



Urban futures – what will we need to know?

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urban futures – what will we need to know?

Joe Ravetz outlines a 20-year prospect produced by the 'City-Region Game', and considers the 'knowledge outlook' for planning – what will we need to know, and how?

Cities, city-regions and urban systems around the world are changing fast, with new pressures and opportunities all around. But in contrast many kinds of development seem quite fixed: we build houses or roads on a semi-permanent basis. For such fixed assets, spatial planning would seem to need a long-term view, with detailed projections and modelling – but often the reality is a few housing numbers, anything more being too complex. Seen from one angle urban change is smooth and predictable; from another, urban change happens through 'surprises' and 'transitions' – one example being the 'Facebook'-style transformation of social and economic life in just a decade. Is it possible and/or desirable for spatial planning to anticipate this kind of change?

The role of future studies in urban governance is an issue for European policy, which looks for ways to improve urban governance for cross-cutting challenges.¹ One approach is scenario planning, which systematically explores uncertainties and alternative futures, and follows the implications back to present-day decisions.² A wider scientific scope is seen within 'Foresight', promoted by the UK Government Office for Science, with a 'Future of Cities' programme just starting.³ At CURE (the Centre for Urban and Regional Ecology) we took a further step with '*Synergy Foresight*': this uses a mapping method for complex interconnected problems; engages a wider network of stakeholders through multi-channel media; and looks for creative collaborations and 'synergies' to enable 'pathways through the jungle of uncertainty'.^{4,5}

An urban-scale Synergy Foresight sees cities/city-regions as interconnected communities, shaped by multiple forces – social, technological, economic, environmental, political, cultural, etc. – where

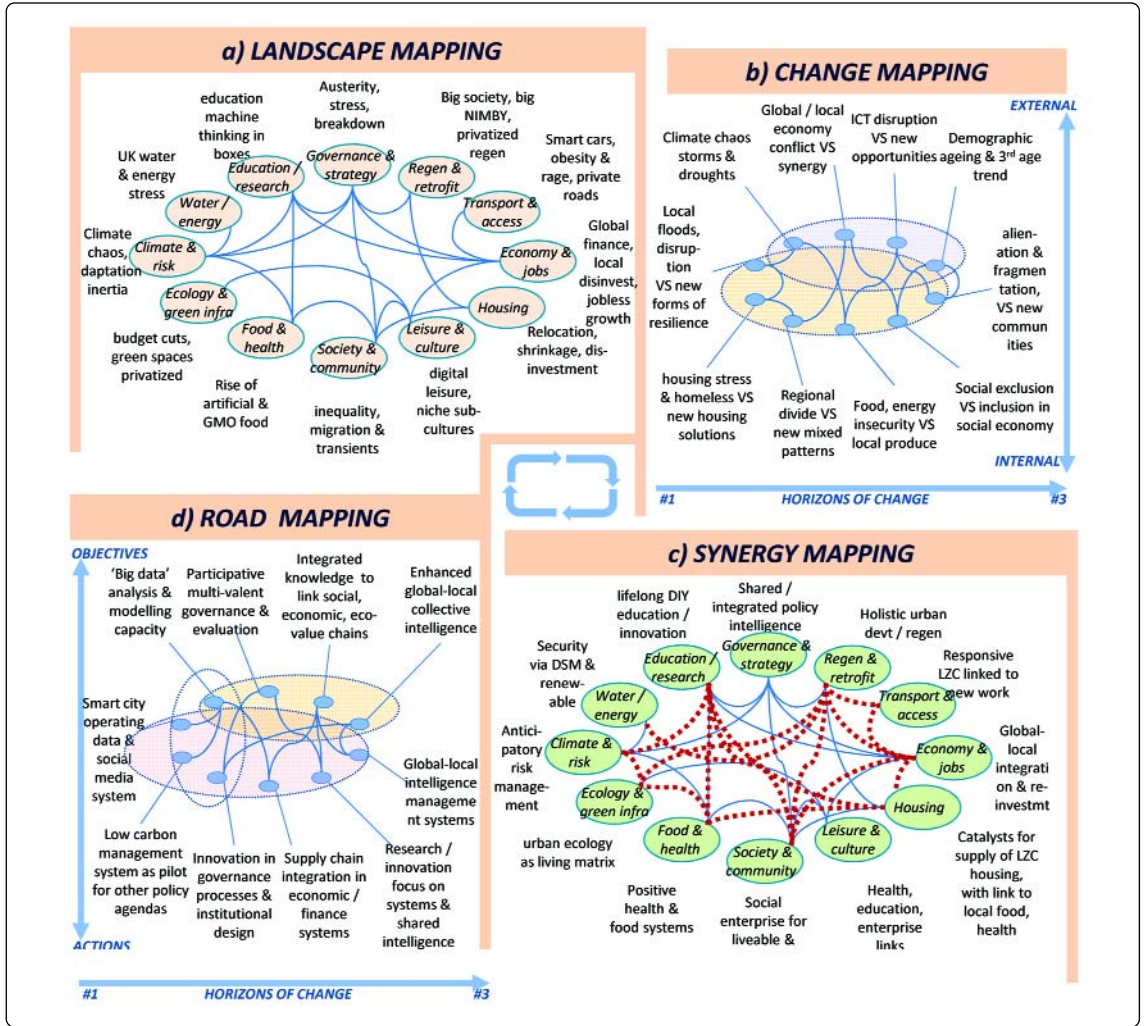
change can 'emerge' through major transitions as well as gradual trends. The role of city-region policy is then more about enabling and guiding such emergent change, rather than command and control. For example, urban decline and deprivation are seen not as simple 'cause and effect', but as a cumulative causation of economic, social, and physical factors – where effective regeneration cannot be imposed by diktat, but comes through the creative self-organisation of communities.

A similar perspective on the problems of interconnected and emergent cities is found in parallel 'foresight' and 'outlook' type studies at EU and international level.^{6,7} This suggests that urban foresight is not only about projection and forecasting, but more about anticipation and envisioning – building on creative synergies, but also facing more problematic 'wild cards' and dark forces.⁸

The 'City-Region Game'

The 'City-Region Game' was developed as an application of Synergy Foresight, in conjunction with the International Futures Forum's 'World Game'.⁹ A game/role-play format can make it easier for participants to think creatively and 'out of the box' and immerse themselves in 'the future' and a space of possibilities.

The game starts with three simple questions presented to each player: 'Which department/industry would you like to run (as CEO or Secretary of State)?'; 'Who are three others you most work with/have a problem with?'; and 'Which three uncertainties could most change what you do?' The responses can very quickly build up a complex 'landscape mapping' of stakeholders and issues ('actors and factors'). The game can be run in two



Above
 Fig. 1 A typical 'City-Region Game' result – 'The knowledge outlook for UK city-regions: a synergistic mapping'

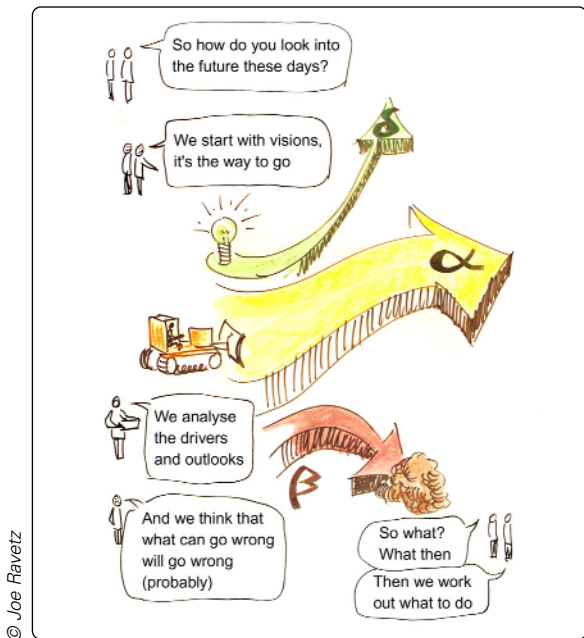
hours, two days or even two months, depending on time and resources and the level of detail required. It can be run as a one-off snapshot or as part of a full programme – working systematically with complex issues, alternative scenarios, risks and opportunities, and strategies and policies.⁹

Fig. 1 shows a typical summary game output, from the CURE workshop series on 'Knowledge outlooks' – exploring the question 'What kind of knowledge will we need for the forthcoming challenges and opportunities in UK city-regions?'

This summary 'outlook' is arranged in four corners, each one a stage in the Synergy Foresight method. This begins with a 'landscape mapping' of interconnections between 'actors' (stakeholders), or 'factors' (issues or themes). Secondly, the 'change mapping' corner shows critical change drivers and uncertainties in the general form of 'problems

versus opportunities', leading to different scenarios (this kind of mapping of interconnections is very helpful compared with using a list or matrix). Third, the 'synergy mapping' corner overlays new potential opportunities on the previous landscape. Lastly, the 'road mapping' corner sketches the pathways, objectives and actions needed to realise the desired opportunities. Experience so far shows that this is a practical format for combining complex issue analysis with creative joined-up thinking.

In the example shown in Fig. 1, the 'landscape mapping' shows a deeply problematic situation. Deregulation of housing, health, education and other services continues; and austerity increases social stress, with pockets of 'breakdown and crackdown'. The globalisation and financialisation of the economy widens the North-South gap and disparities with Scotland, Wales, and Northern Ireland; and the whole



Above

Fig. 2 'Scenario work'

UK looks increasingly vulnerable in the global market. The urban built environment struggles, particularly in cities outside London – as jobs and incomes dry up, large areas crumble from lack of investment and social infrastructure. The housing shortage continues, but, without consensus on locations and development patterns, we may see worse conditions in declining neighbourhoods, with fewer services at higher prices which more vulnerable residents can hardly afford, and with diminishing safety nets.

The future prospects in the 'change mapping' show climate change as a destructive force, but one that might also lead to new kinds of ecological resilience and social co-operation. Conflict between global supply chains and local economies seems inevitable, but likewise could bring new opportunities. Information and communications technology has immense power to change economic and social systems, but also opens up new possibilities. Demographic trends are not just about ageing, but about 'third-ageing', with people of 70 years of age or older playing a very active role in society.

Following up these opportunities, the 'synergy mapping' shows new 'value-added' connections – not only financial, but social, cultural and ecological. We could link urban regeneration with local economy and social enterprise; or housing with urban food, health and renewable energies; or green infrastructure with regeneration and climate resilience. Overall, there is huge potential in linking education, research and knowledge with 'social governance': this emerges as a counterpart to the

'social economy', with a wider set of groups and networks, enabled by new social media and with new forms of participation and social innovation.

What will we need to know, and how?

This question is addressed in the 'road-mapping', with a sketch of pathways in the knowledge domain linking 'objectives' to 'actions', to enable the opportunities above to be realised.

First, there may be 'big data' on a scale hard to imagine: artificial learning, wearable ubiquitous computing, and an internet of things, digital speech and body language – and perhaps thought itself. Such data would be increasingly valuable, protected and sensitive – and also the target of surveillance, profiteering, theft or sabotage. The data ocean generates a whole new industry, turning information into 'intelligence' – a more human-scale process, partly dependent on physical proximity. We can imagine a near-future data-driven urban planning, with detailed overlays and analyses of places and spaces, activities and connections, demand and supply, all the way to experiences and aspirations.¹⁰ This could be framed as a 'smart city' knowledge outlook.

'All this points towards a longer-term goal of enhanced global-local 'urban intelligence' – a city-region with built-in capacity for social learning, thinking, deliberating, collaborating, innovating and decision-making'

Secondly, there is a 'social knowledge' agenda, for a fully participative governance system, with evidence and evaluation which is 'multi-valent', i.e. bringing together economic, social, cultural, ecological and other values. This is not so much about data, but more about the processes of deliberation and elicitation, with creative content, role-plays, 'edutainment' and social media.

Thirdly, there is an 'integrated knowledge' agenda which links the social, economic, ecological and other activity systems. At present we can track supply chains, travel patterns, housing markets, and so on; but as yet there is little capacity to see the interconnections and to respond to system-wide problems such as exclusion, unemployment or climate change. This could be the 'integral city' knowledge outlook.

All this points towards a longer-term goal of enhanced global-local 'urban intelligence' – a city-region with built-in capacity for social learning,

thinking, deliberating, collaborating, innovating and decision-making. The implications for research and knowledge systems are way beyond today's textbooks on economics or land use: we need to think in terms of complex systems, multi-cultural networks, and creative co-production of shared resources. This could be a next-generation 'intelligent city' knowledge outlook.

How to put all this together? An urban planner of the 2030s can be envisioned as a knowledge-based social/built environment entrepreneur – a creative hub for ideas, visions, needs and resources, from citizens and organisations at every level. She/he will facilitate social learning and community enterprise, online and in real time; assess values and priorities – social/economic/ecological; address systemic qualities such as resilience, social capital and learning capacity; and enable forward thinking and creative collaboration. Planning for urban energy/climate resilience, for example, is a highly interconnected kind of problem (including social, economic, built environment and governance issues). As a research strand in response – to be followed up – we can envision a highly interconnected kind of planning which links energy systems, building design, housing finance, community enterprise, social care, urban food and green infrastructure.

'Overall, the current hiatus and confusion in UK planning might just bring longer-term opportunities to rethink the role of planning and its knowledge base... There are no blueprints for how this will all work; but we are indeed lucky to live in such interesting times'

Overall, the current hiatus and confusion in UK planning might just bring longer-term opportunities to rethink the role of planning and its knowledge base. Synergy Foresight and similar methods offer new tools which might be more suitable for more interconnected and anticipatory ways of thinking about cities and city-regions. The research and knowledge base, too, is shifting towards a more multi-valent, interconnected, creative-collaborative approach to social learning and urban intelligence. There are no blueprints for how this will all work; but we are indeed lucky to live in such interesting times.

● **Joe Ravetz** is Co-Director of CURE, at the University of Manchester, and is Guest Editor for this Special Issue. The views expressed are personal.

Notes

- 1 *Cities of Tomorrow: Challenges, Visions, Ways Forward*. European Commission, Directorate General for Regional Policy, Jun. 2011. http://ec.europa.eu/regional_policy/sources/docgener/studies/pdf/citiesoftomorrow/citiesoftomorrow_final.pdf
- 2 G. Ringland: *Scenarios in Public Policy*. Wiley, 2002
- 3 See the Foresight website, at www.bis.gov.uk/foresight; and details of the new programme on 'Future of Cities' at www.bis.gov.uk/foresight/our-work/projects/current-projects/future-of-cities
- 4 J. Ravetz: 'Urban Synergy-Foresight'. In *Urban Governance in the EU: Current Challenges and Forward Prospects*. EU Committee of the Regions, 2011, pp.31-44. http://urban-intergroup.eu/wp-content/files_mf/corurbangovernancefinal.pdf
- 5 J. Ravetz: 'Exploring creative cities for sustainability with deliberative visualization'. In L.F. Girard and P. Nijkamp (Eds): *Creativity and Sustainable Cities*. Heinemann, 2011
- 6 *State of the World's Cities 2012/2013: Prosperity of Cities*. State of the World's Cities Series. UN Habitat. Earthscan, 2012. www.unhabitat.org/pmss/listItemDetails.aspx?publicationID=3387
- 7 A. Piorr, J. Ravetz and I. Tosics: *Peri-urbanisation in Europe: Towards a European Policy to Sustain Urban-Rural Futures*. Synthesis Report of the PLUREL project. EC Communications Unit, with University of Copenhagen, 2011. www.plurel.net/Synthesis_report_Peri-urbanisation_in_Europe-115.aspx
- 8 *ERA Toolkit: Applications of Wild Cards and Weak Signals to the Grand Challenges and Thematic Priorities of the European Research Area*. Manchester Institute of Innovation Research, University of Manchester. European Commission iKnow project, 2011. www.escholar.manchester.ac.uk/api/datastream?publicationPid=uk-ac-man-scw:151944&datastreamId=FULL-TEXT.PDF
- 9 A. Hodgson: *Ready for Anything: Designing Resilience for a Transforming World*. Triarchy Press, 2011
- 10 CURE is developing two ICT prototypes, aimed at assisting the planners of the future. The 'Synergy Forum' simulates a roundtable discussion on complex issues – a working prototype is available at <http://synergy-demo.hedtek.com>. The 'Local Forum' enables 'spatially explicit' participation with interactive discussions at neighbourhood level – an early demonstration is available at <http://www.ppgis.manchester.ac.uk/projects>