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Cross the line to make the most of uncertainty

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// a plea to shift from problem solving to knowledge sharing
// a proposal for doing sustainability differently

Why do we need to review our thinking?

The 21st century, with its unpredictable economy and complexly interwoven societal and environmental sustainability challenges, seems to call out for a different view: to accept that there is no solution. Today, in this Anthropocene era we need people willing to work with problems that cannot be 'solved' in traditional terms, comfortable with collaborative work processes, and open to setting limits on creative license. Simply stated, the prevalence of wicked problems means there are no creative solutions that don't end up creating other problems, down the line. In short, we need to accept the fallacy of the 'solution'.

Sustainable urban development and transformation in particular demand tools and techniques for working with evolving situations that evade simple answers. Hence the driving question underlying this dossier is what kinds of tools and techniques are needed for dealing with unpredictability in urban planning and design contexts: how can we strategically exploit ever-changing and uncertain conditions to frame beneficial long-term urban development and transformation results? How to work with dynamic situations?

This dossier recognizes potentials already in place – including the potential derived from design's long history as a practical means of generating new ideas – as a knowledge-producing activity sharing with the sciences and the humanities a mission to contribute to the betterment of society. This dossier forms part of an ongoing project to extract knowledge from practice. It collects practitioners and researchers who share a commitment to 'crossing the line' – from problem solving to knowledge-sharing, who see value in collaborating across the academy and the professions, and who strive to seek out good ideas and learning from the experiences of others, no matter where or how that useful know-how is produced.

Why do we need new tools and techniques?

We are talking here about doing sustainability differently. This means to reconsider – to reflect, review, refine, remake – how the physical planning and design disciplines approach sustainability thinking and action. Accepting uncertainty reduces waste for everyone involved in sustainable planning and design processes.

Less time spent on solutions that don't fit. More ideas recycled, tweaked for reuse in new places in novel ways. Design-minded thinkers recognise relationships between things that others may view as unrelated, or separate. Design thinking 'creates' new value by 'crossing the line' – speculating (or projecting) new ways of assembling materials that already exist in other configurations. It works with and upon the specifics of always changing situations to envision potential new ones.

Planners and designers, related authorities, other actors and researchers, all need to recognise that as matters become increasingly complicated, the tools we need today differ from those we have used in the past. Disciplines and professions conventionally deliver the keys of understanding and the modes of operation with which to handle problems in disciplined and professional ways. At the same time, disciplined or professional mindsets can get in the way of seeing situations in another light, from grasping opportunities for further learning from problems that cannot be simply scrutinised and from there 'solved'. Problems resisting standard treatment offer more than frustration. They invite us to explore beyond professional business as usual and traditional discipline-based knowledge creation. This is the moment to un-discipline and de-professionalise– to cross the 'line' between academy and profession, between one discipline and another, and between one profession and another. We need more engagement between practice and research, more testbeds for exploring processes aimed at sustainable urban development and urban transformation.

Some essays in this dossier describe tools for doing sustainability differently - others describe techniques for their application in, on and through particular projects. All these tools and techniques aim at reducing effort, reusing what works, discarding what doesn't, recycling ideas in innovative ways. With this dossier we ask: What are the practices we should pay attention to and how can we translate them from here to there, without succumbing to importing standards, formal replications, typological repetition, to 'functional stupidity', as Jonas Bylund suggests in his theoretical reflections. How can we adapt proven practices to new places, such as acclimating plants to new biotopes, as Johan Paju explores in his full-scale urban green laboratory. And how can we navigate across theory considerations and practice experiments to foster common learning outcomes?

Making the most of uncertainty

Uncertain situations create genuine opportunities for bi-directional dialogue, learning and knowledge transfer between practitioners and researchers. These should not be squandered. They establish a foundation for real innovation. Interrupted, non-linear and circular processes provide time for analysis and reflection on the outcomes of executed projects. Analysis reveals knowledge gained and knowledge needed. Reflection on and in process produces questions meriting research and issues to be theorised; research and theories provide useful practice tools. Working together, researchers and practitioners can evaluate if projects achieved pre-defined goals as well as identify and document their unexpected (positive and negative) outcomes and effects.

If we are to distil from the various tools and techniques assembled in this dossier some synthetic message, it would be that an iterative method, and perhaps even more specifically still, an iterative method using design-thinking as a planning tool has real positive effects. Leveraging the inevitable gaps between projected change-visions and ever-changing development conditions reduces waste, saves money, produces knowledge on how to work smarter the next time. They support more resilient, sustainable urban development and transformation.

Crossing lines

Conventional planning happens within clearly defined boundaries, photography is a commonly used means of documentation. This dossier opens on reconsidering both, while observing how the commonly accepted lines are crossed in the urban transformation project and the photographic work of Parc aux Angéliques in Bordeaux. The first article, *Transscalar Design*, explains the project from an urban and regional planning perspective. It discusses how the landscape architect, Michel Desvigne, uses incrementalism as a strategic urban transformation tool to develop his design over a long period, taking into account changes along the way, and working with unpredictable agents of change. *Letter to Parc aux Angéliques*, a visual essay, addresses the same location from the perspective of a visual artist. Charged with documenting her visit to the park, the photographer uses the tool of re-appropriating imaginaries to represent her experience of this landscape with photographs that re-make the already made, through new eyes. She reminds us that we all find/see something different in the same place, and that no one definitively owns the image of public space.

Deindustrialisation and other forces have made cities shrink, leaving them with districts perforated by abandoned buildings and empty plots, beyond the reach of conventional urban development – hence the need for crossing the line towards new forms of urban transformation. The third article, *Reclaiming urban ground*, describes how pulling together conventionally separate elements

and actors in so-called Urban Arboreta generates momentum for lending sites new uses, gathering communities and generating jobs. Planting processes and slow growth demonstrate how a recently realised prototype for growing trees on vacant urban land evolved over a long time. Using techniques that include, among others, the integration of lessons learned along the way. The Philadelphia project exemplifies the reflective practice method presented in the fourth article, *Adopting dilemmas and reflexivity-on-the-go* – outlining a new mindset devising the critical tools for working toward sustainable urban transformation goals.

Crossing the line, and leaving behind deep-rooted understandings of 'genius single problem-solver' poses challenges for teams of professionals and researchers working together in a transdisciplinary mode, trying to tackle problems conjointly and in novel ways. Refining design-based documentation methods offers a promising path, as demonstrated in the fifth article of this dossier, *Working diagrams as communication tools*, which explores diagramming and visualisation as both a communication tool for sharing knowledge with public stakeholders in large hydrological infrastructural projects and a communication technique useful for collaborators on large, complex projects.

Physical designers are used to drawing plans and having suppliers deliver the materials necessary to build their project. This can prove difficult when the materials needed become so specific that there are no suppliers at hand. In landscape architecture, the increasing demand for locally attuned urban vegetation has prompted experimental production, as described in the sixth article, *Biotope testbeds to cultivate urban nature*. Here, landscape architects cross the line between designer and supplier by instating real-world labs where testbed techniques help them not only envision but also produce the plants necessary for greening urban environments and mitigating heat islands, cloudbursts and other phenomena of the 21st century.

Testbeds are needed as well when crossing the line of conventional urban planning in municipalities. The seventh article, *Citylab Haugesund*, reports how a Norwegian municipality has become a real-world lab for experimenting with planning policy for the transformation of abandoned harbour areas while keen on keeping the identity of the place. In *Frihamnen Göteborg*, a former free harbour in Sweden, undergoes similar transformation and accommodates a design experiment on the basis of collaborative making of public facilities and public space – crossing all sorts of lines between designing and building, clients and designers, creating and collaborating, making and meaning, where standard models of knowledge exchange between experts and non-experts are revisited; and standard relations between top-down and bottom-up approaches to urban planning are rethought.

Finally, the closing article on the Nature Lab presents a teaching tool at the Rhode Island School of Design (RISD) where students learn to think and create 'in between' established science-art research practices. Learning to cross the line between scientific and artistic approaches, between research and practice, between thinking and doing, and to educate future 'transdisciplinarians' might the most important step, according to contemporary scholars, to overcome current hindrances to a more sustainable future of the planet, be it in the area of urban development and transformation, or in any other field of knowledge in need of innovation.