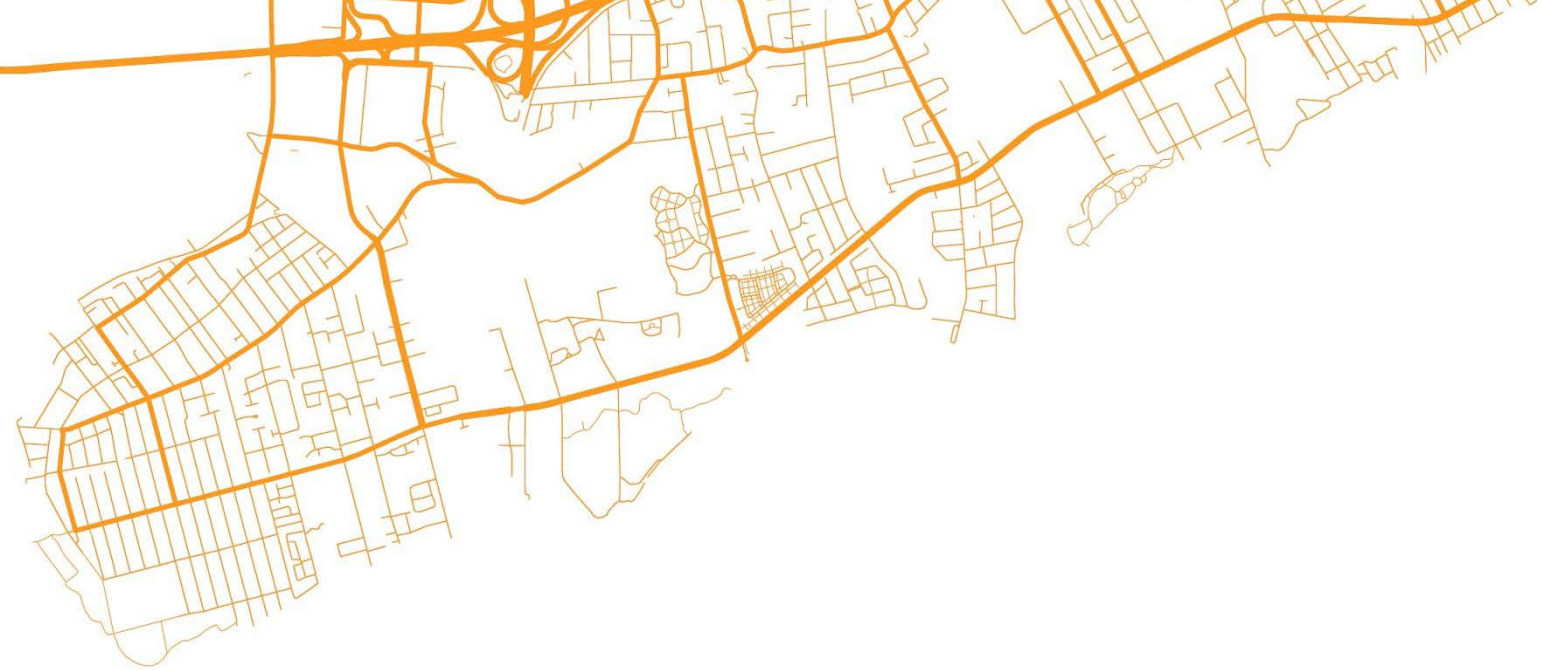

FUTURE OF CITIES:
Universities and Cities

James Ransom, Universities UK

This essay has been commissioned as part of the UK government's Foresight Future of Cities project. The views expressed do not represent policy of any government or organisation.

1. Introduction: looking to 2065 (and back to 1965)

We must recognise that we are living in a world of swift and revolutionary changes. We are still at the beginning of the age of computers, of automation, of nuclear energy and of other inventions, and I am certain that the effect of all these will change dramatically the shape, pattern and character of our towns, certainly those of the future.
Lord Lewis Silkin, former Minister of Town and Country Planning, 4 March 1964, House of Lords

Can we try to guess at what life will be like in the future and design for it; or, perhaps better, can we imagine or envisage a pattern of urban development and city construction sufficiently flexible in its very nature to absorb and ride with the changes in the pattern of human life and living which will occur within the life of these massive objects that we have to build?
Lord Richard Llewelyn-Davies, Professor of Architecture at The Bartlett, University College London and designer of Milton Keynes, 19 May 1965, House of Lords

Standing in the House of Lords fifty years ago, Lord Llewelyn-Davies, a Professor of Architecture at UCL, reflected on the future of cities. Fifty years again before this, UCL formed only the second school of planning in the UK, following the University of Liverpool who formed the first in 1909.

This link between universities and cities – of departments of urban planning training the architects of tomorrow, and linking the world of theory and the world of planning – is perhaps the most obvious one. But the links are far broader and deeper. Universities provide highly skilled graduates, world leading research, technological innovation, and business support. As Goddard and Vallance explore in their book *The University and the City*, the relationship is 'a multifaceted one of distinct but interrelating physical, social, economic and cultural dimensions'. Universities are physical sites and regeneration projects that 'connect economic and community engagement'.[1] They educate the workforce of tomorrow.

In several city regions, the university students, teachers and staff make up around ten percent of the population. Jim O'Neill, Commercial Secretary to the Treasury, said that 'any visit to a number of cities cannot fail to pick up some of the energy these people generate'.[2] A Universities UK study found that in 2011-12 the sector generated over 73 billion of output, including 2.8 percent of UK GDP, and 2.7 percent of all employment.[3]

This essay is formed of three parts. The first looks at the leadership role of universities within and beyond cities. The second part asks how universities can help ensure cities are adaptive, 'smart' and attractive places to work and live in future years. The third considers the role of universities within a system of cities, with cities given a greater power and responsibility to tackle the problems of the future.

Fifty years ago we faced great societal challenges, as we do today, and as we will in fifty years' time. These challenges can be tackled with a creative, highly skilled workforce, and adaptive, smart, connected cities. Later in his speech, Lord Llewelyn-Davies considers the role of institutions such as universities that make up a city, and says that the 'growth of these institutions is as organic as the growth of a tree'. The future of our cities is intertwined with the future of our universities. This piece argues for a partnership between cities and universities that will tackle societal challenges and help future cities grow.

2. Towards 'Connective Anchors'

Universities in cities are often described as 'anchor institutions', and sometimes as 'civic' universities. Taken together, universities should be seen as 'connective anchors' that can work with cities to bridge the local, national and international.

Nearly all universities have in their name the city or region in which they are based. Along with other anchor institutions such as hospitals and large museums, universities are deeply embedded in the local economy, play a critical role in the coordination and support of economic activity, and have an important social connection with the local community.[4]

The term 'anchor' suggests embeddedness, but it could also suggest immovability or inflexibility, whereas universities have long fostered innovation, been leaders in their local communities, and worked closely with businesses and industry; indeed many universities were set up with the aim of driving local economic growth and social mobility. This link between universities and innovation, enterprise and a skilled workforce has always been present, and will continue to be so. Yet there is more that can be done to widen and deepen entrepreneurial engagement.

In a 2009 pamphlet, John Goddard of Newcastle University called for a reinvention of the civic university, with engagement an institution-wide commitment:

> *The engaged civic university which I propose is one which provides opportunities for the society of which it forms part. It engages as a whole with its surroundings, not piecemeal; it partners with other universities and colleges; and it is managed in a way that ensures it participates fully in the region of which it forms part. While it operates on a global scale, it realises that its location helps form its identity and provides opportunities for it to grow and help others, including individual learners, businesses and public institutions, to do so too.*[5]

Many universities are already exemplars of this, and with greater devolution to cities this civic role will become more important. The city of Sheffield is delivering housing in partnership with the two local universities and local communities.[6] The University of Northampton works to build capacity in the social enterprise sector, and collaborates with local partners to improve public sector service delivery.[7]

Taken together, the roles of civic university and anchor institution are the basis of what could be termed a 'connective anchor' – universities as institutions that connect the local with the national with the international. For the city they provide a window to the world, and they help funnel global connections to the city. The 'connective anchor' works with local leaders to bridge the local and the global, playing an important economic and social role at all levels.

Why is this important? Cities compete beyond national borders, and those who are globally connected will be best placed to benefit.[8] The World Economic Forum notes successful post-industrial renewal cities such as Boston and Gothenburg 'stress education and connectedness in strongly linking their educational institutions to the wider city and the wider world'.[9] Universities are often ideally placed to build connections, with strong existing

networks across regions and internationally through research collaborations, engagement with industry, and links with influential alumni throughout the world.

Local leadership is critical for effective cities. A report led by Liverpool John Moores University notes that leadership is 'essentially a systematic rather than personal quality' and it is the 'institutional mobilisation of all resources and partners to deliver successfully agreed long term ambitions'.[10] Universities are but one partner in the leadership of a city, but as a potential 'connective anchor', they are ideally positioned to help.

3. Combining Smart and Adaptive cities

Universities can work with local leaders to build connections locally and internationally to help position the future city. If we characterise building these connections as the 'process' of ensuring competitiveness, we also need to consider the 'content'. For the future city, this is a combination of the 'smart' agenda and ensuring adaptability.

Underpinning both is social capital. The World Economic Forum has developed a four part taxonomy of city competitiveness, with 'soft connectivity', a city's social capital, a critical factor. Education is the 'ultimate soft connectivity', and cities can specialise in knowledge intensive niches by capitalising on education. Education and soft connectivity make investments in hard infrastructure and new technology more productive.[11]

An adaptive city is a resilient city. Recent work by Nesta has shown that 87 percent of highly creative workers are at low or no risk of automation compared with 40 percent of jobs in the UK as a whole.[12] You can complete online surveys to determine whether your job is at risk of being taken by a robot.[13] Whilst automation is likely to solve many more problems than it creates, a successful city in future years will adapt to these changes, attracting creative industries and highly skilled jobs.

Cities are constantly in states of flow, and can easily be locked into patterns of behaviour that over time can have serious consequences.[14] A highly skilled workforce, with access to continuous education and training opportunities, is also a highly adaptive one. Universities UK supported the work of the RSA City Growth Commission, whose report on universities and metro regions developed recommendations on optimising teaching and research for growth, increasing graduate retention and utilisation, and encouraging enterprise amongst students, graduates and faculty.[15] The report also noted that higher education, as a knowledge industry, contributes to the 'agglomeration economies' that drive city growth. There is a strong correlation between cities with more skills and higher levels of human capital, and local employment growth.[16] Both universities and cities are centres of innovation and growth, and this is underpinned by the provision of high-level and creative skills.

Twinned with adaptability is the 'smart cities' agenda. The Future of Cities Foresight project has considered smart infrastructure and preparing citizens for smart cities.[17] Universities play an important role in developing and testing new technologies, curating and understanding data (and the infrastructure behind it), and conceptualising and operationalising the 'Internet of Things' – a network of physical objects that collect and exchange information.

City leaders and universities will need to work together to harness the benefits of smart cities. Initiatives such as the Future Cities Catapult are a good example of this, bringing together businesses, universities and city leaders to turn ideas into prototypes, including developing sensor networks and unlocking urban data.[18]

The objectives of 'smart' and 'adaptable' cities are mutually reinforcing, with a smart city a more responsive one, and an adaptable city more likely to benefit from the insights delivered through data and technology. The result is an attractive city to work in, driven by a strong knowledge economy and creating the jobs of tomorrow.

4. Universities and cities as problem solvers

Connected, smart and adaptable cities are a good foundation for solving societal problems. Ed Glaeser, an economist at Harvard, famously said that cities are our greatest invention. With rapid global urbanisation, and more responsibility being devolved to regions and cities in the UK and Europe, our greatest invention will also increasingly lead on tackling societal challenges, including some problems traditionally shouldered by states. Cities have the ability to address issues such as climate change, skills shortages, aging, disease and economic inequality – issues that can be local but can also cross borders.[19] Many challenges are interdisciplinary, and universities are ideally positioned to help provide an interdisciplinary response.

Despite shouldering greater responsibility, cities will not stand alone. A theme running through the Future of Cities foresight work is the need to plan for, and have national support for, 'systems of cities'.[20] This takes into account the different specialities of cities, the different challenges and opportunities and local knowledge and physical assets. Just as each city has particular research and industry strengths, universities have a diverse range of expertise and specialisms, often mirroring the region and locality they are within.

We are seeing the consolidation of systems of cities in England. The trajectory of policy, from City Deals to Combined Authorities to Devolution Deals, whilst far from the levels of fiscal devolution we have seen elsewhere in Europe, is inevitably towards more and more decisions being taken locally. The 'Northern Powerhouse' is an example of a shift of some powers towards a cluster of cities that will be required to work in a system. Similar clusters have emerged in China (with a striking shift in economic focus in the 2000s from the coastal to the inland cities), and in South Korea, where the government has a strategy to incentivise clusters and universities outside of the dominant Seoul region.[21] The 'northeast megalopolis', the most heavily urbanised region of the US and home to a high density of universities and students, is perhaps the most notable example.

Systems of cities will include smaller urban areas. The OECD's policy position is that 'second tier cities' – those outside the capital whose economic and social performance can affect national performance – are typically underrated and governments should do more to maximise their contribution.[22] The Centre for Cities adds that medium-sized cities are the most innovative, leading pioneering work in different industries. In Gloucester and Aldershot innovation is focused around the aerospace and defence industries, for example,

and in Coventry and Peterborough the automotive industry.[23] Universities work closely with industry throughout the country - the most recent higher education-business and community interaction survey showed universities' contribution to the economy through services to business and the community (as measured by their knowledge exchange income) was worth over £3.9 billion.[24]

National support is essential for a strong system of cities – the stronger the support the more robust and internationally competitive cities can become, with universities and other partners part of a wider complementary network spanning regions and borders. But greater autonomy may also mean cities play a greater role in other policy issues, such as attracting international students. Non-EU students contributed £3.8 billion to the UK economy in 2011-12 from fees and accommodation alone.[25] With increased international exposure comes the need for UK cities to be attractive and welcoming destinations.

With the greater role of cities comes the greater need for centres of knowledge within these cities, and universities have a long history of supporting cities with the analysis of local needs and the provision of evidence and policy insight. The relationship is mutually supportive, with universities providing education and training, supporting local businesses and undertaking world-leading research, and cities home to workforces, students and vibrant communities, and attracting international businesses and researchers.

5. Conclusions

In planning for the future city, universities and city leaders need to work together. Universities can act as 'connective anchors' – coordinating economic and social developments at local, regional and international level, and connecting these levels. Cities should aim to be both 'smart' and adaptable, with universities educating a creative and highly skilled workforce, and partnering with city leaders to use data and technology to improve the urban environment. And the problems of the future will increasingly be tackled by cities themselves, supported by universities and a wider system of cities.

The policy environment should support this, with initiatives such as Catapult Centres for business, university and local government collaboration, and Higher Education Innovation Funding (HEIF), which helps to build links between, for example, university external engagement staff and local councils. There are many excellent examples of such links leading to better economic planning, new infrastructure to support innovation, more engagement with small businesses, and ultimately new highly skilled jobs.[26]

Returning to 1965, Lord Llewelyn-Davies in the House of Lords called for a massive expansion of university research into urbanisation. We have seen that the role of universities transcends research and economic impact, although these are incredibly important. Universities provide education and skills, regenerate land and property, support businesses, foster culture and build community relationships. And, as we have seen, they can work as an integral part of future cities alongside city leaders in solving future problems, and providing local and global leadership.

Notes

[1] Goddard, J. and Vallance, P., *The University and the City*, p.1
[2] RSA City Growth Commission, *UniverCities: The Knowledge to Power UK Metros*, p.5
[3] Universities UK, *The Impact Of Universities On The UK Economy*, p.2
[4] UKCES, *Anchor institutions and small firms in the UK*, pp.vii–viii
[5] Goddard, J., *Nesta Provocation 12: Reinventing the Civic University*, p.5
[6] Clark, G. and Clark, G., *Nations and the Wealth of Cities: A New Phase in Public Policy*, p. 57
[7] See www.northampton.ac.uk/business-and-enterprise/enterprise
[8] Clark, G. and Clark, G., *Nations and the Wealth of Cities: A New Phase in Public Policy*, p. 57
[9] World Economic Forum, *The Competitiveness of Cities*, p.54
[10] Liverpool John Moores University, *Second Tier Cities in Europe: In An Age of Austerity Why Invest Beyond the Capitals?* p.9
[11] World Economic Forum, *The Competitiveness of Cities*, p.6, 13
[12] Nesta, The creative economy and the future of employment, p.3
[13] See www.bbc.co.uk/news/technology-34066941
[14] Woodlief, A., *The path-dependent city*, Urban Affairs Review 1998:33, p.405
[15] RSA City Growth Commission, *UniverCities: The Knowledge to Power UK Metros*, p.13
[16] Shapiro, J., *Smart Cities: Quality of Life, Productivity, and the Growth Effects of Human Capital*, NBER Working Paper No. 11615, p.2; Glaeser, E. and Resseger, M., *The Complementarity between Cities and Skills*, NBER Working Paper No. 15103, p.17
[17] Available at www.gov.uk/government/publications/future-of-cities-smart-infrastructure
[18] See https://futurecities.catapult.org.uk/about-us
[19] Moir, E., Moonen, T. and Clark, G., *The future of cities: what is the global agenda?*, p.5
[20] *Ibid.* p.5
[21] Clark, G. and Clark, G., *Nations and the Wealth of Cities: A New Phase in Public Policy*, p. 25
[22] Liverpool John Moores University, *Second Tier Cities in Europe: In An Age of Austerity Why Invest Beyond the Capitals?* pp: 7-8
[23] Centre for Cities, *Cities Outlook 2015*, p.36
[24] HEFCE, *Higher Education – Business and Community Interaction survey 2013-14*, p.4
[25] Universities UK, *The Impact Of Universities On The UK Economy*, p.2
[26] See www.hefce.ac.uk/kess/heif/strategies/