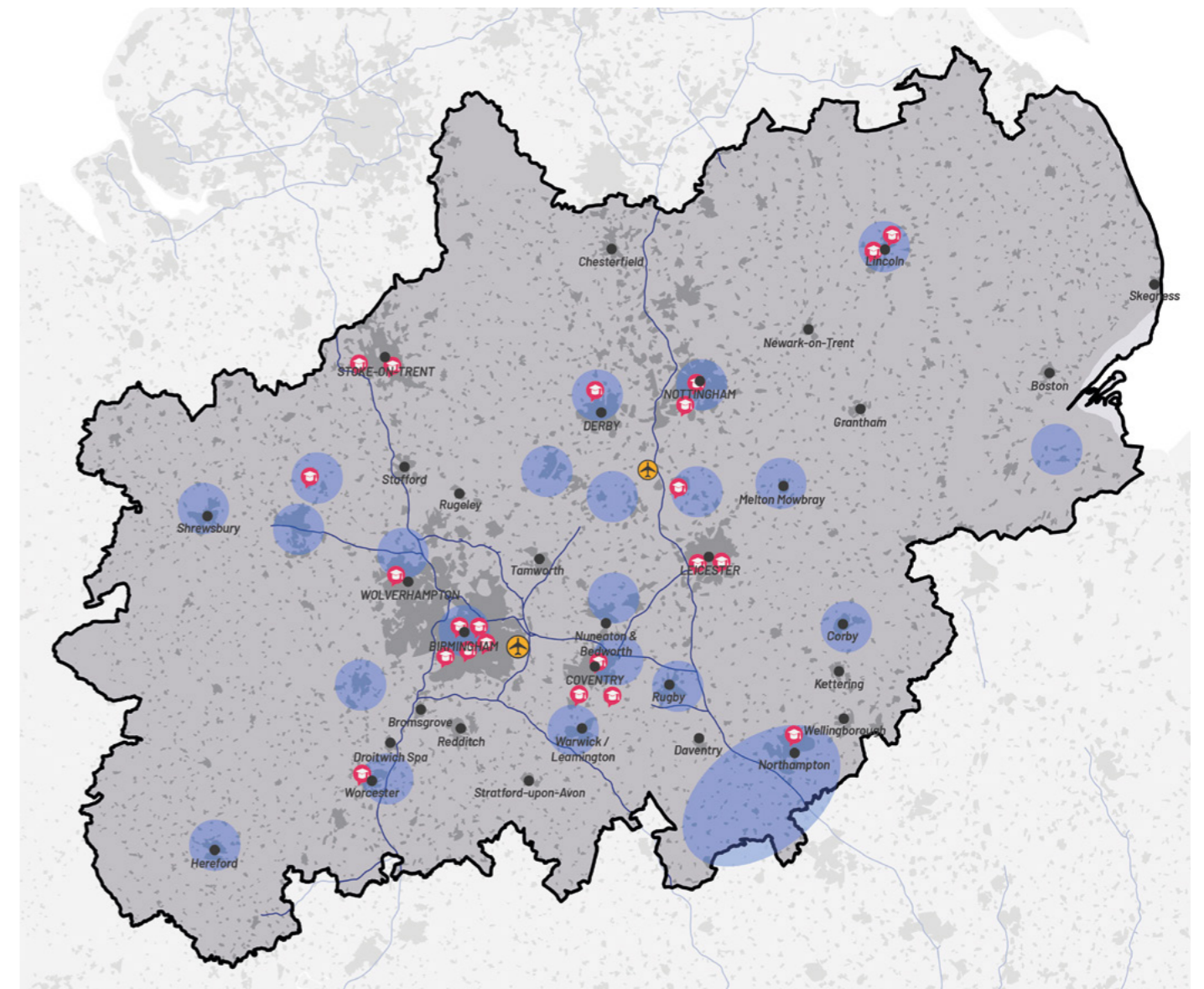
As we have argued elsewhere, some of the best approaches to spatial planning involve the collaboration and co-ordination of multiple actors. This is true at the national level as well as amongst subnational players.

There is however an important place for national-level action and the role of central government which we explore in this section.

Industrial Strategy

At present, the closest that we have to a national One Powerhouse plan is the National Industrial Strategy published in November 2017. The strategy is built upon five foundations which are intended to transform productivity and 'earning power' throughout the UK. Each foundation is supported by a series of policy priorities and spending commitments. The strategy also sets out four "Grand Challenges" relating to AI and data, clean growth, future mobility, and ageing and calls for collective cross-sectoral action to engage with them.

While providing a coherent vision concerning the economy, the weakness of the Industrial Strategy is that it lacks very much spatial specificity. It is as if the economic challenges and opportunities facing the nation are the same from one part of the country to the next. In fairness, the fifth foundation is entitled 'Place' and expresses a commitment to developing Local Industrial Strategies across the 39 Local Enterprise Partnership areas. There is also explicit acknowledgment of the role of regions like the Northern Powerhouse and Midlands Engine as 'the right economic geography' for working at scale but the strategy falls short of a clear commitment to proper strategic spatial planning.

The National Infrastructure Commission

The National Infrastructure Commission is an executive agency, sponsored by HM Treasury, which is charged with making an assessment of the long-term infrastructure needs of the country and then making recommendations to the government. It carries out in-depth studies into the UK's most pressing infrastructure challenges and it monitors the government's progress regarding infrastructure delivery.

The first national assessment was launched in July 2018 and makes a series of recommendations about low carbon, broadband, roads, cities, flooding and waste. Important issues though these may be, there is barely a single map in the entire assessment and – with the exception of a study of high-speed rail in the North and the CaMKOx Growth Arc – the commission rarely identifies the specific issues relating to any particular region.

At one level this could be justified on the grounds that its primary purpose it to look at those infrastructure projects of national, cross-cutting significance, but as with the Industrial Strategy it is difficult not to see the value in exploring the regional and spatial dimensions of its important work.

The Devolved Nations

After devolution to Scotland, Wales and Northern Ireland, the newly-devolved nations saw spatial planning as an important tool for nation-building, helping the new governments assert their distinctiveness and express their territorial cohesiveness. Drawing upon the European Spatial Development Perspective, released in 1999 to promote the coordination of national plans and policy sectors across Europe, Wales and Scotland soon developed their own spatial plans and Northern Ireland followed a little later. Their plans have subsequently been reviewed and developed but they have formed a vital basis for investment and economic development and have generally been considered a success.

The One Powerhouse Consortium has considered the spatial planning work of the devolved nations as it has developed its own work but decided early on to focus its efforts on developing similar approaches in England. The idea behind the One Powerhouse Plans is that the four regional blueprints of the English megaregions could be drawn together with the three spatial plans of the devolved nations to form a set of complementary spatial plans. This document attempts to bring these different plans together in one over-arching document and sets out cross-cutting themes and issues (see section above) together with a set of national-level recommendations.

A Plan for England?

The absence of spatial planning in England has led various bodies to recommend different approaches to filling this gap. Most recently the UK2070 Commission has recommended a National Spatial Plan for England that would "be limited to those matters which can only be or are best defined at a national level".[45] The Commission argues that these should include issues of national significance or which require cross-boundary action but the examples it gives – climate change, competitiveness etc. – don't seem to merit a national approach any more than a subnational one. It explicitly recognises the risk of any national plan appearing to be a "top-down imposition" and acknowledges the various pieces of work that are presently emerging bottom-up.[46]

When it comes to "aligning the nations", the UK2070 Commission proposes that this could be done through a "UK Spatial Framework" that facilitates discussion on matters of common interest. Given the pressing need for megaregional plans, it might be more straightforward simply for the plans of four English megaregions to make up a plan for England and alongside the three devolved nations to together form the UK Spatial Framework.[47]

The very idea of One Powerhouse suggests a unity of purpose across the UK but, as we have shown, such unity need not involve a highly centralised approach toplanning and strategy-making.

7.0 Towards a strategic investment framework

Current spending on economic affairs

According to the government's Public Expenditure Statistical Analyses 2019, the government spent nearly £55bn on 'economic affairs' in 2017-18 of which nearly 53 percent was on capital expenditure.[48]

At a regional level, when calculated on a per capita basis, this equated to £605 per person in the Midlands, £630 per person in the South West, £669 per person in the North, and £923 per person in London and the Wider South East.

Furthermore, expenditure in London and the Wider South East has diverged from other English regions:

⟶ Since 2013/14 expenditure in London has risen by £418

⟶ Since 2013/14 expenditure in the North has risen by £131

⟶ Since 2013/14 expenditure in the Midlands has risen by £140

⟶ Since 2013/14 expenditure in the South West has risen by £177

'Economic affairs' is broken into the following categories:

⟶ Enterprise and economic affairs

⟶ Science and technology

⟶ Employment policies

⟶ Agriculture, fisheries and forestry

⟶ Transport

For each of these there are significant disparities in spending between the different regions. For example, spending on transport is significantly greater in the Wider South East compared with any other region and has grown faster over time too.

Transport spending by region per capita[66]
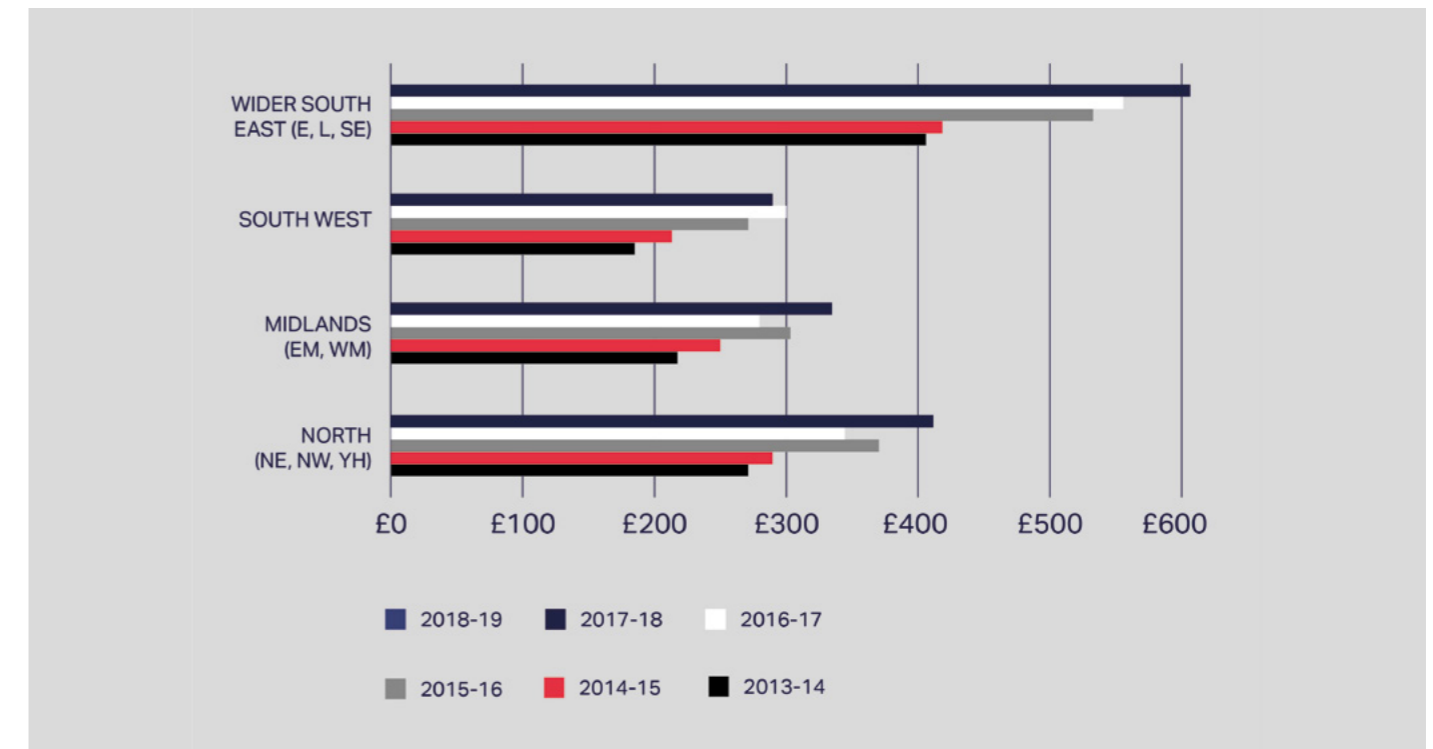
Similarly, expenditure on R&D from all sources shows some stark regional disparities:

Expenditure on R&D 2017 (£m)[67]
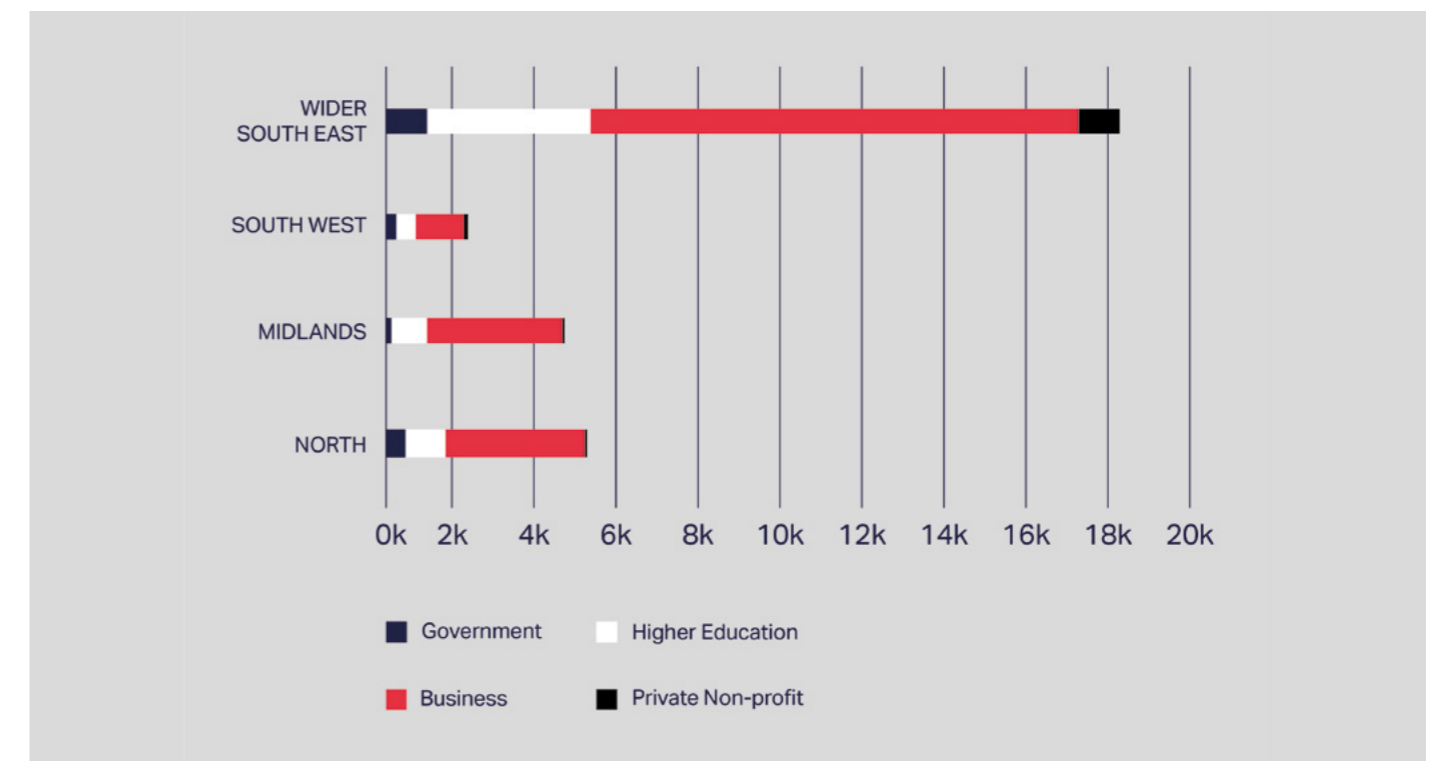
In London, public investment in R&D is almost exactly level with private investment, while in the South West and in the North East and North West, business expenditure is twice as large as public expenditure. In the Midlands, business invests 4.4 times as much as government, higher education and non-profits. In France – a country with far less pronounced regional divides - business and government expenditure are more closely correlated and many regions receive high levels of both government and business investment in R&D.[49]

Future spending on infrastructure

While historical expenditure paints a picture of regional disparity and divergence, perhaps it is more important to consider spending plans for the future. The National Infrastructure and Construction Pipeline contains data on planned infrastructure spending.

Pipeline infrastructure spending per capita[68]
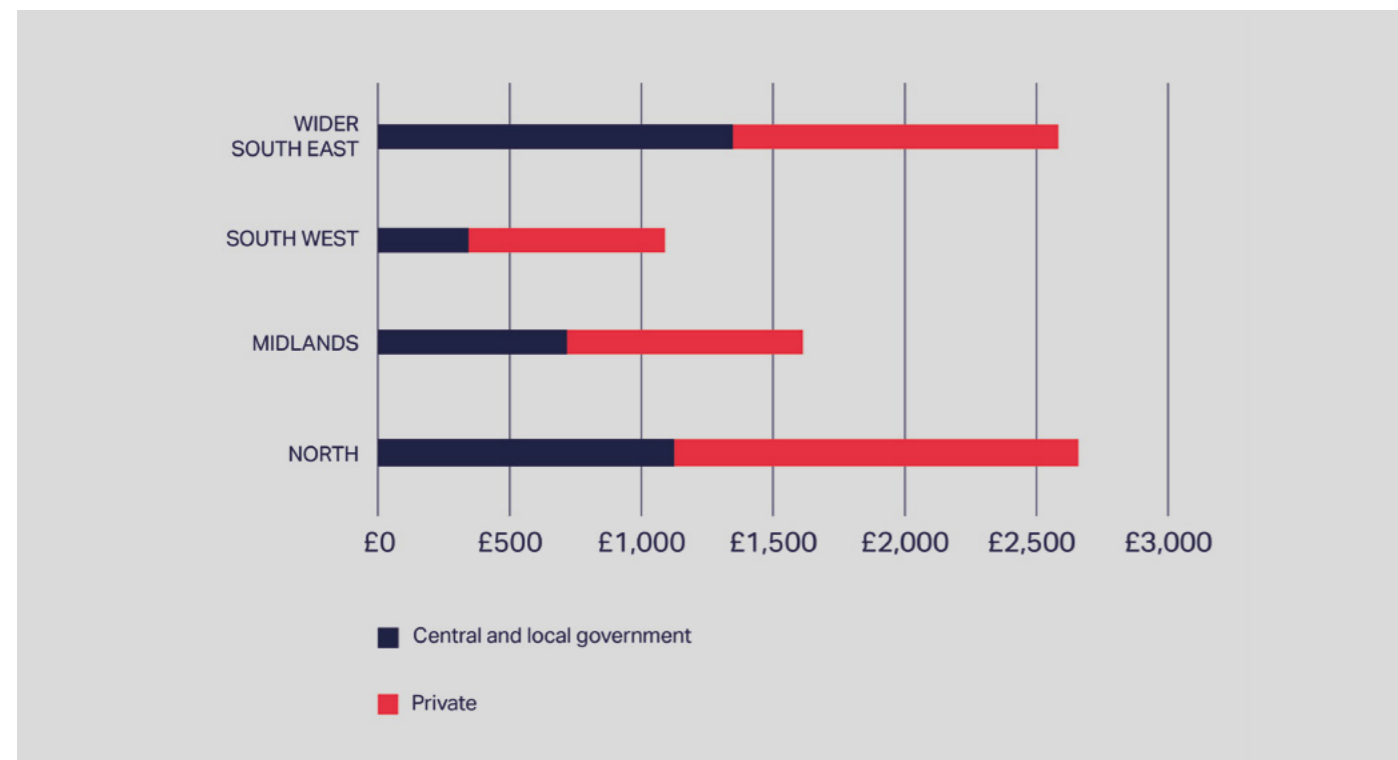
This again shows regional disparities in both government and private expenditure although much of the planned expenditure in the North concerns major nuclear projects in the North West. If we look at planned transport infrastructure spending, including planned local expenditure and TfL/GLA, spending then a very different pattern emerges.[50]

Planned central and local public/private transport infrastructure spending per capita 2018/19 onwards[69]

A framework for fiscal devolution
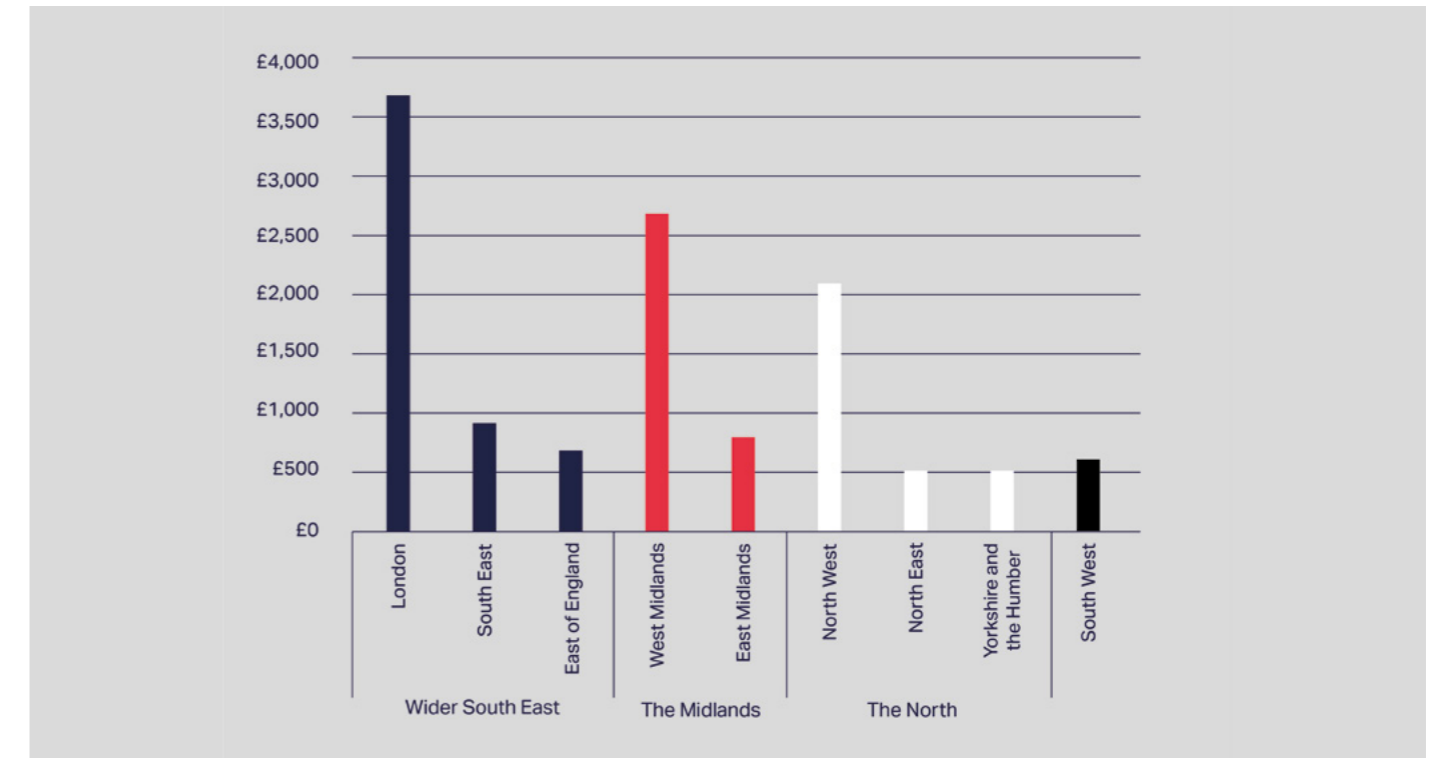
The new government has pledged to spend £100bn on roads, rail and flood defences, £3.6bn on a Stronger Towns Fund as well as creating a £4.2bn fund for new bus and rail links in cities outside London. This is an important step forward, but it is still a long way short of what the regional blueprints suggest is needed to seize regional opportunities.
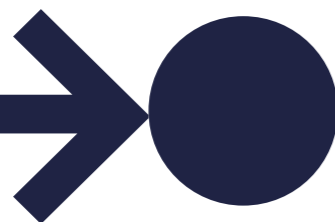
The UK2070 Commission, for example, has proposed a £250bn UK Renewal Fund which would boost capital spending by £10bn per year for 25 years. Even this though would not necessarily address the regional disparities that exist if the distribution of the new funding is made according to similar processes as principles as has been the case in the recent past – indeed, if London and the South East continue to hoover up a disproportionate part of the fund then it could exacerbate regional differences.

For this reason, the One Powerhouse Consortium proposes a fourfold framework for fiscal devolution:

a.   Changes to Green Book and lifting the cap on capital investment

The Treasury Green Book stipulates approaches to project evaluation and investment. These typically take a relatively narrow view of economic benefit and they are almost entirely 'spatially blind' as they are based on an assumption that the location of any investment is of little relevance providing there are maximal returns on investment. This is all the more critical given that National Infrastructure Assessment proposal are currently constrained by a 'cap' of 1.2 percent GDP – significantly lower than many other competitor nations thereby constraining long-term investments.

It is important then that as a first step to tackling the regional inequalities in government spending on economic affairs, alternative methodologies for project evaluation are developed which have a better consideration of wider economic benefit drawing upon the evidence generated through regional spatial planning. And secondly, the capital spending cap needs to be lifted to the EU average at the very least.

b.   Allocation and accountability at the regional scale

At present, almost all investment in regional economic affairs is allocated on the basis of some form of competitive bidding between local level players such as LEPs, local authorities, combined authorities and even individual businesses. This tends to lead to a very piecemeal approach to economic investment which – in the absence of any strategic plans at the regional scale – can lead to local duplication, competition and ineffective delivery.

We propose that the large proportion of government spending on economic affairs is allocated through transparent formulae combining a broad understanding of economic opportunity and a proper calculation of local need again informed by regional spatial plans. A large part of the allocation should be made at the megaregional level with some used for regional scale investments but the rest subject to a further delegation of spending to constituent combined and local authorities. The accountability for the allocation and expenditure of regional funding should be held by some form of 'super-LEP' and directed by some form of megaregional board made up of the LEP chairs and other political and business leaders. (see next chapter).

c.   A network of regional investment banks

For many decades it has been recognised that access to finance, especially for SMEs can be very difficult outside of London. The so-called 'Macmillan Gap', referring to the difficulty of SMEs in raising long-term capital, is not only caused by the relatively small number of banks and funds operating outside of London but also banks' over-dependence upon more formulaic approaches to investment decisions for firms that operate some distance from financial decision-makers.

In Germany, it is argued that the strength of its SME sector and so-called Mittelstand is a direct result of its highly embedded regional banking system and the relative proximity of investment managers to the firms in which they choose to invest. For our regional economies to thrive, government needs to provide further investment in the British Business Bank and funds such as the Northern Powerhouse Investment Fund ultimately leading to the development of a network of regional investment banks working closely alongside private sector banks.

c.   A pathway to full fiscal devolution

Finally, perhaps the most fundamental constraint on regional economic investment is the dependence upon central government or private banks to act in the interest of the regions. The UK – and England in particular – is one of the most centralised nations in the developed world. Not only are subnational authorities constrained in their ability to raise funds through local bonds and other investment vehicles, but they have hardly any powers to raise taxes at the subnational level. There has been some limited exploration of the devolution of business rates, but this has taken place at the local authority level and the checks and balances necessary to harmonise and redistribute between richer and poorer authorities make the exercise somewhat futile.

If the UK is to move towards becoming a more mature economic democracy then we must set a target for the proportion of GDP that should be raised and spent at the regional level and then chart a pathway to get there in incremental steps involving different tax revenue streams. At a larger, megaregional scale, much fiscal redistribution can be done within regions and as economic prosperity starts to narrow the gap between regions, so the fiscal gearing and redistribution can gradually be relaxed. But in order to unlock this more decentralised future for regions, there needs to be a cross-party, long-term approach and a clear route map for change.

8.0 Recommendations and the One Powerhouse Action Plan
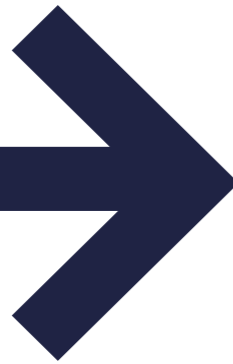
The current phase of the work of the One Powerhouse Consortium is concluding at the very beginning of a new Parliament. With the country seeking social and economic renewal, a clear and coherent programme to bring the nation together and turn the tide on widening regional inequalities is timely.

To this end, we offer the One Powerhouse Framework and the four Regional Blueprints as the first fruits of a new approach to stimulating economic growth and regional convergence. Each document, in its own right, signifies and exemplifies the value of a megaregional approach to regional economic planning and collaborative leadership. But the One Powerhouse Consortium believes that in order to move this exercise into the mainstream, the newgovernment should heed six recommendations.
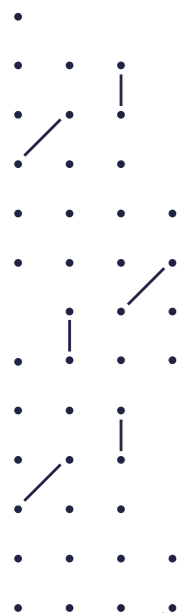
Recommendation

01

Adopting the principles and processes of regional spatial planning

Government must acknowledge and support highly contemporary approaches to spatial planning and recognise their value and importance alongside its current work on industrial strategy, infrastructure planning, local economic development and their component parts.

It must distinguish new approaches to regional spatial planning and collaborative leadership from the tired and often disrespected work of local planning and it must adopt and promote the principles of regional spatial planning set out in this report.

Recommendation

02

Making the move to megaregions

Government must reintroduce the notion of English regions. But unlike previous attempts to impose top-down regional agencies, this time it must build from the bottom-up: supporting the emerging collaborations between regional leaders across the Northern Powerhouse area and the Midlands Engine and encouraging the formation of other 'super-LEP' areas in the South East and the South West.

Recommendation

03

Putting in place a regional investment pipeline and fiscal framework for change

Government must honour and extend its commitment to more generous and equitable expenditure on regional economic development and put in place a framework for fiscal devolution that involves:

⟶   Changes to the Green Book and lifting the cap on capital investment

⟶   Investment allocations made at the scale of the megaregion with full delegation of expenditure to LEP chairs and local leaders

⟶   A well-supported network of regional investment banks

⟶   A clear commitment and pathway to greater fiscal devolution at the regional scale.

Recommendations

04-06

Creating institutional capacity and accountability

Government must provide greater support for emerging institutions at the megaregional scale to build the capacity of megaregional co-ordination agencies like NP11 and Midlands Engine and create appropriate Boards or other bodies to hold such agencies to account.

Government must task and resource the National Infrastructure Commission with responsibility for overseeing and supporting the development of regional spatial strategies and an over-arching UK spatial framework.

Government must introduce four regional ministers, one for each of the English megaregions, whose primary role is to represent the region to government and who will form a committee for regional rebalancing involving the Secretaries of State for BEIS, HCLG and chaired by the Chancellor of the Exchequer.

Annex 1: Technical brief for regional planning partners

The regional blueprints should identify the regional economic structure in terms of assets and networks. Common components might be based upon a) a rigorous analytical framework; b) a series of compelling visions; c) a strategic investment framework; and d) institutional capacity and strategic partnerships for delivery.

1.   Analytical frameworks

It is proposed that each regional blueprint might consider:

→   An assessment of the economic and social structure: including economic hubs and sectors driving growth and strategic networks including transport, utilities and environmental assets

→   Economic interdependencies and synergies identifying the functional economic areas within which labour markets, supply chains and economic ecosystems operate

→   Demographic trends including the identification of particularly vulnerable places and communities[51]

→   Existing and potential aggregate capacity for development including pinch points & underused capacities of infrastructure systems.

2..   Compelling visions

Building on these analyses the blueprints should set out a compelling vision identifying key opportunities for regeneration and for long term economic advance including some or all of the following:

Critical economic assets

→   Existing assets needing sustained investment and development

→   Latent economic assets (eg such as international cultural and educational quarters)

→   New and emerging assets (eg advanced manufacturing clusters or international higher educational and research centres)

→   Key innovation opportunities in science, health and research including robotics and artificial intelligence

→   Opportunities for the relocation especially of governmental assets (eg defence related institutions and bases).

Other major areas for development

→   Projects with significant potential for land value capture where land could be assembled ahead of demand (NB we do not expect regional plans to make statements about local housing demand or land allocation of a more specific nature).

→   Particularly vulnerable communities which should be a long-term focus for safety nets, health and welfare investment

→   Leisure and tourism opportunities and investment foci including new national parks, national historic areas or international heritage assets

→   Major cultural and sporting investments, including facilities broadcasting and the arts.

Areas for major infrastructure development

→   Major projects for transport infrastructure better the regions internally and with each other

→   Major projects for energy generation and the development of environmental capital

→   Major projects for land reclamation and coastal defence.

3.   Strategic investment framework

Each blueprint should make some general consideration of levels of the investment that might be required in order to translate the compelling visions into reality. Clearly this is not the place for any detailed appraisal but, where notional work has been done or where benchmarks might exist, it would be good to have some understanding of the scale or resources that might be required and a sense of the timetable over which they might be deployed.

It would also be useful to understand what funding arrangements, existing or future, and incentives or mechanisms might be helpful to unlock strategic investment.

4.   Institutional capacity and strategic partnerships

Each blueprint will benefit from a discussion of the opportunities to build institutional capacity and related delivery mechanisms in order to secure and accommodate any of the above. This might include:

→   The role of Local Enterprise Partnerships and their local industrial strategies

→   The role of combined, local or other strategic authorities

→   The role of business bodies and/or large employers in the region

→   The role of education, health and other public institutions including environmental agencies

→   The role of civil society organisations.

It is expected that much of the plan will be based upon the research and analysis of these bodies along with their own pre-existing plans. To this extent we would strongly encourage regional plans to de developed and produced in close collaboration with LEPs and other relevant bodies. The One Powerhouse Project Group will identify regional partnership leads to support this collaboration.

We would also encourage technical partners to ensure a level of engagement with – or understanding of – public attitudes and concerns. In some cases, relevant citizens' panels can be used for this purpose.

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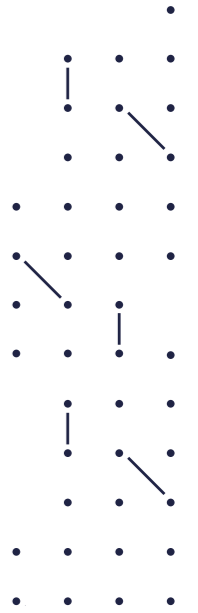
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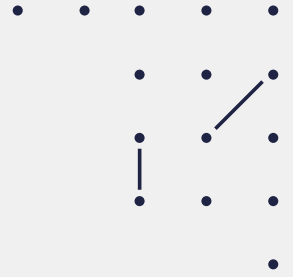
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