

Renaturing cities by urban living labs

Jonas Bylund, Management Board

JPI Urban Europe sees a growing interest in the urban living labs-approach and in how this approach can be of use in various areas concerning innovation in urban areas.¹ For instance, a recent talk at the Renaturing Cities-conference² was prompted by it and this note is reworked from the presentation ‘Approaching labs by way of ecosystems?’ I delivered at the conference. The centre-piece of the conference was the question of how Nature Based Solutions can be used to integrate urban sustainable development and ecosystem services initiatives in Europe, an integration that is seen to yield synergies in economic and ecological solutions.

How does JPI Urban Europe approach labs by ecosystems?

Of course, the integration of various strands of urban sustainable development activities is of great interest to the JPI Urban Europe, particularly since we are currently crafting a strategic research and innovation agenda.³

Our Scientific Advisory Board (SAB) laid one of the first – but certainly not the last! – foundational stones in the collective composition of this document earlier this spring (March 2014) by the presentation of a kind of green paper⁴ on current trends and challenges. Thus, one of the core issues argued in the paper is, by the words of Vice-Chair Professor Darren Robinson:

Addressing this multifaceted challenge will require fundamental interdisciplinary research and that this is translated into practical techniques, technologies, planning solutions and policy instruments. Addressing only one of these two stages will lead either to unexploited opportunities or to the application of sub-

¹ JPI Urban Europe second Pilot Call (2013 & 2014), Annex C at <<http://jpi-urbaneurope.eu/downloads/full-proposal-call-text-2013/>>.

² *Renaturing Cities: Addressing Environmental Challenges and the Effects of the Economic Crisis through Nature-Based Solutions*, DG Research and Innovation, Brussels 13–14 May, <http://ec.europa.eu/research/environment/index_en.cfm?pg=land_session4>.

³ See <<http://jpi-urbaneurope.eu/activities/sria-agenda/>>.

⁴ Robinson et al. (2014), ‘Urban Megatrends: Towards a European Research Agenda’, <<http://jpi-urbaneurope.eu/downloads/jpi-urban-europe-megatrends-report/>>.

optimal solutions; the scale of our urban challenges requires that we avoid such a calamity.⁵

These words articulate a very important point in this still early work: the movement from academic (and other kinds of) research to innovation in society at large. This movement entails the coming together of very different kinds of actors, who ventures out of their comfort zones to work together rather than passing on knowledge packages and products like they were used to do – if we subscribe to the official versions and models of how e.g. national innovation systems are set up. Hence, the movement means that we see a clear need for integrated and transdisciplinary urban research. Because it is clear from both innovation studies, planning studies, and practitioner experience that implementation requires a research ethos or approach, since there are rarely any off-the-shelves ‘plug-and-play’ solutions ready in urban development!

But how do we actually do this? One way to approach this is to make use of urban innovation ecosystems. Urban innovation ecosystems better characterise urban settings when we think about solutions or tackling challenges: it conveys activity, active choices, relational issues, and complexity, some order but without absolute control from any single actor. We could think of urban innovation ecosystems as made up of nearly everything required to make research and innovation work in settings outside the RDI workshops or laboratories in a stricter sense. The notion thus describes the creative capacity of cities to co-create value and make up the level of deployment for RDI.

So, our version of ‘renaturing’ is to borrow the ecosystem metaphor to characterise the environs – settings and networks – where experiments and learning for urban sustainable development occur! Admittedly, this is all a bit vague at the moment. The notion of urban innovation ecosystems is still a black box, a placeholder, for a better name. But we have a fairly clear idea on how to approach this.

Urban living labs

There is nothing unconventional in noting that for every ecosystem we need a lab to make knowledge out of its workings: characteristic events, actions, tacit knowledge, etc. must be sampled and made manipulable, so to speak, for our curiosity and problem solving. The question is where we decide to locate these labs: like monasteries in university campuses or company locations? When we renature our cities, do we want our labs to be secluded from the messy world ‘outside’? Or in the bustle of ongoing happenings? The latter seems far more promising to enable for solutions-development and testing than the former. These are the spaces shaped by urban living labs, where urban innovation ecosystems are not domesticated but a vibrant co-creator when we aspire to shape workable solutions.

⁵ JPI Urban Europe, *Press Release: Future Urban Challenges call for renewed and integrated policy approaches*, <<http://jpi-urbaneurope.eu/press-release-future-urban-challenges-call-for-renewed-and-integrated-policy-approaches/>>.

Hence, in the most fundamental definition:

[An urban living lab] 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.⁶

As you, dear reader, may recognise, living labs is a concept hijacked from ICT research and innovation. However, any urban planning practitioner could probably tell you that urban development, when ‘successful’, shows more or less similar traits, albeit not always intentionally programmed in the projects.

To give further reference points to the sketchy outline of urban living labs above, we could make a note of the following characterisations. Since the speakers at the conference were asked by the organisers to relate to three specific objectives, somewhat tweaked here, they also tie the argument nicely together.

1) How can we characterise urban living labs and urban innovation ecosystems as part of Nature Based Solutions?

– *Challenge-driven urban innovation is not really doable if e.g. co-creation and user-driven innovation is not taken into account*

2) How are urban living labs and urban innovation ecosystems novel ideas?

– *We use it to support e.g. smart cities solutions and innovation, but also through SEiSMiC⁷ to connect to practitioners around Europe*

3) How does this help to federate relevant communities and create new synergies?

– *We rarely know a priori exactly which communities are the relevant ones in or what synergies will occur by innovation. Hence, this is a more open form which in principle is dynamic enough to explore this issue case by case. This is constructive ambiguity!*

So, what's the added value of urban living labs?

Won't it be very expensive, more expensive than ‘standard’ marketization of innovations? Doesn't it mean lots of extra work? And why ‘ecosystems’?

No, probably to the contrary: as every gardener knows, you have to prepare the ground for any change. Be it incremental or radical. There's a lot more entanglement in this

⁶ JPI Urban Europe second Pilot Call (2013 & 2014), Annex C at <<http://jpi-urbaneurope.eu/downloads/full-proposal-call-text-2013/>>.

⁷ See <<http://www.seismicproject.eu/>>.

kind of market transaction than perhaps imagined in the more linear innovation models. But the latter are simply not very realistic.⁸

This may antagonise some people, but it's really high time to stop using ballistic models such as the innovation chain and the language of barriers: as if one could merely put wheels on the inventions and artefact systems at the end of a development process and simply give them a slight push in the door to the workshops so that they will keep on rolling out to their due places in the world!⁹ No wonder implementation is not going very well. One could say, then, that innovation and implementation requires friction. Otherwise the solutions – now on wheels – would just keep on rolling through the city and right out to somewhere else! Change and innovation need attachment and friction. Urban living labs is one way we try to enable this friction. There is practically no way around it; and, in practice, it's all the linear ballistic approaches that are shown to be more expensive – both in terms of financial resources and democratic 'capital'.¹⁰ And finally, concerning the use of ecosystems: if we are now in the Anthropocene,¹¹ then the issue of borrowing the metaphor of ecosystems is simply moot, since urban areas are firmly set in the earth systems in terms of metabolism and in stratigraphical layers in terms of trace-making.

However, this is not to say urban research and innovation for sustainable development comes without a cost. Clearly, the JPI Urban Europe approach is not a silver bullet. Rather, it will be hard work in uncertain conditions. But let's face it *together!*

⁸ See e.g. Callon, M., Lascoumes, P., & Barthe, Y. (2009). *Acting in an Uncertain World: An Essay on Technical Democracy*. Cambridge MA, London: The MIT Press; EC (2014) 'Boosting open innovation and knowledge transfer in the European Union' *Independent expert group report on open innovation and knowledge transfer*, DG Research and Innovation, <http://ec.europa.eu/research/innovation-union/pdf/b1_studies-b5_web-publication_mainreport-kt_oi.pdf>. One example could be smart meters. cf. Alan Meier (2014) 'New boundaries for Ecodesign: From stovepipes to umbrellas', presentation at <<http://youtu.be/EeBD70K-cBPc?t=18m49s>>.

⁹ I'm borrowing this turn in the argument from innovation studies literature that is actually becoming classics rather than unconventional, such as PROTEE (1999) 'PROCEDURES DANS LES TRANSPORTS D'EVALUATION ET DE SUIVI DES INNOVATIONS CONSIDEREES COMME DES EXPERIMENTATIONS COLLECTIVES', Final Report, <<http://www.transport-research.info/Upload/Documents/200310/protee.pdf>> and Akrich, M., Callon, M., & Latour, B. (2002). 'The Key to Success in Innovation'. *International Journal of Innovation Management*, 6(2), 187–225.

¹⁰ See e.g. Felt, U., & Wynne, B. (2007). *Taking European knowledge society seriously*. Luxembourg: Office for Official Publications of the European Communities.

¹¹ The Economist. (2011). A man-made world: The Anthropocene. at <<http://www.economist.com/node/18741749>> .