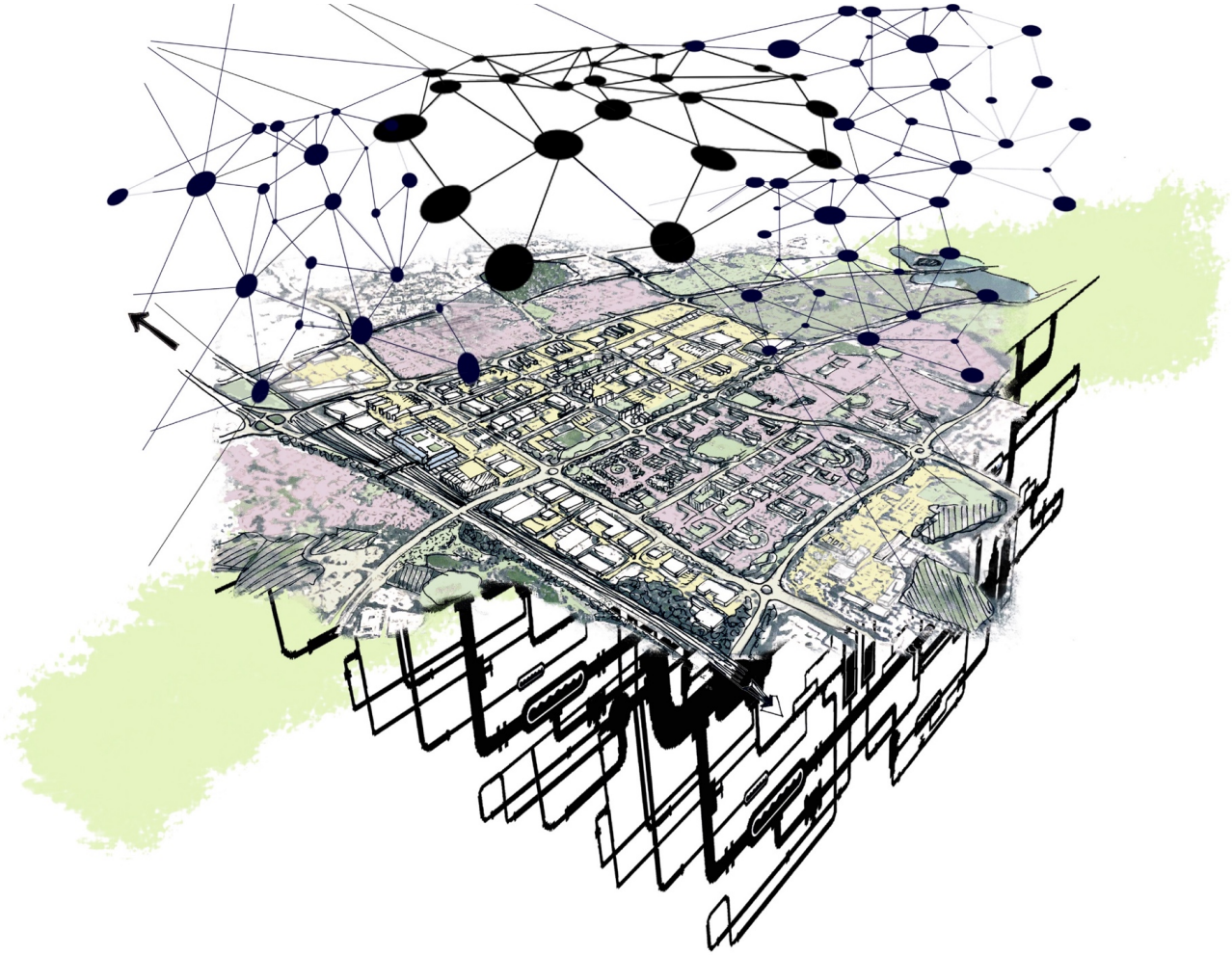
East West Arc
Re-thinking Growth in the London Region



RESEARCH REPORT
November 2018

www.eastwestarc.co.uk

UNIVERSITY OF FORWARD THINKING WESTMINSTER

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Along with the semester-long research and design work of three modules of students' work at the University of Westminster:

Master of Arts in Urban Design 'Master Planning' module
Master of Architecture 'Milton Keynes' design studio
Bachelor of Designing Cities 'Urban Regeneration' design studio

London, November 2018

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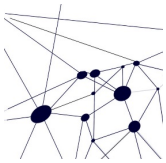

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The East-West Arc, Re-thinking Growth in the London Region

The East-West Arc spans 30 local councils comprising the growth corridor from Oxford through Milton Keynes and Northampton to Cambridge. Its population of over three million is the fastest growing region in the UK.[1] See Figure 1. It forms the northern fringe of the greater London city region to which it is profitably tied, just north of the Green Belt. History, knowledge, technology, agriculture and nature combine in a rich tapestry that has long contributed to the commonwealth of the United Kingdom. In a globalizing world where distances of all kinds are slashed, the Arc is more than a key part of the greater London region. It is a gateway north to the Midlands and the Northern Powerhouse.

The Oxford-Milton Keynes-Cambridge Gateway is one of the most innovative and dynamic areas of the UK. Its potential is recognised by the government as a once-in-a-generation opportunity for the region to become a 'knowledge-intensive growth cluster, competing globally'. Yet that potential is capped by inadequate infrastructure and expensive housing, as well as ecological constraints. As HS2, along with the train and expressway linking Oxford and Cambridge become realities, this vital region can be seen better as a gateway in all directions, thus helping to rebalance growth across the UK. The day-long symposium on the East-West Arc held at the University of Westminster in June of 2018 addressed these challenges from a range of perspectives.

Traversing the Arc from south to north is the proposed high-speed rail line HS2, as well as the planned east-west expressway and east-west rail line linking Oxford to Cambridge through Milton Keynes. These transport links, taken together, are intended to enhance connectivity, mobility and productivity across the region. This will further boost growth while presenting financing and environmental challenges along with its benefits.

The National Infrastructure Commission (NIC) report from 2017, *Partnering for Prosperity: A new deal for the Cambridge-Milton Keynes-Oxford Arc*, set out one vision and approach to infrastructure-led development linked to place making. It also set out new thinking on the housing challenge in the region that is equivalent to a new city the size of Birmingham. Other impacts of growth also need to be addressed, such as last mile connectivity and multi-modal transport, social inequities, land consumption of agriculture and forests, greater flood risk, pollution, and loss of ecological function and integrity of historical region including its villages and towns. These are but a few of the impacts that need to be addressed by an assessment of growth scenarios and their impacts, in advance of the foreseen major infrastructure projects.

Government has long recognised the strategic importance of the Arc, and not just to the region itself, comprised of three recently-formed regional growth boards in Milton Keynes, Oxford and Cambridge. Central to the Arc is its relationship to London, the west of England and the synergies with the Midlands and further north. This greater London Region contains the UK's primary transport hubs and corridors, including the main north-south road and rail routes, together with key international gateways such as Heathrow and Birmingham airports

[1] Cambridge Econometrics and SQW (2016), Cambridge, Milton Keynes, Oxford, Northampton Growth Corridor. Final Report prepared for the National Infrastructure Commission.

and the seaports of Harwich, Felixstowe and the Thames Gateway in the east. While the long history of this greater region has unfolded piece meal, it is now interconnected into a functioning mega-region that needs a coherent strategy founded by cogent analysis.
In this context, it is critical to envision the East-West Arc as gateway that enables in all directions, and not merely as a self-contained sub-region or as a northern fringe of London.

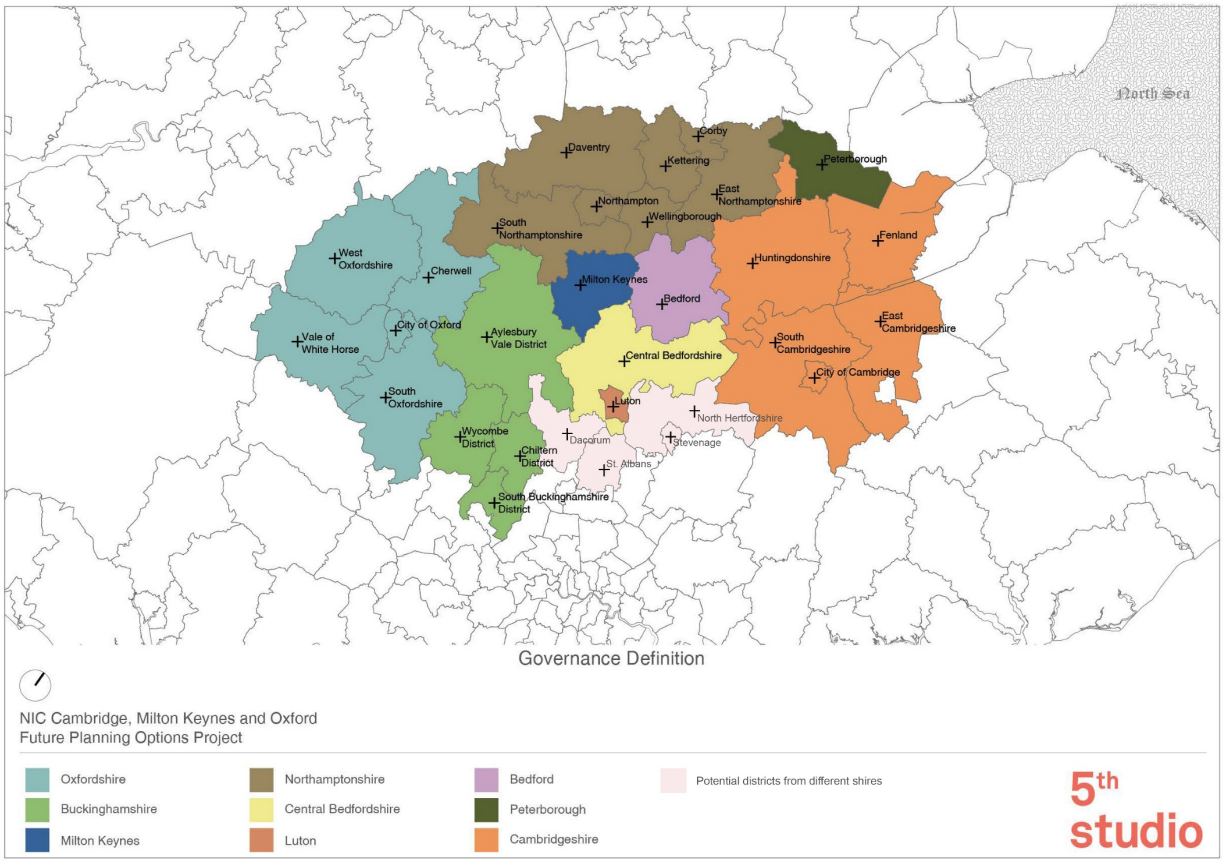

Figure 1 Governance – The existing Local Government bodies across the corridor – potential 30 local authorities. Source: author, modified from 5th Studio – Final Report, Nov. 2017, p.107.

City Regions in the 21st Century

City regions dominate human activity on this planet, increasingly so. Current estimates of the planet's total population of 7.5 billion suggest that between 55% and 85% are urban[2]. In this research project, we investigate their nature, and the nature of their development and outsize domination, in relation to the East West Arc and the Greater London city region. Their impacts of all types are too big and important to ignore. In particular, we question the relation of the East West Arc to its surrounds.

Central to any debate about the future is the very nature of the city region. That is, how we live and therefore who we are. What are they and what will they be? What do we call them? What images do they conjure? Will the Oxford Cambridge initiative be seen as a self-contained corridor or a gateway? What about its links north and to the Midlands and beyond, and south to London? Is there a new geography taking hold?

World-wide, urban agglomerations are expanding to encompass greater areas and populations, and consuming more resources to support them. In the UK as elsewhere, these trends are projected to continue into the indefinite future. Megaregions take the place of old notions of town separate from country, yet the latter persists, both in the popular imaginary and in government arrangements. This has led to the declining roles of regional planning, spatial strategy, planning and infrastructure.

In terms of guiding their futures, our fragmented landscapes and cities can only mirror fragmented governance, which brings back the question of regional planning and its long tradition in UK. Will England resume this tradition of leadership in regional planning nearly a century long, and leadership in transport infrastructure two centuries long? Who are the Patrick Geddes's, Patrick Abercrombies, and Peter Halls of today?

Will current bifurcating trends such as increasing wealth *and* inequality, increasing ecological destruction *yet* improving quality of life for some persist, or can we change? Are city regions too complex to govern? Outstanding questions for research, policy and governance include whether there needs to exist a unitary agency to manage the region and its planning, and what is the nature of the policy to guide its growth and development – such as a spatial strategy or plan. The projected levels of investment in infrastructure, in housing and in business throughout the corridor, with attendant growth in population and jobs mean that coordinating strategies and investments on this scale is critical.

[2] United Nations and European Union estimates

Purpose and Objectives

Investment in infrastructure is vital to sustain both continued competitiveness and overall quality of life. Further, infrastructure plays other crucial roles: to re-balance the economy by supporting growth across the entire region; and to do this sustainably so that the environment does not suffer and less advantaged populations benefit. In this way, opportunity is distributed more evenly while stewarding the environment and resources carefully. A key opportunity to attain this is by linking the Oxbridge Gateway initiative to the Greater London Region. The Government through its budget and industrial and housing strategies, along with the National Infrastructure Commission through its reports, have given strong signals of support to the East-West Arc by promoting strategic growth opportunities that the delivery of infrastructure and housing can unlock.

Encompassing England's economic heartland, the Arc is simultaneously a centre of knowledge and technology innovation, as well as renowned for its environmental qualities and historic places such as the Cotswalds, Oxford and Cambridge. Providing desirable places to live and work is essential to maintaining the region's competitiveness, especially in securing investment and talent.

Given the scale and complexity of the Arc's continuing development, foresight based on analysis at multiple scales across multiple issues is vital. We envisage five key themes that need to be addressed, also acknowledged by Government, councils and the National Infrastructure Commission. They and the questions that they address are:

1. Vision and Strategy

Realising the region's potential will require a clear and integrated vision supported by a coherent integrated delivery strategy that will involve new collaborations between public and private sectors.

- What is the nature of the city region? Destination or gateway? Connected or autonomous? Equitable or polarized? Cohesive or fragmented?
- What is / are the defining images that portray the region?
- Whose region is it? Who pays, who benefits, who gets to live and work there?
- What is the best way for vetting competing scenarios for the future? What evaluation criteria should be applied, and by whom?
- How to integrate the vision and spatial strategy into existing national strategies, policies and statutory plans?
- Does a stand-alone spatial strategy or strategic plan for the region add value and coherence that individual agency and LEP / council plans cannot?

2. Infrastructure and Development

Building this region will also entail re-thinking traditional growth models, especially if projected infrastructure networks are to be developed and prospective housing demands are to be met.

- How do various visions, scenarios and strategies compare with the National Industrial Strategy? The National Housing Strategy?
- How to align the East-West rail line, the East-West expressway and HS2 with each other and the communities that they serve? Shared rights of way?
- How to best plan so that infrastructure networks of all types are integrated as seamlessly as possible into both the existing urban fabric and new growth?
- How to envision infrastructure as multi-layered networks comprising roads, rails and houses but also nature, agriculture and water; to envisage more holistic and healthy places that realise the best potential for the region?

3. Shared Value and Sustainability

Often urban development occurs that is guided by limited criteria, such as regulatory compliance or profit. We seek to establish the norms that compel shared value that go beyond balancing 'competing' interests to synergize them to gain multiple benefits for all concerned.

- What are the opportunities to create and share value among all sectors – public, private, and not for profit?
- How to measure and account for non-commensurate types of value? For example, monetary and non-monetary?
- How to reconcile the economy and the environment so that they are mutually supportive rather than seen as trade-offs?

4. Leading and Governing

Strong yet flexible leadership of place and competitiveness that addresses long term challenges and opportunities through short term, incremental steps responsive to current and foreseeable political and economic contexts. This entails the redesign of institutions for suitable governance structures and processes with sufficient resources and flexibilities to deliver an integrated strategy across the region.

- Who governs?
- What are the arrangements and relations among the polities comprising the region? Centralized, decentralized, network, composite?
- How are places and their governance mechanisms elaborated? How are the region, sub-regions, local councils and their collaborations articulated?
- How to evaluate how the benefits and costs are distributed fairly by re-aligning government institutions?
- Develop processes and establish collaborative consortia to conduct via broad consensus the analysis, strategy, and delivery for the corridor linked with the greater London region.

5. Finance and Delivery

There exists the need to build investor and voter confidence in order to create the right investment structures to attain balanced and fair public and private sector

involvement to forward fund infrastructure planning and development that balances economic, social and environmental value.

- How to align individual projects, whether housing estates or infrastructure facilities, with regional and national strategies on the one hand, and local priorities and plans on the other?
- How will the established the East West Rail company undertake alignment – right of way and institutional – with the proposed East-West Expressway and the locales that they serve?
- What are the best partnership and institutional arrangement models to enable investment that is effective yet equitable for all parties?
- How best to engage strategic development and investment partners such as key landholders such as universities, councils, Ministry of Defence, National Rail, etc.?

The June 2018 East West Arc Symposium

On June 19, 2018, the University of Westminster's Faculty of Architecture and the Built Environment hosted a day-long symposium on the East West Arc. It was attended by one hundred leaders and interested persons from across London and the Oxford-Cambridge corridor region, representing a wide range of sectors, levels of government, professions, ages and ethnicities.

The symposium addressed key issues of the future of the region and its links to London and beyond, as well as its governance. There were three provocative panels in the morning session, representing a rich range of interests and places. One of the panels included presentations by student from three design studios that completed design and planning projects on the corridor. These students came from three different courses in Westminster's Faculty of Architecture and the Built Environment, reflecting the multi-disciplinary perspectives engendered in teaching and research. In addition, there were four interactive workshops after lunch. These workshops developed and interrogated robust ideas to guide the framework for future steps to design and deliver the Oxford-Cambridge corridor as a viable, sustainable place long into the future. The panels and workshops are described below.

Perhaps most importantly, befitting the role of the university in society, this event established a Forum on the London City Region in which dialogue can occur on the East-West Arc and other contemporary development issues. Establishing the University of Westminster as a forum for future dialogue fulfils an important part of our university's mission, which is to advance knowledge and debate on important questions facing British society. The symposium accomplished this by providing a neutral setting to discuss the evidence and ideas impartially. In a time when particularised interests play an outsize role in determining our fates, this function of the forum takes on increased importance as it continues a long-standing and highly prized role of academia in advancing knowledge for the greater good.

The symposium was the first in an ongoing series of events of the London City Region Forum. The University of Westminster is planning a traveling set of symposia in Oxford, Milton Keynes and Cambridge. These events are multi-sectoral, multi-disciplinary, free and open to the public. As a public university in collaboration with other public institutions and sectors, we provide an open, informed, reasoned, and impartial while passionate public forum for dialogue and debate.

Morning Panels and Presentations

Opening Address

Sadie Morgan Professor at the University of Westminster
Commissioner for the National Infrastructure Commission
Director at dRMM Architects

Panel 1 - Futures of the City Region

- Markus Appenzeller, MLA+ Partner / Head of Urbanism,
  Academy of Architecture, Amsterdam
- John Acres, President of the Royal Town Planning Institute RTPI
- Councillor Lewis Herbert, Chair of Greater Cambridge Partners,
  Chair Fast Growth Cities Network
- Rachel Fisher, Deputy Director, Cities and Local Growth Unit, Ministry of Housing,
  Communities & Local Government
- Professor Michael Neuman, University of Westminster, moderator

Today, debates surrounding the city region are more complex than ever. They are multi-disciplinary, multi-sectoral and multi-scalar; and they are exploding in size and complexity. When we considered metropolises and city regions in the past, the focus was more internal, on trade, commuting and capital flows between the inner core and the surrounding hinterland. The impetus today responds to globalization, rapid urbanization, neo-liberalisation, climate change, migration and other factors. Do we have the means to grasp and deal with these new realities?

Understanding the complexity of the contemporary city region and the forces that shape it has proven too much a challenge for a single mind or discipline – hence a range of experts on the panel. They examined this new logic in relation to the Oxford-Milton Keynes-Cambridge corridor and its links to London in ways that could inform its planning and governing. This regional challenge will require our best thinking and cooperation.

The presentations highlighted the need of regional and sub-regional strategic planning, although the plans were abandoned. Existing decision processes are not democratic or transparent, increasing the tensions between authorities. The Arc could be an opportunity to bring holistic long-term planning with a fresh approach, based on an interactive combination of bottom-up and top-down initiatives. The example of the Netherlands is revealing: the liberalization and decentralization of the spatial development, without a common vision, brought mitigated results, and led the authorities to re-consider spatial planning.

From the government perspective, to tackle this issue and build on a common vision and the goals of housing, economic growth & investment and transport, an across-department programme has been developed ‘to ensure decisions on connectivity, place-making and economic growth are made in a joined-up way’. The options to achieve the one million new homes are still under exploration. One of the major challenges lies in tackling un-affordability across the region, which require a specific plan addressing different levels of affordability

among home buyers, renters and social renters; and encompassing land value capture. Growth needs to be more sustainable everywhere. A strategic spatial framework among all the different shires is also needed, to avoid the exclusive focus on Oxford-Cambridge corridor. The discussion went further in the audience, questioning the weight of London as a player for this region and the issue of boundaries for many of the smaller localities. The smaller councils should be part of the overall discussion and be more involved in the process.

Student Presentations, University of Westminster

- Olga Ivanova, Master of Arts in Urban Design
- Martin Miranda, Bachelor Designing Cities
- Paresh Parmar, Master of Architecture

During this spring academic term, three different student modules worked on the Oxford-Milton Keynes-Cambridge corridor. Their work was presented by the students. They worked at three scales simultaneously – the greater city region, the corridor sub-region, and local – across a wide range of factors. Their work is independent, inspired, informative and relevant; full of bright ideas and fresh thinking.

The depth of their presentations guided the audience toward the different possibilities of connectivity in the corridor, apart from transport. Their work was at three scales simultaneously: local, corridor, and London city region. The students mentioned the lack of linkages between academic and enterprise sectors, which seem to be rather competing than collaborating from their point of view. How to build a partnership model for governance, comprising several governments levels, into a coherent entity? Which identity for this region?

Panel 2 – Governing and Delivering the City Region

- Professor Cecilia Wong, University of Manchester
- Adrian Colwell Executive Director of Place and Growth,
  Cherwell and South Northamptonshire Councils
- Peter Sharratt, WSP and Professor, University of Westminster
- Professor Johan Woltjer, University of Westminster, moderator

A key governance imperative for the 21st century is long term sustainability and growth in city regions. Sustainability, however, is often overshadowed by economic development and competitiveness. An underlying concern is about the long-term consequences of prevailing settlement patterns and the “lock-in” they signify in terms of unsustainable practices. “Lock-in” because these patterns are instantiated in institutionalized governance structures and practices. Government currently lack a coherent framework and supportive metrics for promoting sustainability and growth at the city-region scale.

City region governance is complicated by many factors, not the least of which being that they lack clear agency. Another concern is the extent to which city regions can “learn” to govern themselves, to develop sustainably, to grow equitably, and so on. The “learning region” has direct implications for the issues that the corridor faces. We believe that If we are to be

prosperous and sustainable in the future, changing city region governance practices invites radical rethinking.

The question of 'creating value across a complex eco-system', and thus managing complexity between different stakeholders, from supra-national entities to the public & private sectors and the civil society, can be understood as a design problem of a strategic nature. How to significantly influence the move toward an integrated approach with the weight of a system un-adapted to transformational changes? At a smaller scale, the example of policy-driven growth for Cherwell was presented, as a corollary to the complexity of governance in a corridor comprised of 22-30 local authorities, several LEPs, growth deals, overlapping housing and job areas, etc. From a larger perspective, recalling the competitive multi-city regionalism in the USA, and the Chinese plan to have 19 megacity regional clusters by 2020 – involving several mega clusters larger than Switzerland – provided interesting insights. It led the discussion to the fact that governance should reach a wider scale consensus about the planning and development of the Arc. It is expected that the Arc shall relieve growth pressure on London, and also capture massive investment and infrastructure over the next generations, from which other parts of UK could also benefit from such emphasis. Galvanised by the debate, the morning session concluded on the global scale and global competitiveness, other critical points that have failed to be addressed so far.

Afternoon Workshops

Notes capturing the four workshops' discussions can be found in the appendix.

Vision Michael Neuman and Krystallia Kamvasinou, facilitators

This workshop explored what the Oxford – Milton Keynes – Cambridge corridor region should / could look like in the future. Is it a gateway? A region unto itself? An integral part of the greater London city region? What forces impact on its future? Is there only one possible future? Is it a 'natural' geography? Or is it a new, largely human geography? Can it be integrated and whole, or is it destined to remain fragmented? How can we, as individuals, organisations and governments, actively shape this dynamic and complex place? Concretely, what can we as individuals and as government agencies do to design a vision and bring it into being?

The workshop advanced the discussion about the meaning and value of having a vision and identity for the local communities in the corridor. Additionally, the equal involvement and representation of all stakeholders in the development of this process is fundamental for the sense of ownership of the vision. A single vision-image or multiple images encompassing a diversity of visions is a powerful way to communicate new ideas, to which people can relate.

The East-West-Arc has no identity in itself and therefore the regional redevelopment project lack coherency across the multiple local governments. A good vision is a vehicle of identity, which embraces tangible and intangible components. A good vision is one that people can relate to, and can be shared, representing a common identity. Currently, residents do not have a specific image or identity to relate to in regards to this region. Although one single

vision is a lot to pin on a place, if this vision is realistic and achievable, then it should represent the single ambition of the region. This ambition can help to shape and align the future short and long term plans of the different local authorities.

The workshop did not end with a single conclusion. A concept was sketched out that presented an idea to extend the catchment areas between the existing smaller and larger cities by creating attractions that can offer healthy and affordable quality of life. This could potentially encourage inhabitants to move in new developments.

Leadership and Governance Johan Woltjer and Giulio Verdini, facilitators

This workshop addressed the questions of whether existing institutional arrangements are sufficient to plan, design, finance, deliver, and govern over the long term the complex and interrelated corridor initiative. With up to 30 councils, 10 shires, government agencies, and other local authorities; what are the governance structures and processes for interaction and decision making that can best guide this region over the next decades? What laws, finance mechanisms, and contractual arrangements amongst sectors and actors need to be adopted or amended? Are there better, not-yet-devised means that reconcile interests and marshal resources? In the current absence of regional planning and government, what structural arrangement best coordinates and aligns this plethora of entities: distributed, bottom-up, or unitary approaches? What types of processes of collaboration and coordination are needed to reach difficult consensus and agreement across the entire corridor by the parties?

Regional strategy formation and execution in fast-growing places puts a premium on timing, yet coordinated strategy development and implementation across this scale takes a significant investment in time, talent and resources for it to be done properly and effectively. Are the key players, especially national and local governments, able to marshal these resources and stay focused over the time required? The obstacles and opposition to such an endeavour cannot be taken lightly, and in fact need to be included in the structures and processes in order to ensure outcomes that as many as possible are satisfied with.

Infrastructure-Led Growth Cecilia Wong and Roudaina Alkhani, facilitators

Demand for affordable housing and sustainable mobility in the Arc both outpace supply by large margins. These factors combine to hinder growth and sustainability. These factors represent a high risk for the long-term competitiveness and liveability in the Arc. This workshop explored the possible levers for building a comprehensive approach that integrates housing, jobs, road-rail and blue-green infrastructures into a coherent growth strategy. What types of infrastructure best accommodate growth, where should they be located and how should they be interconnected? How to balance local, regional and national interests while shaping a regional vision for in which infrastructure delivers prosperity and sustainability?

The workshop highlighted major concerns, which started by the way infrastructure seems to be understood in the recent studies and debates, with a main focus on transport-housing and the emphasis on the housing and jobs as the main drivers of growth. Some planners emphasized what they believe is ‘an obsession with housing numbers’, with no control on the proper development made by private sectors, who may elude the issues of affordability and

services. These are corroborated by the worrying fact that no land-use capacity assessment studies have been carried out so far to support the road-rail infrastructure plans. Such as assessment involves the natural, agricultural, historical and cultural land uses for a multi-layered and holistic approach.

The discussion attempted to take the measure of previous mistakes, such as the South East London plan, where communities opposed development, natural protected areas were harder to cross, vehicular usage increased significantly, and agricultural lands were simultaneously rising in value and fragmented by infrastructures and development, leading to reduced long-term viability of the food system. These issues led to questions such as are we building for the Arc or the Arc is made for the building sector? Which infrastructure are best suited to sustain long-term employment?

Lastly, the discussion highlighted an oversight in the Arc debate, namely Brexit. As massive national investments are planned for the coming decades, a criticism concerned the equity of future funds for a region, which is already very wealthy, while other parts of United Kingdom are suffering from long-term deprivation.

Finance and Investment Jim Coleman and Megan Sharkey, facilitators

As highlighted by recent studies commissioned by the National Infrastructure Commission, the Arc contains high growth cities and renowned universities as well as nine of the UK's top 100 high growth tech firms. This workshop addressed the key issues that affect how to pay for, operate and maintain the infrastructures and housing stock driving this activity. The Arc's singular economic geography and future growth potential calls for innovation in finance so that all sectors contribute equitably in the costs and impacts of growth. How to balance public and private sector so that investment across the Arc is viable over the long term? How to secure life-cycle financing yet mitigate risk sustainably?

As always, the issues of finance and delivery are central to the project and the Arc's long-term success. The typical question regarding how things get paid for becomes increasingly complex due to the scale of the development and its diverse range of stakeholders. These matters worked to stimulate interesting conversation among participants. Upfront costs were highlighted as a major concern, noting the importance of infrastructure-led design, but the limits of available financing and the familiar "chicken and egg" conundrum dog debates and action.

In addition, participants discussed packaging infrastructure holistically across the region instead of the usual separation and funding of individual infrastructure projects such as HS2, east-west expressway, east-west rail line and active transport. Throughout the discussion and to rectify concerns, the importance of land value capture and a variety of other options to pay for infrastructure were debated. Although no definitive solution was reached, the group acknowledged that the current arrangement creates distortions. The discussion also emphasized that new means of financing projects necessitate new approaches to the governance of infrastructure projects and East-West Arc region itself. The findings from this workshop further support the importance of developing a regional strategy that balances the local and regional scales with the socio-economic diversity of the region.

EARLYWARN The East West Arc Research and Development Network

Following up the June Symposium, a research consortium and interconnected research projects that study the East-West Arc are in the process of formation and development. The questions and issues raised by the Symposium, and the NIC's overall vision that is now be taken up by government departments, form a starting point for the network of entities that comprise the consortium, that we denote as the East-West Arch Research and Development Network – EARLYWARN.

The EARLYWARN proposal is designed to provide the analytical tools needed to assess the beneficial and harmful impacts of the explosive growth occurring and projected to continue to occur over the next thirty years in the Oxford Cambridge Corridor, denominated the East West Arc by the National Infrastructure Commission (NIC, 2017). These impacts include soaring jobs and economic growth, housing costs, climate change, environmental pollution, traffic congestion, and acute and chronic infrastructure stressing; just to mention the most prominent. Combined with scenario development and assessment, the research intent is to develop and apply advanced and integrated data and analytics to determine the most suitable ***places*** to develop in the future, including infrastructure to support them.

The purpose of this research and development network is to provide a forum and an arena to conduct research, along with policy development and its analysis, that provide sound evidence for dialogue, debate and decisions about the future trajectory of the greater Oxford-Cambridge growth region. This region, up to 30 local councils across 11 shires, is projected to grow by one to two million persons and by 7000,000 to one million jobs by 2050, depending on scenario estimates (Cambridge Econometrics and SQW, 2016, National Infrastructure Commission, 2017). Accordingly, the government through its National Infrastructure Commission since 2016 has been assessing this situation. Now that it has concluded its work on the Cambridge-Milton Keynes-Oxford corridor, it has passed further development of the concepts and their execution to government departments and localities.

Yet there is no single entity or consortium that has been designated or that has emerged to cope with all the data and activities that are necessitated by such a large region undergoing rapid and massive growth. This has been made worse by the void in regional planning and policy by the government's decision in 2011 to abolish regional planning and policy from its governance arsenal. This has left a void in which the markets and individual agents act without complete knowledge and ability to coordinate.

Part of the mission of the network is to develop the groundwork for the institutional framework for planning and decision making in the region. Initial work entails defining the geographic extent of the region and what factors need to be assessed to govern its growth, along with which actors need to be engaged in research and development decision making.
Another part of the mission is to conduct a rigorous assessment of all the pertinent factors in order to guide the area's growth and development. This exercise provides baseline data to develop and then to assess several growth scenarios, which will be conducted by a consortium. In sum, this phase of the research would constitute an economic and spatial planning effort to determine the long-term suitability and sustainability of the types of economic development and population growth expected in this vital region.

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Appendix

Notes of the workshops' discussions

Vision workshop

Participants:
Margarita Andreeva, Master student, University of Westminster
Markus Appenzeller, Partner at MLA+
Aya Dibsi, Architect from Hungary, residential projects and space making
Irena Itova, PhD student, University of Westminster
Olga Ivanova, Master student, University of Westminster
Dr. Krystallia Kamvasinou, senior lecturer, University of Westminster
Lea Marin, Master student in International HRM
Martin Miranda, Bachelor student, University of Westminster
Ugochukwu Njoku, Construction student, College of North-West London
Allan Rankine, Milton Keynes Councillor, Bletchley Park Ward
Stuart Turner, Practitioner of Architecture and Urbanism
Dora Versisugi, IT developer, passive house consultant, PM building passive housing
Claire Warburton, Principal Adviser, Green Infrastructure, Natural England
Moderator:
Prof. Michael Neuman, University of Westminster

Discussion:

Q: The group was asked to start identifying what makes a vision? What constitutes a good vision for a region like Ox-MK-Cam? Is it more than just a corridor?
A: The group starts by answering it is a combination of good ideas. The vision starts by generating an idea or a concept. A vision needs to represent ideas that can be reached – a goal expressed by an image.

Q: This helps define what a vision is, but the question is what constitutes a good vision?
A: A concept that is overarching and including the residents and industry involved to build it together. A shared vision, which implies some kind of process or method to develop a shared vision.

Q: What other components and aspects are constituents of a good vision?
A: Something that is ambitious but reachable. It needs to be place specific.

Q: What criteria should a good vision respond to?
A: People need to be in the core for a good vision because we are planning for people. A good vision needs to understand its context and where it sits within the wider context.

Q: What could we say about the vision for the Arc as it exists now? Does a current vision exist or does it still need to be developed?
A: The vision needs to make people engaged and excited. What now exists about the vision of the Arc is for it to became the UK equivalent to the Silicon Valley. An innovative centre utilising some of the most prestigious British assets at the moment -- Oxford and Cambridge universities and the fastest growing city in Britain, Milton Keynes. Combining them could create holistic view of the whole area and its international potential.

Q: Is a potential enough to sustain a vision, or is there something else that can be used as a geographical position of a territory in order to capture its identity? Sometimes a name may be part of the identity, such the example of the Ruhr region in Germany.
A: The name has to be unique to stand out to make people to talk about it and attract attention and that is how the vision develops from idea into something interesting.

Q: Does a vision have to have a visual reference? Since we are talking about communication, images, people are always challenged by the idea—does it have to have a visual reference, something strong and powerful to allow it to communicate, to allow the idea to be communicated? Or is the text in the written statement sufficient within itself? Or maybe it is both?
A: There were many ideas but nobody is talking about communicating the vision of the community that is living there. We should not talk from top-down perspective alone. We need to understand and include the local identity.

A: The process of developing a vision commenced by the NIC had included stakeholder representation from the statutory authorities, commercial and business parties and community foundations which established a network on organized basis who has placed its representation in the discussion around the corridor. This network exerts a strong influence on MP Iain Stewart, yet, this group also had the feeling that they were not always being heard and represented by other parties.

A: The old transport route in the past was via Bletchley. The Varsity rail line was servicing in the past the connection between Oxford and Cambridge even before the existence of Milton Keynes. It was a connection of the local communities between both cities, and the community members acknowledge this connection and appreciates its value. This connection can be reactivated as an asset but with new meaning, a process that can be part of the vision.

Q: Does a vision need to be seen? Images are not only for representation. When you change your mind about something, what do you really change? You change your mental image in your mind. Cognitive sciences have shown that this is the way the human mind works, around images. What we are talking about in this case is complete transformation of a region, which involves existing laws etc. The role of an image can be used to transform thinking. What could the image of this region be?
A: Good lifestyle. Using transport infrastructure and housing as the starting point is not the right way to go. This is the vision laid out by the government; the motorway and the fast train line are proposed in insolation with little relationship to the surroundings. Although people appreciate the provision of more and affordable housing, it can have a negative image. Transport can have a positive image for people because it shows a possibility of movements. However even transport is not always a good starting point because while transport provides mobility, yet accessibility is more important. Cars in city centres are not a political priority any longer, but alternative modes of mobility such as bicycles. Could it be that this a corridor that is not only based on rails and roads?

Q: Is there a concept that drives this region into the future? Is it a gateway, is it a corridor, a diamond, a triangle?
A: Because of the position / location of the corridor with respect to the rest of southern England, it is a heart. It could be the centre and the engine of the region. The key would be to link it to the geographic territory in some way that can build better relationships among cities and towns in the region.

Ideas to consider:

* The Randstad – ring city – is an image in the Netherlands that has been circulating for over three decades, but it is also a real territory. Any image is just abstraction from reality but also very powerful. Any image, or name, or identity, has to link to the territorial reality to be most effective.
* Oxford and Cambridge is known to be an academic location. We should use the actual history of this region to come up with an image. Often, when we think of places, we think of the history behind them and what they are known for. This region is the knowledge region of England. We can keep that historical tradition, but we do not want to discourage other cities and towns around London by implying that knowledge is only in Oxbridge.

* The Fourth Industrial revolution is all about data and technology. Maybe the brain-image can represent being in the front of the new industrial revolution. Nevertheless, in terms of the heart-image, this territory is already known as the heartland of England. This entire region as a hearth, as an economic centre of England. Because it is very complex, it can be a combination of images.

* In Ekaterinburg, Russia, there is a strategic project for developing the vision of Ekaterinburg for the next 50 years, and the team did not try to imagine what the city is. Instead, they had interviewed people on the streets and asked them to write down the idea about the image of their city. They wrote down the ideas and published them in a book. At the end, the authorities could not conclude on any single one of the images, and decided to call Ekaterinburg the city of 100 ideas.

* You need a vision that captures hearts and minds combined. The Arc is about innovation and knowledge, where we came from, where we are and where we are going. How are you responding to the cutting edge, to be just a little bit ahead of the rest of the world? Maybe, the ambition does not have to be attainable, but to have one that will drive aspirations.

* One challenge in the Arc is about connecting cities. For example, are the existing airports in the Arc region sufficient to connect to the rest of the world? To compete, for example, with Silicon Valley, this region would need a significant airport, as Gatwick and Heathrow are far.

* Short term gains-long term vision. Short-term gains have to be smaller and immediately visible, people need to fill them immediately. We should not wait for twenty years for the train line to be completed. We should do something in the short term to connect the cities, with a special bus-line.

* The cities in the Arc at the moment are competing for the attention of London and Birmingham. Instead of competing, how do they collaborate with each other instead?

* At this moment, the governments are employing an “If you build, they will come” mentality. It is not a coherent vision. What is missing from the government vision are two fundamental aspects. One is connecting it beyond the corridor towards London and towards the North. Another key aspect is sustainability.

* Silicon Valley is a powerful comparison or metaphor, but in a way, that is yesterday’s vision. The future may not necessarily be silicon-based and may not be linear. Research conducted on the strengths behind Silicon Valley found that the interconnections, the social networks and the nature of the networking among firms and employees, had much to do with face-to-face interactions and sharing, with transport networks and digital connectivity in supporting roles.

* By connecting Oxford, Cambridge and Milton Keynes by transport, it is better to connect places by creating connection by attractions that will inspire people travel to other locations. Maybe it could be green areas in-between these places that attract people and it adds to the sustainability element.

* The nerves that connect all these places together is the entire infrastructure. This replicates the synapses of the neural network as a process, where the transformation of information is connecting all the places together. Like in a neural network, one neuron activates another by synapses -- electrical discharge. Maybe the corridor can be the gateway from the North to the South to unlock economic potential. Maybe this region is defined by these knowledge connections, the knowledge networks.

* Maybe this region can be identified as a different metropolis than the London metro region. What we have not addressed yet is how connected is this region to the London Metropolitan Region. There are 104 trains a day from London to Milton Keynes per day. About the same to Oxford and Cambridge.

Q: What is the source of the image of the region, the image, the term of the region? The planner of the future is not a single person? Or a process comprised of a collection of people?
A: To a degree (strength and a weakness) the image can be attractive to a politician, economist. However, if a resident is living in one of the areas, s/he would want to be more relatable to the inhabitants, the image should project the local identity. An overarching vision may be a bit too difficult to be appealing to all types of people. It is not about single identity, but a vision that portrays multiple identities.

A: We should create boundaries based on social patterns, yet we can always go beyond these boundaries. Instead talking of housing, we have to talk about wellbeing and quality of living and instead of talking about transport infrastructure, we need to talk about mobility and connectivity.

A; The GDP count should be replaced by quality of living indicators. If you use this, you will end up with a happy place where people want to live. For example, San Francisco is driving families out because of non-affordable lifestyle. London and some other cities are like that as well. The middle and working classes cannot afford to live in these types of attractive cities any longer.

A: The common image of Milton Keynes is green open space, interconnected the grid road system, that was a strong statement. The networked infrastructure has become a symbol of that city that people are proud of, they relate to it. Nevertheless, how does this image fit into the strategic vision of the future of Milton Keynes?

Q: What makes Oxford and Cambridge so attractive that scientists want to go there?
A: Because these cities offer many “soft” factors such as human scale and a “small houses feeling” which play big roles in the quality of life. These soft factors need to play much bigger role in creating the image of the city.

Summary

We did not have a single conclusion. On the idea of a single image or vision for the region, it is a lot to pin on a place. That is not to say that it should not have those things, but it is an ambitious set of criteria for a good vision, and it should be that way. The East-West-Arc as a term has no identity. There is no currently identifiable “brand”. A good vision is a vision that people can relate to it, it has to be shared. Identity is something that people need to identify with and therefore it has to be concrete, specific.

Leadership and Governance

Participants:
Giulio Verdini, University of Westminster
Sabina Cioboata, University of Westminster
Megan Sharkey, University of Westminster
Neil Border, Head of Policy, South East Strategic Leaders
Marco Trombetta, Cambridge-Milton Keynes-Oxford Programme Team, Ministry of Housing, Communities and Local Government)
post-doctoral researcher, London University
Moderator:
Prof. Johan Woltjer, University of Westminster

Discussion:

Q: How does the existing NIC proposal translate into leadership and governance?

A: The existing NIC proposal – partnerships (enterprise); large government commitment – expressway and express rails
A: Region which is seeking opportunities already defined by the NIC
A: Focus on just housing? Need to look at green and eco regions
A: Regionalism – Do we have to create it? Who is the 'we'? What could be a convincing narrative which people can accept and adopt?
A: How can all this translate into some design strategies?

Q: Are the councils, growth boards, or some other regional structures the leaders of the NIC regional proposal?
A: Work with counties not just councils – Milton Keynes, Buckinghamshire, Oxfordshire, Cambridgeshire, etc.
A: Huge mishmash: growth board makes recommendations that get approved by local authorities, but they do not have a binding role.
A: Unitary authorities like Luton (one layer of government)
A: Economic heartland – shadow subnational transport body that doesn't have any power or budget, but hopefully it can become a large decision making body
A: Nothing really approaching a regional governance structure exists or is envisioned
A: Without a regional governance structure, it will be difficult to accomplish a vision which is as ambitious as this.
A: Without a structure, development in the future may not be part of a coherent strategy, instead it will be disjointed.

Q: How does this translate into governance?
A: Will not have same capacities for governance and action in all counties
A: With a national body dictating everything, one can miss nuances from bottom-up
A: Not proponent of adding new level of government but instead a regional body for planning

Q: What is Whitewall's role?
A: Government doesn't want to use word 'regional'.
A: If three existing growth boards (LEPs) come together for setting up a framework to use section 106 strategically – using 'operational funding for capital investment' – it could provide a structure. But currently, Oxfordshire can't make that decision.
A: Leadership versus governance – who provides leadership and how is it translated into governance?

Q: What do we want to see out of leadership and governance?
A: Multiple layers or levels of government: In Australia, there is a system to ensure that the developer's contribution facilitates development in the area but also fit into the wider government's strategy, by providing the infrastructures that the government wants to fund.

A: Best bet in the UK: use SITs
Three layers: top to bottom governance; local councils have to get out some money:
1. Bottom layer Local (Section 106)
2. SIT (sub-regional – shire level: the shires would need to agree) [set up a fund = pool them, with a certain percentage funding different things; for example, transport oriented development]
3. National

A: Consultation process (large-scale): some of the elements for that are already there, although it is not binding yet
A: Councils understanding what they need to deliver but still there is the issue of leadership – who do we want to be the leaders of the regional enterprise?
A: would be better to gather together and reconcile in some process all local plans for corridor, instead of arithmetically adding all the housing numbers that are projected. Do we bring private sector in?
A: Supply of 600.000 housing units is done largely by the private sector in any case.

Q: The corridor as the next dormitory for London where people can find cheaper housing – is this a good thing? How can we calculate costs, and how can we reduce costs?

A: We need a sustainable strategy for the future – thinking holistically to have proper infrastructures.
A: Market solution: is part of the problem, we've had them but now they're not delivering healthy and sustainable places on multiple scales. Cul-de-sac suburb?

Q: But what if you have no leadership and you need market solution?
A: If you want the market solution that's fine, but how do we ensure that what the private sector provides is what is needed, what is relevant, what is sustainable, etc.?
A: According to developers they are providing what is needed, yet in practice they only provide the residential or commercial development without the needed services. Use of the buzzword 'Viability'.
A: Depending on what visions there are, we are all making parallel visions.
A: Unfortunately, there is no leverage to buy land.

Q: How can growth deals work?
A: "Growth deal": Government give localities money to help with capacity building to write a statutory plan – which can be built into a framework for a Joint Strategic Statutory Plan (JSSP).
A: How can this government structure provide a framework but still support markets? How can it not be too cumbersome? Which one overrides which? Thinking about legalities amongst governments.
A: How to ensure that a Local Plan conforms with the JSSP?
A: If something is in accord with Local Plan, it should be in accord with JSSP.
A: Leadership: JSSP – gives big strategic physical framework.
A: Want local leaders to be accountable (roles include facilitators, supporters, enforcers).
We had more questions than answers…

Q: How should this be funded? What is the mechanism for financial distribution?
A: Financial issues: a big, broad corridor to pay for – what is the mechanism for financial distribution?
A: Problem: in UK things are funded very specifically, policy and budgeting not very integrated.
A: Segmented funding is a bad way for regional planning and development.

A: Juggling with spending money in a specific order because it has to be spent.
A: Cost can be shared / fungible across different items: for example, WSP management planning: if I have a budget and if I saved money for one item, then it can go into something else.
A: Get away from a system of 'you need to spend the money on X even if you don't need X. Remember that the community has to be part of this deal as well.
A: Combining profitable with non-profitable (regional planning). Ups and downs in the package

Q: What about infrastructure maintenance?
A: Some money should also be used for maintenance. Huge landscape with very complex features. What will you do with the pressure incurred by adding 1 million new houses?
A: Is there a new profit-sharing approach that can help with maintenance? Making money as well – do you need a governance structure for that? Who would control that? Individual councils?
A: Council tax, other forms of local taxation. Some councils used bond financing, others used a method in which developer puts money into a pot. Seek control from something that generates revenues (e.g., a park).
A: In UK: the focus is on land development. Public acquisition of land – "land banking" for future use
A: could generate funds which can be later used, as well as save land acquisition costs in the future. Referencing the Chinese model of land leasing, Scandinavian models of land banking.
A: Using plus from one development to fill in minus of another one.

Other ideas:

* New Town strategy – maybe the only strategy which is top-down but might be regionally sustainable. Also, a new town strategy can provide a large numbers of housing units. 20-50.000 people in a new town can provide a good quality of life if you have good transport.
* Bottom-up approach instead? But, to be realistic, it is unlikely that this will happen. Lots of constraints in terms of land use. To make a bottom-up approach viable, this is where quality regional framework comes in.
* "Barnyard entrepreneurship": high tech, because it's affordable, high performance engineering. Fostering entrepreneurship. Shifting products to connect and compete globally.
* New Towns with regional thinking – but with JSSP you will subsume some of environment layers and get rid of others. How can Local Plans and layers be 'melted together' instead of adding new layer(s)? This needs to be kept in mind when a JSSP is developed.
* Will engage with some stakeholders, for example even NGO groups – discussions will take place from now on.
* Inter-disciplinary and inter-governmental dynamics: cross-impacting but not taking credit if one department impacts positively on another.

Summary

Leadership: how to connect top and bottom. Need knowledgeable and capable leadership on the growth boards. Link strategy, policy and budget, so that funding encompasses a holistic set of projects. The Oxford growth board is in the process of finalizing its JSSP, a regional statutory plan to establish a regional body and help, by coordinating with Local Plans, for local interventions properly set in a regional context.

Governance Layers: There must be a regional strategy, but a reduction of governance layers. For example, the JSSP started to reduce that by providing vision, framework etc. but also cues of what is expected by local partners. A good JSSP also provides a pot of money which can be used on various things. Expectations of deliver and leadership is key to delivering goals.

Infrastructure-Led Growth

Participants:
Dr. Roudaina Alkhani, Lecturer, University of Westminster
Duncan Bowie, Lead planner for London (strategic planning)
David Daniels, building physicist
Nouha Hansen, Master student architecture, University of Westminster
Myriam Mendes, Infrastructure Transitions Research Consortium, Oxford University
Maki Murakami, Master student planning, Oxford University
Robert Ravelli, planner, (worked on TOD)
Martin Small, planner
Ben Stringer, Senior Lecturer, University of Westminster
Dr. Mireille Tchapi, Research Fellow, University of Westminster
Moderator:
Prof. Cecilia Wong, University of Manchester

Discussion:

Q: Is the NIC's current approach sufficiently broad?
A: The current approach is narrow, with the focus on key transport infrastructures and large-scale housing. Should be including natural, cultural, landscape and historical factors, among others, for a more holistic and regional approach. A new approach could consider downscaling, risk and resilience of Infrastructure, and the economic impacts of infrastructure and development, including equity.

Q: How to assess the impact of strategic planning? What is missing? Is development led by transport considerations alone? Is it about housing versus commuting? Which types of employment for the region?
A: In the UK, we plan everything by starting with the infrastructure without considering the land-use plan, whereas in France, they start with the land-use first and then think of the infrastructure to sustain the development. The relations among transport-jobs-housing are crucial. Now, there is no land-use plan attached to the road-infrastructure plan. There are no land-use capacity assessments and studies, which is problematical. How to assess how to meet infrastructure demand?

Q: How to invest on housing that people can really afford?
A: The affordable housing issue is not sufficiently addressed by the private sector. A multi-layered approach that considers many factors, not only land-uses, is critical. This includes planning and building the houses in conjunction with the infrastructure and services to support them. Currently there is an obsession with housing "numbers", with little control on the proper development made by private sector, so that it forms quality places and communities that serve all. The public sector has decreasing capacity to manage private sector development.

Q: What kind of regional economy do we want in the Arc?
A: This should be determined before building the rail line and expressway, and estimating housing market demand. We can show, using UK maps, different types of employment, their movements and commuting times for different categories of jobs: blue and white-collar workers, consumer service workers, tradesmen, technology and professional workers, medical services worker, etc.

Q: What sites (where) for the different forms of employment, and the homes of the workers in those jobs?
A: Prospective land-use changes can be studied empirically, and including all land uses, not just those of urban and rural development, for example ecological, landscape and geographical values.

Q: Where are the energy, water and other resources to support future growth coming from? How different is it, in terms of long term sustainability, from one region to another?
A: This takes the form of two inter-related issues: the natural resources themselves, and the infrastructures needed to protect them and distribute them. What is the relation of local infrastructures to the regional, national and global infrastructures envisioned by HS2, the East-West expressway and rail line? This pertains to the question of self-reliance and self-sufficiency, to the extent that they are possible.

Q: Who we are developing for? Are we building for the Arc or is the Arc is made for the building industry? What about the (re)development of the existing communities'?
A: Over the long run, there is the threat of developing a 2nd London here. This relates to the issue of how the smaller urban centres can be expanded for a range of housing and jobs to be sustained. Another aspect of this issue is lifestyle, a key word, as it is very different from Milton-Keynes to Oxford, for example, or Cambridge to the rural areas and villages.

Q: is the focus of so much government funding and attention to the Arc at the expense of other regions in England and the United Kingdom?
A: The north of the country needs more investment to be spent. Some believe that investing in the north would be more profitable. However, the government is spending massively in the south of UK. What will remain for the north? There is the perception that massive investment around London will increase the division between North-South, heightened in the context of Brexit.

Cautions regarding the repeating of past failures, or less than optimal outcomes. For example, in the South-East plan of London, most of the communities were opposed to the development, especially in terms of being considered as a place for residents whose work was in London, so that they were long distance commuters to London. An example of replicating the same mistakes in South East London, where there is significant commuting by car to the train stations in order to go to London, and attendant car-parking demands. This type of commuting can be difficult in the Oxford-Cambridge region, given the presence of large protected areas, which are hard to cross for commuters. Moreover, the farmers are commuting already because of housing affordability. It is already hard for farmers to afford their house, because of the competition from commuters and new development and the consequent increases in housing prices. These issues affect agricultural land, which will be needed to feed the mega-region being planned. It is an important issue to input into a comprehensive assessment made for a regional land-use plan, taking into consideration land for housing and land for agriculture.

Summary:
* Infrastructure planning should encompass a multi-layered understanding of the context.
* Infrastructure comprises not only the road, the rail and the housing but many more components, such as water supply, wastewater disposal, waste disposal, storm water management, natural and agricultural lands, cultural and historical aspects, etc.
* The important national public investment made in the Arc region raises questions about the existing imbalances between the North and the South of the UK, which should be considered carefully in the context of Brexit.

Finance and Investment workshop

Participants:
John Acres, president of the RTPI Royal Town Planning Institute
Paul Bird, Jacobs, Strategic Director
Jean Capey, Environment Agency
Hannah Franken, on Dan Darling's team – (works with Peter Busey)
Alec Gelgota, PhD student, University of Westminster
Simon Hicks, ARUP
Hannah Mulligan, architect, energy sustainability modelling for buildings
Moderator:
Prof. Jim Coleman, University of Westminster

Discussion

Q: How does development, including infrastructure, in the region get paid for?
Is this a project that must be funded by the government, or is there another option?
The corridor is a rich area that is generating money – how do we get the best out of it?
A: User pays in principle, investment for investment. The Income stream comes from the user.

Q: Why does everything (infrastructure) get its deal separately? (rail, road, etc.)
Why not make it a package across the entire East West Arc?
A: Government is funding the expressway and rail links. However, that funding doesn't cover the doubling up of existing build rates.
A: Limited thinking when just focusing on road and rail

- Debate over the government's draft National Planning Policy Framework (NPPF) and the final version:
    - If the land owners (including universities) think long term instead of "last year we only received a certain amount of funds, now we're getting it determined by a land value mechanism".
    - Government needs to sit down with localities and LEPs to determine how the financing of the corridor is actually going to be done.
    - Mechanism works fine in high value Cambridge, e.g., but is problematic in lower socio-economic areas.
    - Very high value in central areas, need a thrust to push value elsewhere which then reduces the prices in those high value areas. Are current mechanisms to do that flawed or non-existent?
    - VERY distorting mechanism
        - Yet the universities in the region have been around for centuries, so waiting longer is not a big issue for them.
        - Will not work unless these changes become law. Then, must come to terms with new basis in law.

Q: So, how to scale off land value? Who is going to do it?
A: Developers afraid of up-front costs, because it depends how you capture the land value increase. Decide as a country how to break into it. Some gains have to come out of the land value. Make it worthwhile. Different types of mechanism across different areas – the problem is how to remove or reduce the distortions?

- Local or macro UK issue?
    - Central government has to sink its teeth into it.
    - But viability is less of an issue here in OxCam than further north.

- Cambridge standards on housing quality makes it difficult to increase the supply of affordable housing. People are rejecting the large scale, affordable housing developments.

A car-dominated model of finance and investment is the issue.

- This is an opportunity to break that model
- But public transport is the hardest area to get funded.

Q: How to deal with the massive gap in funding for infrastructure? Estimated to be 90 billion – 250 billion pounds by 2050. Where is that money coming from and where is it going? How is it circulating in the system to generate the impact we are looking for?

Relying on the market to create value might be a misstep.

- Requires a funding mechanism. If the funding is to be retained in a place, there needs to be a mechanism that relates the income in the area to maintain the area.
- Could the public sector become an area that makes money off of these developments?
- Local banks.
- Bond issue to financial markets.
    - But how to give to locals? that is difficult

For example, with the Crossrail levy in London, the government feels like it's getting value for its money.

- Everybody pays a bit, but the funding for Crossrail mainly comes from central government. However, there is not a similar conversation for Oxford-Cambridge corridor, where the government should provide upfront infrastructure funding.
- There is too much reliance on the private sector markets to deliver all this.
    - Might work for some parts, but it will result in funding gaps as well.

Q: How to capture the added value from urban development that does not penalise the average investor?

- Investor should get a return regardless of size of investment – fairness.
- As the investment raises value over time, we have to capture that over time as well.
    - Tax could work, but "we're afraid of that" in this country.
    - We want a forward funding model where you get the pay back from what is put in.
- Currently, funding only available from commercial finance and government.
- Bond market could be interesting
    - Sustainability transit could encourage certain investors that may have ignored other options.
    - Transit oriented investment might help some get what they want, but will/could leave gaps.
    - However, some places are very constrained with height developments and other restrictions, such as in in Oxford and Cambridge, yet maybe in Milton Keynes it will work.

Q: How to build confidence through public funding?

A: The old version of public investment had major support due to central government intervention for new settlements, new towns. Is the time ripe to do it again in this region? Individually or the whole area? IF we take something this big and complex and don't address it with something equally powerful the next government will come through and squash it.

Q: How to overcome public sector resistance? How to lower the risk?

A: Someone has to be the first one in. Once that happens other will follow.

- Need to reduce risk before we can start planning and developing.
- Building strategic infrastructures in key places first (road, rail, flood defence, etc.)
- Land remediation is an option, to open up developable land, but that doesn't move people around.

Q: what is the proper timing of the regional project and its infrastructure investments?

A: The timescale is so long that what starts is out of date in the future.

- We're in a cycle of the market economy. The marketplace could do it, but it does not seem to be working in the long term, for example the focus on short-term profits at the expense of the residents, public sector, or environment.

Q: What is the best way to finance flood defence? Is a partnership funding model for flood defence appropriate?

A: A partnership between local and national government along with contributions from the private sector can potentially be effective, especially if those who benefit pay for their fair share of the costs.

- Government and local authorities should be contributing, along with a percentage from the private sector, particularly as the schemes benefit the private industries as well.
- For example, flood defence allows a locality, say Oxford, to stay open during a flood. Can the benefit from the defence in terms of costs saved from not having to cover losses from a flood be monetised? Such a cost-benefit calculation may ease the reluctance to contribute to its funding.

Q: How to consider the environment as part of the national infrastructure, including economic terms?

- See the environment as an asset and/or a utility. Ecosystem services is the name of one model.
    - If we had this view we could monetise some of it.
- Natural capital is an interesting attempt to make a business case of the environment. It also provides an opportunity for value capture, in that parks and natural landscapes increase the value of nearby private property, much like proximity to infrastructure does in urban areas. This is an opportunity for another type of value capture (hedonic model).

Q: What type and governance of planning and design guidance should exist across the Ox-Cam corridor?

A: Use a "net gain principle". A comprehensive strategy should exist, equivalent to the new London Plan. London's plan operates holistically, whereas in this corridor region, there are several separate pieces, for example the three growth boards, and the thirty-some municipalities. The governance model needs the right approach, which takes in to account all levels of government and coordinates their efforts through a single strategy.

Key Points:

- Finance is the key gap to realising the vision of the corridor region.
    - Is it the timeliness of the finance and not just the finance itself?
    - If you could get road and rail operating in five instead of ten years, then you could accelerate all aspects of the corridor's development.
    - A comprehensive and consensual strategy would enable development and financing to proceed more easily. Currently, cumbersome processes and regulations slow progress.
- You need the infrastructure first but, how to fund it? (chicken and egg)

    - Milton Keynes drew people because of its waste disposal initially, and its road network.
- Land value capture through existing mechanisms and new ones to be developed:
    - Local, regional and national
    - A Corridor-wide flat rate for the business rate levy?
    - Natural capital as a means toward value capture, not just hard infrastructure.
    - Mechanism distortions?
- Places with the highest property values, such as Oxford and Cambridge, are quite constrained in terms of new development, due to heritage and environmental constraints, as well as community opposition to changing community character and risking their property values.

Summary:

- We all agree we need something different than the current systems, and we need to figure out what it is.
- Reliance on local mechanisms works well in locations where you already have sufficient infrastructure to support current and projected populations.
- Current arrangement creates distortions in the market.
- Public sector as a partial funder and the private sector as a partial funder, with capture value for both, because neither can fund the whole.
- Currently, the private sector is underwritten by the public sector, as the private sector benefits by capturing most of the uplift in land and property value.
- Bonds are a good funding mechanism, especially when value capture can be used to repay the bonds.
- A new approach to finance needs a new approach to governance of the whole region.

Students and panels' presentations

Presentations' slides from the morning panellists and the students are also available on the East West Arc website www.eastwestarc.co.uk

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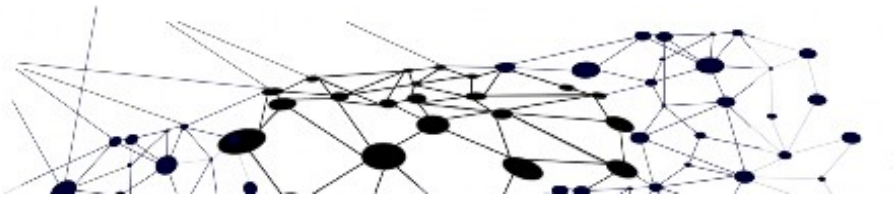

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