# Comparative International Urban and Living Labs

## The Urban Living Global Challenge: A Prospectus

Michael Keith and
Nicola Headlam

# THE URBAN LIVING GLOBAL CHALLENGE: A PROSPECTUS

# COMPARATIVE INTERNATIONAL EXEMPLAR URBAN AND LIVING LABS

**Michael Keith and Nicola Headlam, 2017**

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## 1. EXECUTIVE SUMMARY:

## GLOBAL LEARNING, NATIONAL DELIVERY, LOCALLY EMBEDDED

There is a wealth of international learning on the productive potential of activity that seeks to understand, map and shape the future city by linking research scholarship to policy development. In response to a request from the seven research councils and Innovate UK to consider some lessons that might inform the development of the UK Urban Living programme, this report summarises a survey of initiatives in this space globally. The selection of comparators is not exhaustive but was based on a short desk-based exercise, drawing on advice from Urban Living partners.

The following summarises what we consider might work and what might not work in the UK context.

- Urban/ Living Labs are well established ways of working in which partnerships and networks between research, industry, civic and community sectors (usually some of but rarely all) harness collective learning.  There is an extremely wide array of practice under the loose banner of urban/living labs. Labs may operate at any spatial scale, from neighbourhood to whole world, and are extremely sensitive to context.
- Productively they can bring together the research ecosystem and the innovation ecosystem - two areas of activity that overlap but that have significantly different roots in government policy and funding streams.
- There are learning points for every level of operation, for projects as they develop into platforms and for programmes and portfolios of urban living labs.  We suggest a distinction between:
- LIVING LAB PROJECTS could emerge from any sector, be thematic in scope and active over more or less any spatial scale.
- LIVING LAB PORTFOLIOS are constructed through the combination of projects or programmes.
- LIVING LAB PLATFORMS are locally embedded within policy development functions; the label suggests a maturity of partnership working.
- LIVING LAB PROGRAMMES refer to either a cluster of projects or platforms, depending on the maturity of the relationships. Living lab programmes are those which seek to curate projects – either through strategic commissioning, themes/areas of interest or a curation of place-shaping efforts within a specific territory (a city-region for example).
- To be worthy of the name, labs inherently co-produce urban knowledge; the question of with whom they work to achieve this covers a wide variety of potential partners. Labs may be predominantly commercially-facing, such as some operating in the smart city space, of an activist type, such as 'Just Space', or embedded in the policy development circuits of a specific city, such as Newcastle City Futures.
- Due to the varied operating contexts of the labs it is important to focus on processes / mechanisms that have worked elsewhere that might be successfully applied in the UK.
- Reflecting the distinctive backgrounds of 'urban labs', the nature of disruption and innovation they promote varies significantly. Some rely on directly commissioned research to generate tightly specified end goals on a contractual basis. Other models are closer to 'blue skies' or fundamental research that depend less on contractual relations and more on trust and partnerships built up between new institutions, research cultures and governance innovation over longer periods of time.
- Cities and city governance networks must be viewed as primary partners in the initiatives.  A future priority should be the economic drivers for cities, 'Invest to Save' principles and budgets of major public sector spending in cities, and the possibility for disruption, experimentation and innovation in improving public services. Furthermore, institutions neither inside nor outside the academy ought to be supported to guard against 'extractive' relationships with city partners.

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## LEARNING FROM LIVING LAB EXEMPLARS

There are many examples of successful project work. In Table 1 we highlight a series of exemplars and their lessons for the UK.

**Table 1: Learning from Living Lab exemplars**

| | |
|---|---|
| STRATEGIC FUNDING MODEL | *Mistra Urban Futures* |
| | *Frauenhofers* |
| CIVIC EMBEDDED AGENCY | *Boston Mayor's Office of New Urban Mechanics* |
| | *Newcastle City Futures* |
| | *Policy Scotland* |
| FOUNDATION LAB | *Guggenheim BMW Lab* |
| | *Rockefeller Urban Innovations* |
| ACADEMIC-LED/ACTIVIST-ENGAGED | *UCL Urban Laboratory* |
| | *Just Space* |
| UK PROJECT FOCUSING ON LAB ACTIVITIES | *Governance of Urban Sustainability Transitions (GUST)* |

## STRATEGIC FUNDING MODELS

A diverse range of funding models support work in this space. Programmes or portfolios can be strategic commissioners of institutions. 'Patchwork' funding models are common for living labs: some research money, some innovation or R&D money, some local government money, some government departments. *MISTRA Urban Futures* has been supported blending research money and central and local government funding. There is also considerable interest in the ways in which the German *frauenhofer* model differs from UK innovation models[1].

## CIVIC EMBEDDED AGENCY

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[1] This is the subject of project work by Urban Transformations/Future Cities Catapult Research Fellow Paul Cowie. More information on his work can be found here:
http://www.urbantransformations.ox.ac.uk/people/paul-cowie/

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Projects may be well embedded within policy development but longer term strategic engagement with policy takes on the features of a platform. *BONUM* (Boston Office of New Urban Mechanics) is an example of a platform which is integrated within the mayor's office itself. It harnesses the strengths of Massachusetts Institute of Technology (MIT) and Harvard University in strategic partnerships with the City of Boston.

## FOUNDATION

*The Guggenheim project* described in the report below represents a highly successful living lab project but in the UK context philanthropic spending on research of this type is not so well developed, though smaller foundations (such as the *Joseph Rowntree Foundation)* do commission specific research.

## COMMISSIONS

Transactional models of working between policy and scholarship are very common, through consultancy and commissioned work to answer very specific questions. Longer term, more interactional relationships also exist between city governments and commissioned work of the type reported in, for example *Forum Virium* in Helsinki. For benefits to accrue and for platforms through which City Hall and intelligent cities may develop, there needs to be flexibility, a focus on the future and on established protocols for enabling international learning.

## MODELS AND BEST PRACTICE

Reflecting the distinctive backgrounds of 'urban labs' the nature of disruption and innovation they promote varies significantly. Some rely on directly commissioned research to generate tightly specified end goals on a contractual basis. Other models are closer to 'blue skies' or fundamental research that depend less on contractual relations and more on trust and partnerships built up between new institutions, research cultures and governance innovation over longer periods of time.

For an Urban Living initiative to work effectively the research councils should consider how city governance networks might become central to the programme with cities themselves as primary partners in the initiatives. Research questions might demonstrate coproduction with city stakeholders, addressing economic drivers for cities, Invest to Save principles and budgets for major public sector spending, and the possibility for disruption, experimentation and innovation in improving public services. Institutions neither inside nor outside the academy ought to be supported that maximise coproduction across boundaries between public sector, private sector, academic research and civil society without privileging one element of the combination.

As both this short consultancy and existing research demonstrate, Urban Living Labs differ significantly in a number of aspects:

- Functional logics
- Institutional settings
- Time horizons
- Research functions

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As a result, while the different projects outlined in this report offer a wealth of learning and best practices, they encompass a broad range of approaches that cannot be easily reduced to a single methodology. International models provide lessons and a rich array of experience in the interdisciplinary urban 'space', the Urban Living Partnership needs to understand their diversity in order to consider the design logics of further stages. Urban Labs 'generate options, not solutions'. The diversity of their design suggests that the Urban Living Partnership might need to consider the preferred model and design imperatives between the research and innovation ecosystems before deciding which international models might be identified as 'best practice', rather than assume a single model that might be followed.

## 2. CONTEXT: UK URBAN LIVING

This report concludes a small piece of consultancy for the seven UK research councils and Innovate UK on the international lessons for the Urban Living Partnership undertaken by the Urban Transformations team, based at the University of Oxford. Fieldwork has been conducted in summer and autumn 2016 in a fast-changing policy context for UK Higher Education (HE). The report can be considered as the completion of a trilogy of reports produced since 2015, the first delineating a rationale for the UK Urban Transformations Portfolio of Economic and Social Research Council (ESRC)-funded investments, the second delineating the UK urban research ecosystem (including an analysis of the impact pipeline for urban research). This report focuses specifically on the international lessons for the Urban Living initiative.

In the post-Brexit HE funding landscape there has been turbulence regarding the roles of European Union (EU) funding, against a context of 2016 Corporate Social Responsibility (CSR) settlement and a rapidly changing research ecosystem, and the emergent Global Challenge Research Fund and Industrial Strategy Challenge Fund programmes. It is our belief that Urban Living, a partnership of research councils working together, has an opportunity to take on increased importance in this climate.

Furthermore, the incoming May Government has signalled less emphasis on the northern powerhouse initiatives of Osborne's Treasury, and there is considerable interest from the Treasury in hyper-connected cities, and on regional productivity.

Building on earlier commissioned work on the research ecosystem this project from the team based in the Centre on Migration, Policy and Society (COMPAS) at the University of Oxford considers how previous attempts to synthesise research, innovation and city governance in the spirit of the current Urban Living programme have worked and been challenged, with particular focus on internationally comparative examples of work.

The short consultancy offers lessons for world-leading interdisciplinary urban research, particularly at European and International scales of analysis but with a brief reflection on the challenges for British universities.  Working principally through a desk review and a limited number of interviews with international experts, we seek to explore the scope and potential for Urban Living to be considered as a global challenge for the UK research community.

The report will be presented both to the Urban Living Partnership Board and the Research Committee of the ESRC. We seek to distil insights from researchers, funding systems and policy-makers to develop criteria for highly innovative research of this nature.

### INTRODUCTION

Both 'the university' and 'the city' are in a constant state of change. The challenge for those in any contact with either (or both) is to explore how to harness their power and resources. It should be of no surprise that there is a conjugation of institutions of higher learning and cities: they are mutually constitutive. What is interesting in the current moment are the ways in which innovation policy proposes highly spatially specific and potentially transformative 'helix working'. This recognizes the potential of a cross-sectoral blend of the research base, private and public capital and civil society. There is enormous potential for experimental forms of institution within which bright and committed people seek to furnish themselves with the skills, knowledge and network capital to operate the parts of the machine that they are able to influence. Colleagues at the University of Newcastle have devoted a lot of thought to the ways that such 'third mission' type activities may be reconfigured in order to re-state the role of 'the civic university'.

> *Universities have always been full of people who want to change the world. Their new enthusiasm for a growing civic role for their institution reflects the growing expectation that they will do this in a more active and less accidental way in future…*
>
> *The University of the Future will need to regard its local setting as inherent to its operations, with financial, business and cultural exchanges, a range of joint and part-time working arrangements, and a flow of formal and informal contacts. Cities and universities will need to set priorities jointly…and work together to achieve them… in the knowledge that this new activity benefits both sides and is recognised as a core activity for cities and universities alike.*
>
> **Goddard, J. and Tewdwr-Jones, (2016)**

Furthermore, there are hopes that universities themselves seek to design partnership spaces with the features of collaboratoria, of 'communiversities', of living labs, of observatories and dashboards for data and intelligence, combining of all of these into the business-as-usual of academia or of the running of the smart city. These platforms might have the potential to radically remake both 'the city' and 'the university', whereby harnessing shared intelligence to power urban development requires the deliberate and purposeful crafting of new, flexible platforms or interfaces between university and city. There are many historical precedents for such ways of working, not least in the urban observatory programme of the Lyndon B. Johnson administration in the United States (US). Significantly, in evaluating the role of novel structures for civic action in the US model, evaluators noted that the primary area of change required was in the roles and behaviours of those peopling urban observatories.

> *The role of the urban observatory executive as **catalyst**; He [she] is part **diplomat**, trying to bring various factions together in a situation in which they will respect and work with each other. He is also part **strategist**, to the end that academic, city hall, and all the publics and participants can cooperate... Such a man [person] must have **tact, imagination, drive, and managerial acumen.***
>
> **Marshal Dimmock, (1972), cited in Barnes, (1974)**

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The urban observatory executive described here is the ancestor of the living lab co-ordinator, and the range of skills required remains as relevant today as 40 years ago.

## CIVIC UNIVERSITY PLATFORMS

> *A University is not outside, but inside the general social fabric of a given era.*
>
> **Abraham Flexner (1930)**

Whether in the modish framing of Open Innovation in the knowledge economy or debunking the separation of the "ivory tower" the city invites us to consider the construction of zones for urban theory and practice to combine in the creation of new and useful urban knowledge. This has structural consequences for universities, as actors themselves, for the roles and skills of those peopling them and for the networks and relationships of partners with whom they work. Living labs are very much within this trend toward civic universities and of brokerage across partnerships.

> *The relationship between the university and the city is evolving in an era of global urbanization. The networked nature of urban space and society means we can no longer consider urban universities as simply located 'in the city'.*[2]
>
> **John-Paul Addie**

In the *New Urban University* project, based at UCL, there has been a lot of attention paid to the dynamics of universities within the global circuits of the knowledge economy. But, again it was ever thus, universities have always been 'place-shapers' through their policies and processes, not least their links with society itself.

The following diagrams (Figs 1 and Fig 2) illustrate a recent publication from the Carnegie Trust authored by Prof Mark Shucksmith as he seeks to demonstrate the difference that the civic university might make to the normal functioning of universities.

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[2] Retrieved from the website for the EU-funded project, 'Situating the new urban university: Higher education in an era of global urbanization': https://newurbanuniversity.org/

**Figure 1: Traditional University spheres**
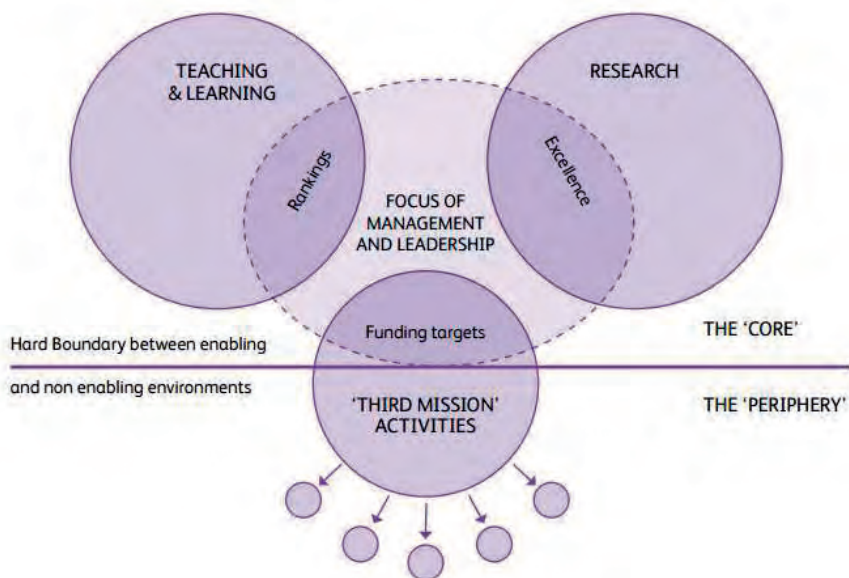


Quite by contrast, the second figure emphasizes how far teaching and learning, research and meaningful engagement serve to fundamentally alter the areas of operation of the academy. Urban Living Labs arguably sit at the intersection of the areas of university operation, where "transformative, responsive, demand led actions" serve as the fuel for conventional areas of academic practice.

**Figure 2: The civic university**
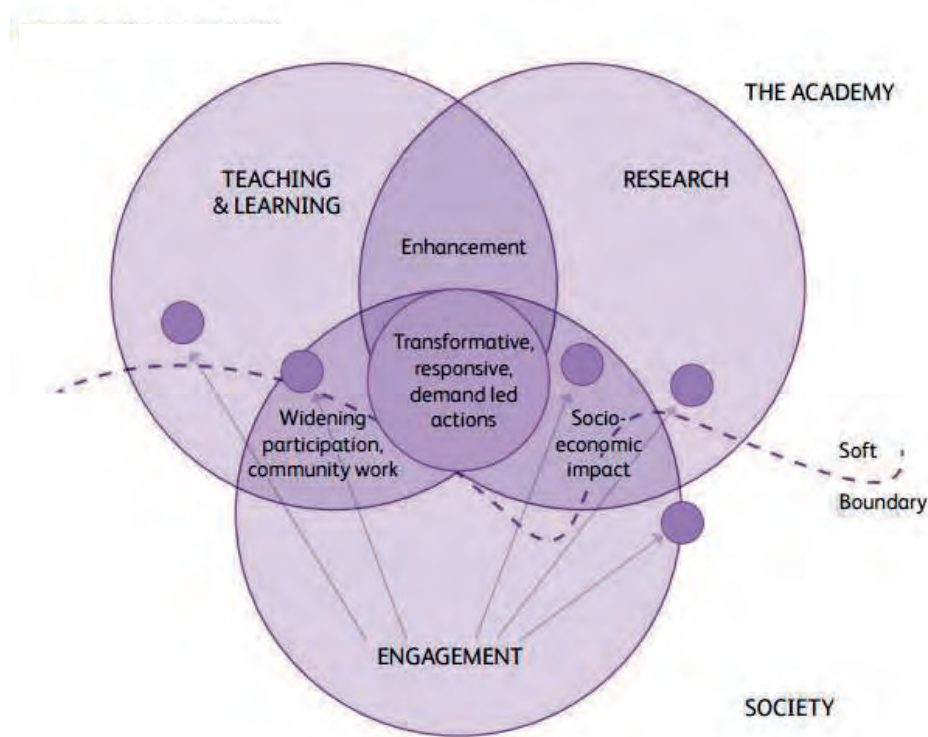
Just as the structure of the civic university is conducive to the work of the Urban Living Lab, recent trends regarding the role of co-production in urban knowledge emphasise the roles of partners in the creation of meaningful knowledge. Many people perceive a shift in emphasis, away from research of/on place and toward research for/with research partners and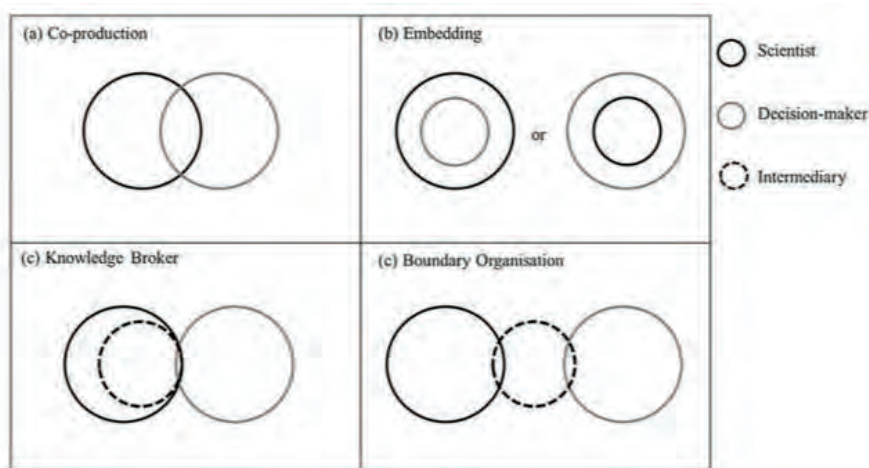 a focus on research 'impact' and knowledge exchange. Figure 3, cited in Citanovitch (2016), is rooted in a marine management context but neatly encapsulates the structural dimensions of knowledge exchange between scientific and decision-making powers.

**Figure 3: Co-production of scientific knowledge**



Urban Living Labs may take on the features of any of these ideal types of scientific decision-making models but are, in their mature and platform incarnations, more akin to the "boundary organisation" in Figure 3, drawing on both research funding and other revenue streams but creating an independent space out with extant institutions.  As we have argued elsewhere the contact zone, or boundary institution, of the living lab could take on the features of urban living and promote links between research and impact through platforms that blend the characteristics of some or all of the following:

- Research centre
- Policy unit
- Think tank
- Consultancy
- Start-up/spin-out
- Laboratory
- Observatory
- Mechanism for public participation
- Activist networks

Not all Urban Labs are to be found inside the academy. A recently published review of Urban Labs has stressed the diversity of their logic, their institutional base, their client differences and the timescales against which they operate. Urban Labs in the private sector are very different to those based in the academy and other

forms of urban experimentation that might be found in civil society or in varied forms of public / private partnership[3].

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[3] Marvin, S. and Silver, J. (2016). 'The urban laboratory and emerging sites of urban experimentation', in Evans, J.; A. Karvonen and R. Raven (Eds.) *Experimental City*, London and New York: Routledge, 47-60.

## INTRODUCTION

### WHAT IS THIS REPORT?

This report seeks to explore international examples in order to gain an impression of practices which might be able to illuminate the UK context.  It is necessarily scoped in a close fashion in order for a largely web-based trawl to be manageable in a 6-week period, with supplementary data collection and refining of cases.  Given the limitations of time and capacity it does not claim to be an exhaustive study of global practice in this area but rather to cast light on potential areas where lessons may be embedded into the UK context. But if the UK is generally thought to be 'behind the curve', a sense of humility and open minded learning from international experience in shaping future city observatories and labs is sensible for constructive design of future UK initiatives.

### DEFINITIONS

Urban Living Labs have come of age in the knowledge economy era. The following definitions place the emphasis of their role in slightly different places and all were used in the desk review.

*Living Labs are user-centred, open innovation eco-systems based on a systematic user co-creation approach integrating research and innovation process in real life communities and settings.*

***European Network of Living Labs (ENoLL)***

*It is a forum for innovation, applied to the development of new products, systems, services, and processes, employing working methods to integrate people into the entire development process as users and co- creators, to explore, examine, experiment, test and evaluate new ideas, scenarios, processes, systems, concepts and creative solutions in complex and real contexts.*
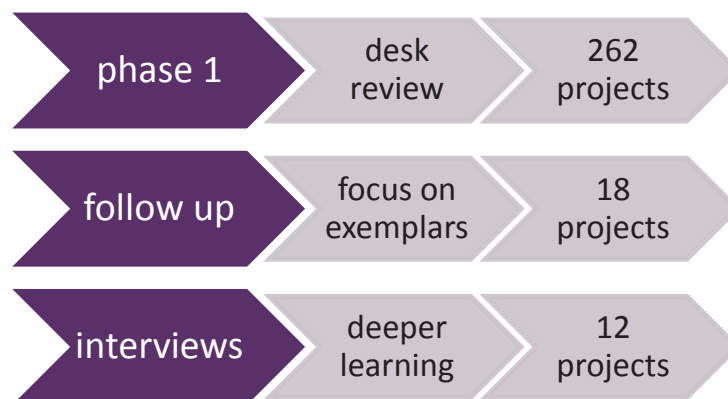
***Joint Programming Initiative (JPI) Urban Europe***

*New collaborations are emerging in the form of urban living labs – sites devised to design, test and learn from social and technical innovation in real time.*

***Governance for Urban Sustainability Transitions (GUST)***

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## PROJECT METHODOLOGY AND APPROACH

**Figure 4: Project Fieldwork Phases**

| phase 1 | desk review | 262 projects |
| follow up | focus on exemplars | 18 projects |
| interviews | deeper learning | 12 projects |

Initial exploration yielded an unmanageable volume of potentially relevant examples, so the above research strategy was devised to guide the reviewing process.  This was augmented by the selection of several key actors interviewed by the authors.

### PHASE ONE FILTERS

The desk review phase considered 262 specific projects in total. These are divided into:

PLACE BASED LABS: 91 in number, garnered from a programme-level desk review, listed in appendix one and exemplars selected in section 4.4.

RESEARCH PROJECTS WITH URBAN IMPACT: 75 in number, listed in appendix two and section 4.5.

ROCKEFELLER RESILIENT CITIES: Totalling 100, these have been examined for transferable learning, particularly the 5 in the UK.

To the 262 the following filters were applied:

1. Urban Transformations criteria for priorities in urban research (see below)
2. The ENoLL checklist

In 2015 Urban Transformations identified the following criteria for prioritising ESRC urban research investments in cities:

INTERDISCIPLINARY: Demanding demonstrable combinations of researchers from across natural sciences, social sciences and the humanities working in collaboration.

INTERPROFESSIONAL: Developing models of knowledge exchange and research impact that work across the silos of urban professional interests, positioning research in its complex institutional setting of discrete 'urban professions'.

MULTI-SCALAR: Recognizing the constitutional, analytical and normative challenges of city agglomerations that range from megacities and city regions to granular small-scale neighbourhood change.

INTERNATIONALLY COMPARATIVE: Acknowledging the imperative for UK research to address research challenges and urban dynamics that transcend an old development model that expects cities of the global

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south to mimic development pathways of the global north and explores the potential for international collaborative research that addresses the global challenges of the 21st century.

FUTURE ORIENTED: Thinking seriously about research that moves beyond extrapolation from trend to address the challenges confronting cities across the world in the 21st century and the forms of research knowledge that are needed to address them.

In addition, we have used the ENoLL checklist which defines whether a project has the features of a living lab:

ACTIVE USER INVOLVEMENT: Empowering end users to thoroughly impact the innovation process.

REAL-LIFE SETTING: Testing and experimenting with new artefacts 'in the wild'.

MULTI-STAKEHOLDER PARTICIPATION: Involving technology providers, service providers, relevant institutional actors, professional or residential end users.

A MULTI-METHOD APPROACH: Combining methods and tools originating from ethnography, psychology, sociology, strategic management, and engineering.

CO-CREATION: Producing iterations of design cycles with different sets of stakeholders.

However, both of these sets of criteria are best applied to the level of the individual research project. The key about living/urban labs is that they function over a series of scales; international practice can be viewed, therefore, as on the level of a project, a programme, a portfolio or a platform.

## PARAMETERS FOR ANALYSIS: PROJECT, PROGRAMME, PORTFOLIO, PLATFORM?

Due to the short, time-limited nature of this commission it has been decided to focus primarily on the programme level interventions which frame specific projects. These programmes are listed in Table 2.

**Table 2: Programme-level labs and number of projects**

| PROJECTS/PROGRAMMES | |
| --- | --- |
| 4 | Mistra Urban Futures |
| 4 | New Urban Mechanics |
| 3 | BMW Guggenheim Urban Lab |
| 8 | Lab +  International Network of Living Labs |
| 13 | "Effective members" of ENoLL |
| 10 | "Laureate" cities awarded the Guangzhou award for Urban Innovation |
| 40 | GUST snapshot projects |
| 5 | urb@exp project cities |

These we characterised according to the typology below:

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AN URBAN LIVING PLATFORM: Embedded within a city context and its policy making function, it has a permanence beyond project-based activity and can be seen as part of the governance system. A platform may house a series of programmes or projects but is not time-limited. A platform does manifest a *clear and defined territorial focus* and area of operation.

AN URBAN LIVING PORTFOLIO: An umbrella for projects and programmes, such as ENoLL, Lab+ or Urban Transformations. A portfolio offers connections and networks across projects or platforms, and links to the urban learning environment explored by the city leadership initiative.

AN URBAN LIVING PROGRAMME is a number of projects with strategic rationale, which are either curated or commissioned, such as JPI Urban Europe, MISTRA Urban Futures. Programmes are defined primarily by funders. In this report we begin at the programme level and look at bundles of funded projects.

AN URBAN LIVING PROJECT is one demonstrating the functions of an Urban Living Lab. They can be funded under programmes, standalone, private sector initiated or community led. There are many examples of labs – to the extent that the label risks being meaningless as it frames interventions as varied as Nokia-led product testing in Helsinki, the explorations of the occupy movement, urban surveillance, sensing and monitoring projects under the rubric of the smart city and 'communiversity' experiments.

## PROGRAMME LEVEL SURVEY OF INTERNATIONAL LEARNING FOR URBAN LIVING: LIVE LABS

Appendix One lists 91 projects compiled from the following programme level interventions: Mistra Urban Futures, New Urban Mechanics, BMW Guggenheim, Urban Lab +, ENoLL and winners of the Guangzhou Award for Urban Innovation. The 100 Rockefeller Resilient Cities are also examined.

### MISTRA URBAN FUTURES.

The Mistra Urban Futures Programme covers two cities from the global north and two cities from the global south, building in the need for programme wide knowledge exchange. Mistra Urban Futures represents a strategic set of choices from funding agencies in Sweden to work differently and has enabled four projects which are well-funded and connected globally. One of the key features of Mistra is the Gothenburg consortia funding model which underpins the programme. The four Local Implementation Partnerships are: Mistra Cape Town, Mistra Greater Manchester, Mistra Gothenburg and Mistra Kisumu. The Gothenburg consortia combine matched-funding from local and national government agencies, as well as the research council. The implementation partnerships operate at the city scale and there is a facility for working across the projects within the programme. Mistra UF has recently produced a handbook on their approach published by Routledge, at their first international conference in September 2016.

### EXEMPLAR STRATEGIC FUNDING MODEL: MISTRA URBAN FUTURES

*One of the main reasons for the City of Gothenburg – and other Gothenburg Consortium members – to take an active part in the founding of Mistra Urban Futures was based in the need for more, better and practically useful knowledge regarding sustainable urban development.*

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> *Anneli Hulthén, Mayor and Chair of the Executive Committee of the City of Gothenburg*[4]

*The new book* Co-producing Knowledge for Sustainable Cities – Joining Forces for Change *is about producing knowledge in urban areas. More specifically, it focuses on how decision-makers, civil servants, private actors and civil society come together with researchers to co-produce knowledge that can be used to contribute to creating more sustainable urban futures.*

> **Merrit Polk, Gothenburg LIP**

*It is important that participants in knowledge co-production processes are explicit about the changes they want to see in the world, and about the assumptions underpinning these desired changes. Participants in knowledge co-production processes also need to be transparent about who is and who is not involved, how the 'problems' being addressed are defined, and the choice of research approaches and methods.*

> ***Warren Smit, Cape Town LIP***

## URBAN MECHANICS

The urban mechanics model is the best example of institutionally supported platform activity found within the desk review. There are however many precedents from the North American system which create the conditions for the development of these platforms. The new urban mechanics model functions in three major cities, Boston, Philadelphia, and NYC, and is now being trialled in Utah.

## EXEMPLAR OF EMBEDDED CIVIC PLATFORM AND CIVIC INNOVATION AGENCY: BOSTON URBAN MECHANICS

Following a conference at MIT in November 2015, one of the authors visited the Boston Mayor's Office of New Urban Mechanics and was introduced to their activities. A city agency since 2010, it serves as Mayor Martin J Walsh's civic innovation group, piloting experimental approaches to the quality of city services. The office focuses on four major issue areas: Education, Engagement, the Streetscape, and Economic Development. To design, conduct and evaluate pilot projects in these areas, it builds partnerships between constituents, academics, entrepreneurs, non-profits and City staff.

> *Boston MONUM comes as close to being a genuine platform for urban living laboratory work as any others I have seen. It has been a strategic partnership between Harvard, MIT and the mayoralty for more than six years and the model has been rolled out to other major American cities. Arguably the ground for this was fecund in Boston as the universities are such huge players in the city – the previous mayor Moneno backed a city initiative based at the University of Boston and this initiative has conducted US-wide surveys of mayors. There is some*

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[4] Retrieved from http://www.mistraurbanfutures.org/en/node/1117

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*inherent risk to the urban living lab approach to being so politically mandated but it is a feature of American mayoralties that personal patronage is a political reality to be navigated.* [5]

## GUGGENHEIM URBAN LABS

The Guggenheim Labs were temporary (2010-2014) but so well resourced and influential that they merit a mention. The approach adopted by the foundation was to run the three sites with a permanent staff, plenty of money for commissions but retaining a sense of an overarching programme. The legacy of the lab is a fantastic web resource for teaching and learning. The approach adopted was led by international, interdisciplinary Lab Teams—groups of emerging talents in the areas of urbanism, architecture, art, design, science, technology, education, and sustainability—with the Lab addressing issues of contemporary urban life through free programs, projects and public discourse.

They operated only in New York, Berlin and Mumbai but leave a legacy online, specifically through the 100 urban trends supported resource. The curation of this resource, which compares the glossary across the three sites, is still unsurpassed as a how-to guide for urban innovation.[6]

## BMW GUGGENHEIM EXEMPLAR OF FOUNDATION SUPPORTED LAB

Part urban think tank, part community centre and public gathering space, the Lab travelled globally to inspire new ways of thinking about urban life:

*The cities that will best survive the challenges facing us in the coming urban century are those that are most amenable to uncertainty. They are those that build flexibility into their code. They assume they will need to accommodate change, and empower their citizens to help them do so. They have solid goals, without a fixed agenda, and they have vision without expectation. They plan through inquiry rather than didacticism, and draw with pencils rather than pens. They know they don't know what's coming, so they plan to adapt to anything.*

***Christine McLaren***

The New York Lab was located in First Park, a New York City Parks property at Houston and Second Avenue, on the border between the Lower East Side and East Village neighbourhoods. Programs developed by the New York Lab Team included tours, workshops, debates, roundtable discussions, screenings, performances, experiments, and "Comfort Series" lectures by such urban luminaries as Saskia Sassen, Elizabeth Diller and Juliet Schor.

In Berlin, the Lab was located in Prenzlauer Berg in the Pfefferberg complex and was presented in cooperation with ANCB The Metropolitan Laboratory. There, the Berlin Lab Team offered free, participatory programs that focused on the importance of 'making' to activate urban change. The Berlin Lab's 97 talks, 101 workshops, 14

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[5] From the Boston Urban Mechanics website http://newurbanmechanics.org/

[6] More information can be found here: http://www.bmwguggenheimlab.org/100urbantrends/#!/new-york-city/

screenings, 5 special events, and 27 citywide explorations offered practical ways to empower residents with tools and ideas for shaping their urban environments.

During the Lab's stay in Mumbai, the Mumbai Lab Team created a series of projects, academic and participatory studies, and design proposals that reflected the unique conditions and challenges of Mumbai. Over six weeks the Lab, presented in collaboration with the Dr Bhau Daji Lad Museum, offered 165 free programs, including design projects, surveys, tours, talks, workshops, and film screenings. The central location of the Lab was on the grounds of the museum in Mumbai's Byculla neighbourhood.

## URBAN LAB+

Urban Lab+ was a university-university network which ran between 2012 and 2015 connecting the more prominent **university led** labs together, funded by the EU through co-operation funding under the Erasmus Mundus programme. Arguably this network represents first mover advantage as the institutions had developed early track records. The partners in the initiative were:  TU Berlin, EPFL Lausanne Switzerland, UNICAL Calabria Italy, IEUT Santiago Chile, CUBES, Johannesburg, KVIA Mumbai India, CUHK Hong Kong and the UCL Urban Lab, London

> *URBAN LAB+ focuses on the thematic issue of urban inclusion and exclusion...*
> *Composed of a total of eight established Urban Laboratories the project provides*
> *a platform for dialogue and cooperation between partners from Europe as well*
> *as from major regions of urban growth in South Africa, Asia, and Latin America*
> *and, in doing so, advance a common goal: to promote and deliver high-quality*
> *research and education in the built environment disciplines.*[7]

This initiative is quite unique in providing an international network specifically for the scholars involved in university-based living lab projects.

## EUROPEAN NETWORK OF LIVING LABS (ENOLL)

ENoLL, the international federation of benchmarked living labs in Europe and worldwide, is the largest player in the laboratory scene. It is the most comprehensive portfolio of labs in the world and its influence stretches far beyond Europe. ENOLL counts 400 active living labs on the interactive map on the website. It has developed some very clear and well defined principles over many years and functions as a membership organization. Founded in November 2006 under the auspices of the Finnish European Presidency, the network has grown in 'waves' up to this day.

Directly, as well as through its active members, ENoLL provides co-creation, user engagement, test and experimentation facilities targeting innovation in many different domains such as energy, media, mobility, healthcare, agrifood, etc. As such, ENoLL is well placed to act as a platform for best practice exchange, learning and support, and living lab international project development.

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[7] Retrieved from http://www.turning-tables.it/urban-lab/

## GUANGZHOU INTERNATIONAL AWARD FOR URBAN INNOVATION

The Guangzhou award is included here as it acts as a powerful motor for the transmission of ideas about urban innovation and seeks to spotlight such work. It is made bi-annually to a cohort of five cities who are judged to be delivering world-leading urban innovation. The prize money (of $20,000) is then invested in the projects themselves. The award has traditionally favoured projects that present themselves as within the living/urban lab category.

The concept of the Guangzhou International Award for Urban Innovation (abbreviated as Guangzhou Award) is derived from the city's long-term cooperation with United Cities and Local Governments (UCLG) from its foundation in 2004 and with the World Association of Major Metropolises (Metropolis) since 1993. Co-hosted by UCLG, Metropolis, and Guangzhou Municipal Government, the Guangzhou Award aims to recognize innovation in improving social, economic and environmental sustainability in cities and regions. The Guangzhou Award contributes to the progress of city performances by promoting innovations in the public sector and presenting a platform for the sharing and exchange of lessons learned from successful innovation practices.

The award is open to all cities and regions worldwide, including members of Metropolis and UCLG. Applicants can submit innovative achievements in such thematic fields as Public Services, Organization and Administration, Partnership and Citizen Involvement, Smart City, Sustainable City, and others. **Bristol** was a winner in the first cohort. The third cohort will be awarded in December 2016.

## ROCKEFELLER 100 RESILIENT CITIES

The Rockefeller resilient cities programme funds a network of resilience officers hosted by public agencies in their 100 selected cities. Though not couched overtly in the terms of living labs activity they propose a year-long strategy development process which must be co-produced across the government, civil society, industry and research. The 100 cities were awarded in three waves and the programme is now complete. All cities are live. Five UK cities are resilient cities: **Bristol** and **Glasgow** from the first wave, **London** in the second and **Greater Manchester** and **Belfast** in the third (see appendix four for a full list).

The effects of the resilience officers, their resilience planning process and their wider impact within and beyond the public agencies who host them has not been evaluated and it may be that this is an untapped resource for the UK.

## GOVERNANCE OF URBAN SUSTAINABILITY TRANSITIONS (GUST) SNAPSHOTS

In the following section research projects touching on urban labs will be discussed. Two of these, however, merit inclusion in this section. GUST has spent much of its initial funded period carrying out a full survey and audit of urban lab practice worldwide. The project is a member of the ESRC Urban Transformations portfolio and is a JPI-funded project active in the UK, Sweden, The Netherlands and Austria.

They have compiled 2-page snapshots of 40 urban labs so far and these are available on their website. Appendix 5 contains clickable links to the projects in question. Each snapshot focuses on strengths and challenges of the project in question and are an excellent resource for interrogating lab practices.

## URB@EXP

Urb@exp is another JPI project focused on the functioning of labs themselves as an object of study. The aims of urb@exp are to develop evidence-based guidelines for urban labs. Working on the types of problems most suited to deal with in urban labs 'good practices' of implementing urban labs in terms of structure, processes of co-creation and engaging participants effective approaches to integration of urban labs as a new, innovative form of governance into formal local government structures. The urb@exp consortium cities are: Antwerp, Maastricht, Malmö, Graz and Leoben.

> *Through action research urb@exp explores how different urban actors can become effectively involved in co-creation entailing that the project partners engage in 'real world' urban lab experiments. The composition of the consortium, with five cities that have urban labs in place or in the process of being established, ensures direct access to a rich variety of lab experiments and urban contexts.[8]*

## LIVE RESEARCH PROJECTS

Separate but connected are the researcher-led projects explored in this section. In recent years commissioners of research worldwide have expressed preference for lab models of working. Arguably the rise of "impact agendas" stressing the translation of research practice into policy settings complements lab-type approaches and Appendix 2 enumerates 75 research projects with some urban lab features, funded by either JPI or the European Research Council (ERC).

## JPI 1 & 2 EN SUF, ERA-NET SMART CITIES AND COMMUNITIES

JPI is the biggest cross European research council led programme of lab activity and this first phase of operation funded university based research projects specifically commissioning lab activity. The first 2 funded periods of JPI funding were conducted without the UK as funding partners but despite this a handful of UK scholars are on JPI projects.

There are numerous research projects which take as their principal object of study lab working itself (such as GUST, and urb@exp described above. Further work is needed on the networks of researchers engaged in this activity – particularly the ways in which UK researchers access these networks.

## ERC URBAN

ERC funding represents one of the most prestigious streams of research support. These projects are not labs per se but instead represent the best of quality urban research. ERC criteria focus on impact in specific ways and exploring British urban scholars with ERC research grants, through their Knowledge Exchange and Impact claims and the networks they operate in, would be relevant to evaluate further as part of the network of urban research proposed in section 2.   Further work is needed to consider the significance of these projects in

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[8] Retrieved from http://www.urbanexp.eu/

generating impact within city governments, their pathways to impact and their approaches to co-production of knowledge.

## 4.6 SUMMARY

## LEARNING FROM LIVING LAB EXEMPLARS

| | |
|---|---|
| **STRATEGIC FUNDING MODEL** | Mistra Urban Futures |
| | Frauenhofers |
| **CIVIC EMBEDDED AGENCY** | Boston Mayor's Office of New Urban Mechanics |
| | Newcastle City Futures |
| | Policy Scotland |
| **FOUNDATION LAB** | Guggenheim BMW Lab |
| | Rockefeller Urban Innovations |
| **ACADEMIC-LED/ACTIVIST-ENGAGED** | UCL Urban Lab |
| | Just Space |
| **UK PROJECT FOCUSING ON LAB ACTIVITIES** | GUST |

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## 5. LESSONS AND CHALLENGES FOR THE URBAN LIVING PROGRAMME

### UK URBAN LIVING

UK Urban Living represents one of the most exciting initiatives in recent years in the research landscape. It has the opportunity to:

- Work with the grain of evolving practices in British universities concerned with linking research endeavour across disciplines to the civic role of the institution.
- Build on existing trends in academic research, generating a fundamental step change in interdisciplinary collaboration across all seven research councils and Innovate UK in the quality and impact of urban studies research.
- Respond positively to reforms of the research funding system signalled in the work of the Nurse Inquiry, the 2015 Green Paper and the 2016 White Paper on Higher Education and the Stern review of HEFCE and the REF process.
- Develop a pioneering programme of research and intervention that addresses one of the most significant global social, economic and scientific challenges of the 21$^{st}$ century.
- Apply international learning from living labs in order to embed it locally.

### PLATFORM/INFRASTRUCTURE OPPORTUNITIES

The wide variety of labs that operate globally offer the prospect that Urban Living could promote links between research and impact and move beyond standalone projects towards being platforms that blend the features of the:

- Research centre
- Policy unit
- Think tank
- Consultancy
- Start-up/spin-out
- Laboratory
- Observatory
- Mechanism for public participation
- Activist network

In developing the Urban Living programme research funders might either prioritise particular combinations of these features or invite diverse responses from the research community that make explicit their preferred orientation. Further analysis is needed to align future phases of the Urban Living programme with the rapidly changing research / policy landscape internationally. There is space and time in this report to stress only the scale of diversity and depth of experience represented in the landscape.

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However, the Urban Living programme is also potentially in danger of replicating previous challenges that bedevilled earlier cross-council research working[9], **falling prey to a rapidly changing research landscape and diminishing significance in terms of UK research priorities.** These might be summarised as follows:

- **Global learning needs to be strengthened:** The UK has the good fortune of strong disciplinary expertise in the 'urban disciplines'; the disadvantage of being laggard in the development of city observatories and living labs that are embedded in cities, engaged in high quality research.
- **There is little evaluation of what has been tried internationally or nationally:** If there is one lesson of *What Works Centres* (e.g. Local Economic Growth Centre) it is that the lack of meaningful evaluation handicaps successful policy innovation by failing to learn from successful policy formation.
- **The research ecosystem is changing rapidly:** Navigating this landscape involves reconciling national priorities and the new funding world of Global Challenges. The funding focus on the global in the GCRF mode and the extended literatures on the civic university create both tensions and opportunities.
- **Research councils conventionally fund universities and academics under well-established protocols:** Successful urban living labs are embedded in cities themselves as much as in universities. This raises questions about the institutional forms of labs and observatories that might be commissioned by the Urban Living partnership. It also raises questions about how such work should be commissioned, potentially reconfiguring how councils consider questions on research for/on cities. Such questions reach to the heart of what are generally described as Haldane principles in research funding[10].
- **The scale of resources at stake for the Urban Living initiative generates questions concerning the plausibility for the cities of the initiative:** How local early levels of concern, local priorities and international connections are reconciled needs to be a key area of focus.
- **There is a need to define the role of city government in collaboration:** This requires explaining the cities' *seat at the table* and the relevance of both international lessons and the collective learning from the Foresight Future of Cities programme[11] relating to:
  - o Research criteria and partnership criteria in understanding city futures.
  - o Research opportunities for shaping smart commissioning, data analytics and service delivery for future cities.
- **There needs to be further examination of the intersection between the civic university, the locality and the interdisciplinary:** How much are the research councils discussing with the Universities themselves the emergence of new thinking about the role of the University within the research ecosystem?
- **Innovation priorities could be more effectively integrated:** Innovate UK remained until 2017 an independent organization with report lines and accountabilities distinct from the research councils. This position will evolve as UK Research and Innovation (UKRI) becomes the focus of more joint working with the research councils, but at present there is an uncertain link between Urban Living,

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[9] See the challenges of previous interdisciplinary initiatives in the UK research space described in Evans and Marvin (2006).

[10] See the discussion in the House of Commons Innovation, Universities, Science and Skills Committee (2009). *Putting Science and Engineering at the Heart of Government Policy Eighth Report of Session 2008–09'*, section 4. on the history of the Haldane principle.

[11] See the material published from the UK Future of Cities Foresight programme at https://www.gov.uk/government/collections/future-of-cities

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the role and objectives of the Future Cities Catapult and related Treasury focused initiatives such as the emergent Hyper connected Cities Programme proposals and the EPSRC led UK Collaboratorium for Research in Infrastructure and Cities (UKCRIC) programme, focusing on a research partnership of work on infrastructure investment.

## BUILDING ON INTERNATIONAL LESSONS

There is also an opportunity to consider how the fundamental architecture of a programme supported by seven research councils and Innovate UK might differ from conventional 'research programmes' supported by individual councils or small groups of councils working together. In this report we have considered the examples of new ways of working across the space of urban governance, research ecosystems and innovation funding to consider how best Urban Living might learn from precedents and experience in this new space internationally.

Conventional research programmes sponsored by UK research councils are based on a long established set of protocols between universities and funders. Putting things slightly simplistically, advisers to the councils may influence the priorities identified and programmes established. But awards are determined on the basis of peer review measures of academic excellence and an arm's length relationship between funder and research conducted. There are excellent reasons why this set of protocols has become standardized. However, there are reasons to question whether traditional protocols will optimize the relationship between city governance, innovation and contemporary urban research.

Urban Living was the first of the 'grand challenges' to trial cross-council working involving all seven research councils and Innovate UK. The grand challenge of Urban Living was UK focused and interdisciplinary. The CSR settlement of 2016, which introduced the Global Challenges Research Fund as a principal focus of cross-council collaboration, has obvious impacts on the manner in which the Urban Living initiative is positioned within the research ecosystem and in the attraction of scarce research resources from across councils.

However, as UKRI becomes established it will become increasingly important to demonstrate that Innovate and the research councils can work effectively together. In the 'cities space' there is a real opportunity to develop this agenda productively. There is precedent of early working together on the pilot projects for Urban Living and in collaboration in the JPI Urban Europe programme. Subsequent to the completion of this report the announcement of the Industrial Strategies Challenge Fund has created another arena in which the centrality of the future of cities in shaping British economic fortunes might demand an understanding of past experience in this interdisciplinary space.

In the successful models of working we have considered internationally it is essential to align the priorities of three forms of funding and organization that are commonly separated. These address in turn the relationship between research funding and universities, innovation funding and the private sector and initiatives in cities and processes of urban experimentation.  The capacity of the cities to innovate and commission in a smart fashion and the capacity of universities to work genuinely both across disciplines and within the institutional setting of local government organisations with budgets over £1 billion pa is not straightforward.

This raises both a challenge and an opportunity for the Urban Living Partnership. There is evidence that it might be possible to use the current changes in the British research ecosystem to foreground the new ways of working between Innovate and the seven research councils. This would involve senior commitment to the future rounds of Urban Living from Innovate at senior level, full engagement of the Future Cities Catapult and direct links to Treasury and central government policy on initiatives restructuring city governance. It might also involve some reflection on the conventional mechanisms through which future rounds of Urban Living might be commissioned

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## APPENDIX 1: CITIES WITH FUNCTIONING LABS FROM PROGRAMME SURVEY

| EUROPE | |
|---|---|
| **Austria** | |
| Graz | Urb@exp |
| | E-mobility Graz Austria (GUST snapshots) |
| | Smart City Project Graz Mitte Austria (GUST snapshots) |
| Hartberg | Smart City Hartberg Austria (GUST snapshots) |
| Leoben | Urb@exp |
| Leonding | Urban Farm Austria (GUST snapshots) |
| Salzburg | Smart District Gnigl Austria (GUST snapshots) |
| Vienna | Interethnic Coexistence in European Cities (ICEC) Austria (GUST snapshots) |
| | Guangzhou Award |
| | Urban Lakeside, AspernmAustria (GUST snapshots) |
| | Vienna Shares Austria (GUST snapshots) |
| | ERnteLAA  Austria (GUST snapshots) |
| Villach | Vision Step I Austria (GUST snapshots) |
| **Belgium** | |
| Antwerp | Urb@exp |
| **Denmark** | |
| Copenhagen | Danish Outdoor Lighting Lab (DOLL) (GUST snapshots) |
| Horsens | Insero Live Lab (GUST snapshots) |
| **Finland** | |
| Helsinki | Helsinki Living Lab - Forum Virium Helsinki (ENoLL core members) |
| **France** | |
| Issy-les-Moulineaux | MEDIALAND Living Lab (GUST snapshots) |
| **Germany** | |
| Berlin | BMW Guggenheim |
| | TU Berlin (Urban Lab+) |
| | Design Research Lab (Neighbourhood Labs) (GUST snapshots) |
| Friedrichshafen | T-City Friedrichshafen (GUST snapshots) |
| Hamburg | Nexthamburg (GUST snapshots) |
| | Renewable Wilhelsburg Climate Protection Concept (GUST snapshots) |
| **Italy** | |
| Apulia | Apulian ICT Living Lab (GUST snapshots) |
| Calabria | UNICAL Italy (Urban Lab+) |

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| Milan | City of the Future Living Lab (COTFLL) (GUST snapshots) |
|---|---|
| **Netherlands** | |
| Amsterdam | IAMS |
| Eindhoven | Eindhoven Living Lab (ENoLL core members) |
| Groningen | Urb.Gro.Lab Netherlands (GUST snapshots) |
| Maastricht | Maastricht-LAB Netherlands (GUST snapshots) |
| | Urb@exp |
| **Poland** | |
| Krakow | Krakow Living Lab (ENoLL core members) |
| Poznan | Poznan Living Lab (ENoLL core members) |
| **Spain** | |
| Barcelona | Laboratori (ENoLL core members) |
| Valencia | EVOMOBILE (GUST snapshots) |
| **Sweden** | |
| Borås | Norrby Innovation Platform Sweden (GUST snapshots) |
| Luleå | Botnia Living Lab |
| Gothenburg | Gothenburg (Mistra Urban Futures) |
| | HSB Living Lab Sweden (GUST snapshots) |
| | Living Lab UbiGo Sweden (GUST snapshots) |
| Lund | Future by Lund (GUST snapshots) |
| Malmö | Urb@exp |
| | Hållbarheten Sweden GUST snapshots |
| | Stapeln Open Maker Space (STPLN) (GUST snapshots) |
| | Malmö Innovation Platform (GUST snapshots) |
| Stockholm | New Light on Alby Hill Sweden GUST snapshot) |
| | Shape Your World Sweden (GUST snapshots) |
| Uddevalla | Living Lab Uddevalla Sweden GUST snapshots |
| **Switzerland** | |
| Lausanne | EPFL Lausanne (Urban Lab+) |
| **Turkey** | |
| Basaksehir | Living Lab (ENoLL core members) |
| Istanbul | Smart City Istanbul Living Lab (SCILL) (ENoLL core members) |
| Kocaeli | Guangzhou Award |
| **United Kingdom** | |
| Bristol | Bristol Living Lab (ENoLL core members) |
| | Bristol City (Guangzhou award) |

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| | |
|---|---|
| Coventry | City Lab Coventry (ENoLL core members) |
| Glasgow | Future City Glasgow (GUST snapshots) |
| London | Manor House PACT (GUST snapshots) |
| | Muswell Hill Low Carbon Zone (GUST snapshots) |
| | Tottenham - The Community Energy Lab (GUST snapshots) |
| | UCL Urban Lab (Urban Lab+) |
| Manchester | Manchester – Mistra Urban Futures |
| Milton Keynes | MK:Smart (GUST snapshots) |
| Newcastle | Newcastle City Deal (GUST snapshots) |
| | Newcastle Science Central (GUST snapshots) |
| Sheffield | Living Don (GUST snapshots) |
| | Sum Studios (GUST snapshots) |
| Wingrove | Greening Wingrove (GUST snapshots) |
| **AFRICA** | |
| **Kenya** | |
| Kisumu | Mistra Urban Futures |
| **Malawi** | |
| Lilongwe | Lilongwe City (Guangzhou award) |
| **Senegal** | |
| Dakar | Dakar City (Guangzhou Award) |
| **South Africa** | |
| Cape Town | Mistra Urban Futures |
| Johannesburg | CUBES (Urban Lab+) |
| **AMERICAS** | |
| **Canada** | |
| Vancouver | Vancouver (Guangzhou Award) |
| **Chile** | |
| Santiago | IEUT (Urban Lab+) |
| **Colombia** | |
| Antiquoia | Antiquoia City (Guangzhou Award) |
| Medellin | Ruta N |
| **Mexico** | |
| Mexico City | Laboratorio para la Ciudad  Mexico City |
| **United States** | |
| Boston | Boston Mayor's Office of New Urban Mechanics |

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| New York | New York (BMW Guggenheim) |
|---|---|
| | Centre for Urban Science and Progress (CUSP) |
| Philadelphia | Office of New Urban Mechanics |
| Utah | Office of New Urban Mechanics |
| **ASIA** | |
| **China** | |
| Hangzhou | Hangzhou  (Guangzhou Award) |
| Hong Kong | The Chinese University of Hong Kong (Urban Lab +) |
| **India** | |
| Mumbai | Mumbai (BMW Guggenheim) |
| | KVIA (Urban Lab +) |
| **New Zealand** | |
| Christchurch | Christchurch (Guangzhou Award) |
| **Singapore** | |
| Singapore | Future Cities Laboratory Singapore (run by ETH) |
| **South Korea** | |
| Seoul | Seoul (Guangzhou Award) |
| **Taiwan** | |
| Taipei | Living Labs Taiwan (ENoLL core members) |

| | |
|---|---|
| First JPI Urban Europe Pilot Call | APRILab |
| | b-Part84 |
| | CASUAL |
| | CONCOORD |
| | G@together |
| | Gentrification 2.0 |
| | Green Blue Cities |
| | IMAGINATION |
| | Interethnic Coex. in European Cities |
| | SubUrbanLab |
| Second JPI Urban Europe Pilot Call | E4-share |
| | GUST |
| | Incubators |
| | IRENE |
| | play!UC |
| | Resilient Cities |
| | ResSegr |
| | SimsCity ValueCap |
| | URB@Exp |
| | UrbanData2Decide |
| ERA-NET | BREATHE |
| | CIVIC |
| | CODALoop |
| | DESENT |
| | IntegrCiTy |
| | IP-SUNTAN |
| | me2 PARENT |

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| | |
|---|---|
| | Smart Commuting |
| | Smart Urban Isle |
| | SmartCityHospitality (SCITHOS) |
| | SmarterLabs |
| | Smart-FI. |
| | SmartGov. |
| | SPACERGY. |
| | SURECITY |
| | TRANS-FORM |
| ERC "urban" | AFRIGOS. |
| | ATMOPACS |
| | AgricUrb. |
| | BROKERS |
| | Becoming Men |
| | CITIZENSENSE |
| | CONNECTINGEUROPE. |
| | CityNet |
| | ComparingCopperbelt |
| | CrowdLand |
| | DECIDE |
| | DYNURBAN |
| | EINITE |
| | EMPIREOF2000CITIES |
| | EVALUATE |
| | GLOBALDIVERCITIES |
| | GREENLULUS |
| | GeodiverCity |
| | HeartHealthyHoods |
| | Local State |
| | MAGnUM |

|  | MECHANICITY |
|  | METAFERW |
|  | Migrant Socialities |
|  | OPTION |
|  | REALEURASIA |
|  | RECOLAND |
|  | REFCOM |
|  | RELNET |
|  | RETURN |
|  | RETURNPOC |
|  | RUN |
|  | SHARECITY |
|  | SOFTCITY |
|  | SPIKES |
|  | U4IA |
|  | UMnD |
|  | UrbanWaves |
|  | WORLD SEASTEMS |

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| Rockefeller Resilient Cities Round One |
| --- |
| Bangkok, Thailand |
| Berkeley, United States |
| Boulder, United States |
| **Bristol, England** |
| Byblos, Lebanon |
| Christchurch, New Zealand |
| Da Nang, Vietnam |
| Dakar, Senegal |
| Durban, South Africa |
| El Paso, United States |
| **Glasgow, Scotland** |
| Los Angeles, United States |
| Mandalay, Myanmar |
| Medellín, Colombia |
| Melbourne, Australia |
| Mexico City, Mexico |
| New Orleans, United States |
| New York City, United States |
| Norfolk, United States |
| Oakland, United States |
| Porto Alegre, Brazil |
| Quito, Ecuador |
| Ramallah, Palestine |
| Rio de Janeiro, Brazil |
| Rome, Italy |
| Rotterdam, The Netherlands |

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| |
|---|
| San Francisco, United States |
| Semarang, Indonesia |
| Surat, India |
| Vejle, Denmark |
| **Rockefeller Resilient Cities Round Two** |
| Accra, Ghana |
| Amman, Jordan |
| Athens, Greece |
| Bangalore, India |
| Barcelona, Spain |
| Belgrade, Serbia |
| Boston, United States |
| Cali, Colombia |
| Chennai, India |
| Chicago, United States |
| Dallas, United States |
| Deyang, China |
| Enugu, Nigeria |
| Huangshi, China |
| Juarez, Mexico |
| Kigali, Rwanda |
| Lisbon, Portugal |
| **London, England** |
| Milan, Italy |
| Montreal, Canada |
| Paris, France |
| Pittsburgh, United States |
| San Juan, Puerto Rico |
| Santa Fe, Argentina |
| Santiago de los Caballeros, The Dominican Republic |

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|---|
| Santiago, Chile |
| Singapore |
| St. Louis, United States |
| Sydney, Australia |
| Thessaloniki, Greece |
| Toyama, Japan |
| Tulsa, United States |
| Wellington City, New Zealand |
| **Rockefeller Resilient Cities Round Three** |
| Addis Ababa, Ethiopia |
| Atlanta, United States |
| **Belfast, Northern Ireland** |
| Buenos Aires, Argentina |
| Calgary, Canada |
| Can Tho, Vietnam |
| Cape Town, South Africa |
| Colima, Mexico |
| **Greater Manchester, England** |
| Greater Miami and the Beaches, United States |
| Guadalajara Metropolitan Area, Mexico |
| Haiyan, China |
| Honolulu, United States |
| Jaipur, India |
| Jakarta, Indonesia |
| Kyoto, Japan |
| Lagos, Nigeria |
| Louisville, United States |
| Luxor, Egypt |
| Melaka, Malaysia |
| Minneapolis, United States |

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| Montevideo, Uruguay |
| Nairobi, Kenya |
| Nashville, United States |
| Panama City, Panama |
| Paynesville, Liberia |
| Pune, India |
| Salvador, Brazil |
| Seattle, United States |
| Seoul, South Korea |
| Tbilisi, Georgia |
| Tel Aviv, Israel |
| The Hague, The Netherlands |
| Toronto, Canada |
| Vancouver, Canada |
| Washington, DC, United States |
| YIWU, China |

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## APPENDIX 4: LIVE LINKS TO GUST LAB SNAPSHOTS (40 PROJECTS)

All Cities below are hyperlinked to snapshots

| Austria | |
|---|---|
| Vienna - | Vienna Shares |
| Villach - | VIsion Step I |
| Leonding - | Urban Farm |
| Salzburg - | Smart District Gnigl |
| Hartberg - | Smart City Hartberg |
| Graz - | e-mobility Graz |
| Vienna - | ERnteLAA |
| Graz - | Smart City Project Graz Mitte |
| Vienna - | Interethnic Coexistence in European Cities (ICEC) |
| Aspern - | Vienna's Urban Lakeside |
| **Denmark** | |
| Copenhagen - | Danish Outdoor Lighting Lab (DOLL) |
| Horsens - | Insero Live Lab |
| **France** | |
| Issy-les-Moulineaux - | MEDIALAND Living Lab |
| **Germany** | |
| Berlin - | Design Research Lab (Neighbourhood Labs) |
| Friedrichshafen - | T-City Friedrichshafen |
| Hamburg - | Nexthamburg |
| Hamburg - | Renewable Wilhelsburg Climate Protection Concept |
| **Italy** | |
| Apulia - | Apulian ICT Living Lab |
| Milan - | City of the Future Living Lab (COTFLL) |
| **Netherlands** | |
| Groningen - | Urb.Gro.Lab |
| Maastricht - | Maastricht-LAB |

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| | |
|---|---|
| **Spain** | |
| Valencia - | EVOMOBILE |
| **Sweden** | |
| Stockholm - | New Light on Alby Hill |
| Borås - | Norrby Innovation Platform |
| Lund - | Future by Lund |
| Gothenburg - | HSB Living Lab |
| Malmö - | Hållbarheten |
| Malmö - | Stapeln Open Maker Space (STPLN) |
| Gothenburg - | Living Lab UbiGo |
| Malmö - | Malmö Innovation Platform |
| Stockholm - | Shape Your World |
| Uddevalla - | Living Lab Uddevalla |
| **UK** | |
| Sheffield - | Living Don |
| Sheffield - | Sum Studios |
| Newcastle - | Newcastle City Deal |
| Tottenham - | The Community Energy Lab |
| Milton Keynes - | MK:Smart |
| Newcastle - | Newcastle Science Central |
| London - | Manor House PACT |
| Muswell Hill - | Muswell Hill Low Carbon Zone of London |
| Wingrove - | Greening Wingrove |
| Glasgow - | Future City Glasgow |

## WEBLINKS AND REFERENCES

| | |
|---|---|
| **Urban lab programme links** | Mistra Urban Futures: http://www.mistraurbanfutures.org/en |
| | The Mayor's Office of New Urban Mechanics Boston: http://newurbanmechanics.org/ |
| | BMW Guggenheim: http://www.bmwguggenheimlab.org/ |
| | ENoLL: http://www.openlivinglabs.eu/livinglabs/effectivemembers |
| | Guangzhou Award: http://www.guangzhouaward.org/en/index.html |
| | Urb@exp: http://www.urbanexp.eu/urban-labs |
| **Research links** | JPI Urban Europe: http://www.jpi-urbaneurope.eu/ |
| | ERC: https://erc.europa.eu/about-erc/mission |
| | European Observation Network for Territorial Development and Cohesion (ESPON): (https://www.espon.eu/main/Menu_Projects/ |
| **Other links** | International Federation for Housing and Planning (IFHP), 'What is the IFHP urban lab?': http://www.ifhp.org/what-ifhp-urban-lab |
| | Rockefeller Foundation '100 resilient cities': http://www.100resilientcities.org/#/-_/ |
| | ENoLL (2015), *Citizen Driven Innovation Handbook*: http://openlivinglabs.eu/sites/enoll.org/files/Citizen_Driven_Innovation_Full%28 4%29.pdf |
| | Goddard, J. and Tewdwr-Jones, M. (2016), *City Futures and the Civic University*, Newcastle University: http://www.ncl.ac.uk/media/wwwnclacuk/socialrenewal/files/City%20Futures%2 0and%20the%20Civic%20University%20(1MB).pdf |
| | Goddard, J. (2009), *Reinventing the Civic University*, NESTA: https://www.nesta.org.uk/sites/default/files/reinventing_the_civic_university.pd f |
| | Foresight Future of Cities project: https://futureofcities.blog.gov.uk/ |
| | Ransom, J., 'Future of cities: Universities and cities', Foresight Future of Cities: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file /477295/future-cities-universities.pdf |
| | De Wit, Hans (2015), 'Partnerships for the future: Trends, challenges and opportunities': http://www.highered-research.com/wp-content/uploads/2015/11/Pages-95-101-from-Higher-Education-Partnerships-for-the-Future-Book-WEB.pdf |
| | UCL Urban Laboratory case studies: http://us4.campaign-archive1.com/?u=9c2f233a1babad001d856f7bc&id=60313c0575 |

| | RSA City Growth Commission (2014), *UniverCities: The Knowledge to Power UK Metros*: https://www.thersa.org/discover/publications-and-articles/reports/univercities-the-knowledge-to-power-uk-metros |
| --- | --- |
| | Universities UK (2014), *The Impact Of Universities On The UK Economy*: http://www.universitiesuk.ac.uk/policy-and-analysis/reports/Documents/2014/the-impact-of-universities-on-the-uk-economy.pdf |
| | Centre for Social Innovation: http://socialinnovation.ca/about/social-innovation |

## BIBLIOGRAPHY

Barnes, William R. (1974) The uses of Urban Research: A Perspective on the Urban Observatory Experience *Real Estate Economics*, 2 (2) 47-58

Bulkeley, H., & Castán Broto, V. (2013). Government by experiment? Global cities and the governing of climate change. *Transactions of the Institute of British Geographers*, *38*(3), 361–375. http://doi.org/10.1111/j.1475-5661.2012.00535.x

Chesbrough, H. W., Vanhaverbeke, W., & West, J. (Eds.). (2006). *Open innovation: researching a new paradigm*. Oxford: Oxford University Press.

Childers, D. L., Pickett, S. T. A., Grove, J. M., Ogden, L., & Whitmer, A. (2014). Advancing urban sustainability theory and action: Challenges and opportunities. *Landscape and Urban Planning*, *125*, 320–328. http://doi.org/10.1016/j.landurbplan.2014.01.022

Chourabi, H., Nam, T., Walker, S., Gil-Garcia, J. R., Mellouli, S., Nahon, K., Pardo, T. & Scholl, H. J. (2012). Understanding Smart Cities: An Integrative Framework. *Proceedings of the Annual Hawaii International Conference on System Sciences*, 2289-2297. http://doi.org/10.1109/HICSS.2012.615

Delanty, G. (2001). *Challenging knowledge: the university in the knowledge society*. Buckingham [England] ; Philadelphia, USA: Open University Press.

Evans, J. (2011). Resilience, ecology and adaptation in the experimental city. *Transactions of the Institute of British Geographers*, *36*(2), 223–237.

Evans, J., & Karvonen, A. (2011). Living Laboratories for Sustainability: Exploring the Politics and Epistemology of Urban Transition. In *Cities and Low Carbon Transitions* (pp. 126–141). Oxon: Routledge.

Evans, J., & Karvonen, A. (2014). "Give Me a Laboratory and I Will Lower Your Carbon Footprint!" - Urban Laboratories and the Governance of Low-Carbon Futures: Governance of low carbon futures in Manchester. *International Journal of Urban and Regional Research*, *38*(2), 413–430. http://doi.org/10.1111/1468-2427.12077

Evans, R. and Marvin, S. (2006). Researching the sustainable city: three modes of interdisciplinarity,. *Environment and Planning*, *38*, 1009-1028.

Goddard, J. and Tewdwr-Jones, M. (2016), *City Futures and the Civic University*. Newcastle: Newcastle University.

House of Commons Innovation, Universities, Science and Skills Committee. (2009). *Putting Science and Engineering at the Heart of Government Policy: Eighth Report of Session 2008–09*. London: House of Commons.

Liedtke, C., Jolanta Welfens, M., Rohn, H., & Nordmann, J. (2012). LIVING LAB: user-driven innovation for sustainability. *International Journal of Sustainability in Higher Education*, *13*(2), 106–118. http://doi.org/10.1108/14676371211211809

Mensink, W., Birrer, F. A., & Dutilleul, B. (2010). Unpacking European living labs: analysing innovation's social dimensions. *Central European Journal of Public Policy*, (1), 60–85.

Mulvenna, M., Martin, S., McDade, D., Beamish, E., Oliveira, Á., & Kivilehto, A. (2011). *TRAIL Living Labs Survey 2011: A survey of the ENoLL living labs*. Ulster: University of Ulster.

Salter, R., & White, S. (2014). *Collaborative research in the real world: Review of Living Laboratories*. CRC for Low Carbon Living: Sydney.

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http://www.lowcarbonlivingcrc.com.au/sites/all/files/publications_file_attachments/rp3005_crclcl_living_labs_review_final.pdf

Veeckman, C., Schuurman, D., Leminen, S., & Westerlund, M. (2013). Linking Living Lab Characteristics and Their Outcomes: Towards a Conceptual Framework. *Technology Innovation Management Review*, *3*(2).

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