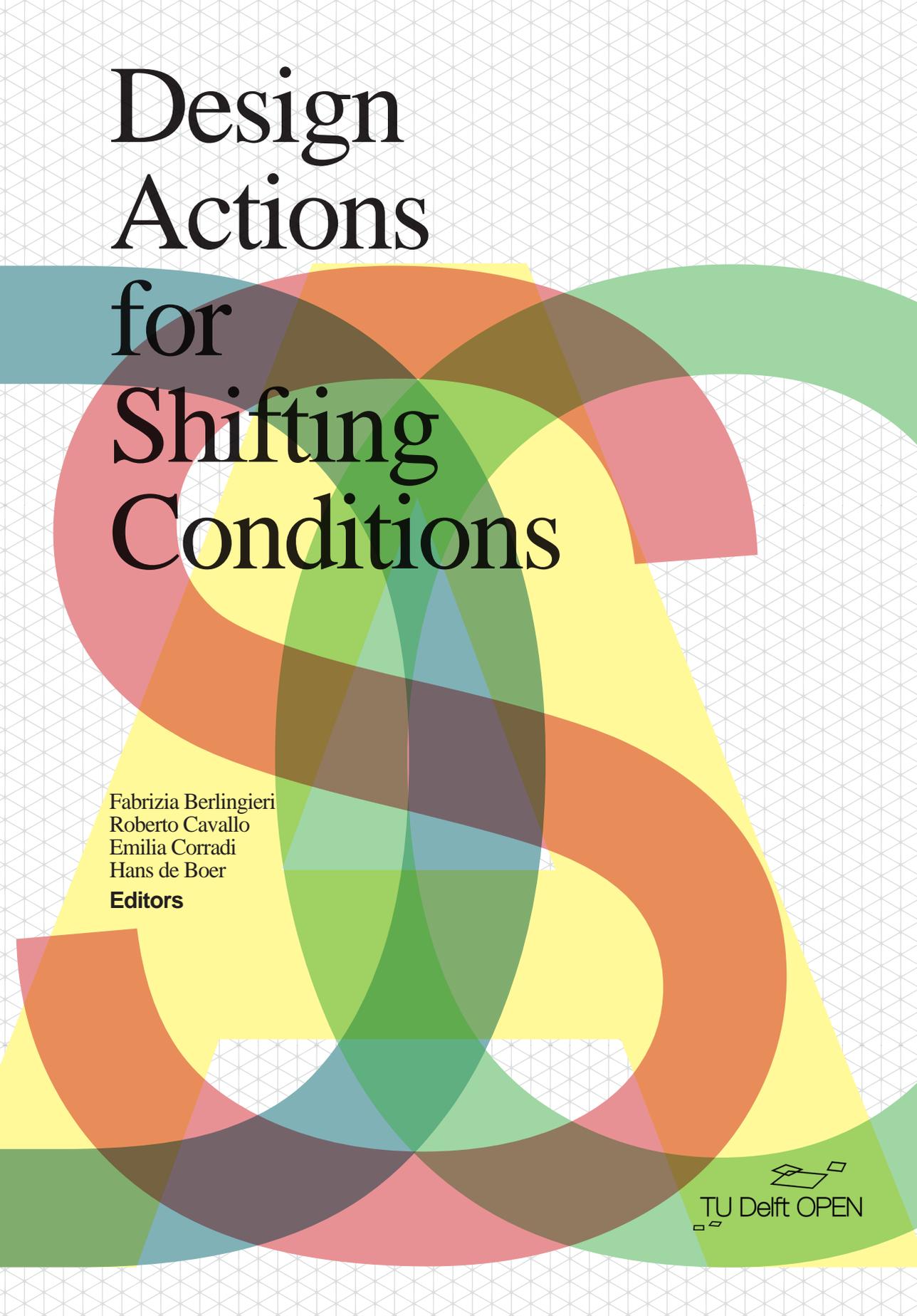


# Design Actions for Shifting Conditions

The background features a light gray grid pattern. Overlaid on this are several large, overlapping, semi-transparent shapes in various colors: teal, orange, green, yellow, pink, and brown. These shapes are arranged in a way that they partially obscure each other, creating a layered effect. The overall composition is dynamic and modern.

Fabrizia Berlingieri  
Roberto Cavallo  
Emilia Corradi  
Hans de Boer  
**Editors**



# Design Actions for Shifting Conditions

Fabrizia Berlingieri  
Roberto Cavallo  
Emilia Corradi  
Hans de Boer  
**Editors**



**POLITECNICO**  
MILANO 1863

DIPARTIMENTO DI ARCHITETTURA  
E STUDI URBANI



DIPARTIMENTO  
D'ECCELLENZA  
FRAGILITA' TERRITORIALI  
2018-2022

 **TU**Delft

 **TU**Delft

Deltas, Infrastructures &  
Mobility Initiative

# DESIGN ACTIONS FOR SHIFTING CONDITIONS

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## **Design Actions for Shifting Conditions.**

### **A premise — 14**

Fabrizia Berlingieri, Roberto Cavallo, Emilia Corradi, Hans de Boer

## I. Paths of research

### **Architectural Design in an unprecedented time — 31**

Emilia Corradi

### **The need for a paradigm shift and integrated approaches for a future (proof) built environment — 37**

Hans de Boer

### **Transition in urban analytics, insight into research — 53**

Špela Verovšek

## Viewpoints

### **Specific/Generic, Disciplinary/Interdisciplinary. Two remarks on architectural and urban design's perspectives for shifting conditions — 62**

Elena Fontanella

### **Demographic fragility — 68**

Agim Kërçuku

### **Adaptation and Resilience. Architectural Design Tools between Uncertainty and Transitory — 74**

Giulia Setti

## II. On (design) education

### **City Making in Times of Transitions. The central role of learning — 85**

Roberto Cavallo

### **Urban Design between culture, nature and society — 91**

Kristyna Solarek

### **Paths for research and didactic experimentation — 97**

Ilaria Valente

# Viewpoints

## **(Re)designing urban Network Space for cite Versailles Brussels — 102**

Raf Ilsbroekx and Maarten van Acker

## **Turf wars and Beyond: Plac Defilad in the hands of local stewards — 108**

Artus Jerzy Filip

## **Recuperating the coastline of Athens as public space — 112**

Thanos Pagonis

### III. Reflecting on Practices

## **Design Strategies for Urban Renaturation — 123**

Fabrizia Berlingieri

## **Notions from practice: Research by Design as a stepping stone for the implementation of integral forms of spatial design — 131**

Jutta Hinterleitner

## **Academic Research in the Arenas of Practice — 139**

Laura Pogliani

# Viewpoints

## **Milan and its ecological transition design emerging paradigms — 146**

Cassandra Cozza

## **Adaptation to Climate Change in Greece: the role of the life IP AdaptInGr programme — 152**

Miltiades S. Lazoglou

## **Making our Greek cities attractive and sustainable. A landscape design policy approach — 156**

Aikaterini Gkoltsiou

## IV. Didactic experimentation

### **City sides. Re-thinking Porto di mare through design strategies of circular economy and resilience — 164**

Kevin Santus, Stefano Sartorio, Arianna Scaioli

### **Bonding natures — 170**

Michele Mazzoleni, Yassin Nooradini, Hooman Riazi Jorshari, Nataliia Saltan

### **Water as regeneration element for the margins: a new identity for Porto di mare — 176**

Gianandrea Blaconà, Daniele Marturano

### **Insular urbanities — 182**

Louis Bernard de Saint Affrique

### **Linearities: coral reefs in the sea of urbanity — 188**

William Guild

### **Two point perspective: a glocal performance of contemporary cities — 194**

Andrea Cappiello

### **Urban agriculture, a case of Warsaw — 200**

Maciej Polakowski

### **City as an ecosystem- Structures for improving the urban metabolism with a city block as a model example — 206**

Sylwia Rebelo

### **Towards a resilient perama: in search of lost space — 212**

Dimitris Loukos

### **Mitigating fragmentation: Thoughts about resilience in the formerly industrial suburb of Drapetsona-Keratsini, west of Piraeus — 218**

Leonidas Christoulis

### **We should not stop looking for beauty — 226**

Marco Bovati

### **Credits — 232**



# ACADEMIC RESEARCH IN THE ARENAS OF PRACTICE —

Laura Pogliani

## **Applied Planning Research as Usable Knowledge**

The challenge of academic research in urban planning and design lies in exploring and experiencing new tools and finding a method of interacting with communities, forging ties among researchers, disciplines and real contexts. For scientists, it is a valuable opportunity to reflect not only on the importance of knowledge but also on the methods used to develop and carry it out.

On the one hand, the ‘usable knowledge’ (Lindblom and Cohen 1979) applied in social and governance processes is mainly an interdisciplinary knowledge, targeted at emerging problems in the public agenda and capable of generating new possibilities and opening new opportunities for collective choice. In this framework, the knowledge is not a prerequisite of the project, but it develops simultaneously with design guidelines. The progressively formulated hypotheses have an exploratory function. They arouse new questions and allow for in-depth analysis and verification to search for a reasonable balance, probably bound to be under discussion over time (Schön 1987, Palermo 2009). Knowledge and action are regarded as very compelling goals of the scientific research, in terms of i) understanding the main elements that define the relationship between territories and settlements, between nature and the human activities that transform it and ii) sharing the responsibility of shaping the fundamental choices of policy-making in the development of cities (Campos Venuti 2012).

On the other hand, knowledge contributes to a deeper level of reflection: «What is needed to progress planning knowledge: distance (reflection on practice) or involvement (reflecting with practice)?» (Balducci and Bertolini 2007, 533). The question arises inside and outside the University to demonstrate the broader relevance of local experience and the need for planning academics to be involved in the practice to test solutions in the real world. As planning is considered a social science and a social practice, putting scientific ideas into practice is vital for developing a more conscious and motivational attitude to real problems when interacting with several players, policies and public decision-makers. Additionally, this practical dimension enhances a collective understanding of urban practices (Castelnuovo and Cognetti 2013). It pushes research to propose tools and procedures that are at least partially repeatable and usable in other contexts. In other words, the relationship between a sphere of exploration and self-reflection, evaluation



**Milano M4. Concept plan (DAStU, 2018)** – The green dotted line is the metro route with the Vetra station. The white dotted lines are the new soft mobility lanes.

and refocusing of the researcher appears as an essential aspect of academic projects and a valid contribution of the University towards the city and the society.

Finally, as stated in the National Agency for Assessing Universities and Research (Anvur 2014), the third mission of an institution such as Universities is to encourage economic growth. Universities can achieve this goal by transforming the knowledge produced by research into learning which is useful within production and growing high-performance levels in activities related to culture, society, education or civil awareness.

The Department of Politecnico di Milano DASTU has for a long time been engaged in a public commitment towards practising knowledge and action with local governments and communities in different contexts. Some findings can help a better understanding of mutual gains.

### **Practices of Urban Design and Urban Planning in academic research and education**

Academic research investigations have been recently practised in urban design and planning, combined with exciting educational programme innovations. In the urban design field, the case of the new metropolitan line no.4 is worth illustrating. The Milano Government asked DASTU<sup>1</sup>, Politecnico di Milano, to provide its scientific and technical support to plan the site areas' surface arrangements for the new M4 stations. Supposedly simple, this request introduced a complex issue about the role of the new metro line in the city facing multiple, even conflictual, and largely still open decision-making processes. In this case, the researchers had the opportunity to outline a territorial scenario for the whole infrastructure to better understand its contribution in the interest of the local government, the operators and the city itself. The innovation of such research has been to propose a solution to conceive a multidimensional framework for urban regeneration actions at different scales named the Green and Blue Backbone (Fior, Vitillo, and Galuzzi 2019). Following this framework, the metro line's construction is matched with new superficial itineraries for slow mobility (cycling and pedestrian), to promote urban regeneration of parts of the city and to connect open green spaces and water networks on a local, urban and metropolitan scale. Slow mobility design follows the underground line on the surface and expands it, connecting the stations with important city sites (in the historical centre and outside). Besides this, careful urban design actions close to the new M4 metro stations allow exploration of broad connections, offer detailed design solutions, and, simultaneously, a deep study about the materials and design elements of contemporary city public space.

On a different scale, DASTU provided its scientific support in drawing up the new general urban plan for a medium-sized municipality (Rescaldina) in the Milanese metropolitan region<sup>2</sup>.

<sup>1</sup> Research group:  
G. Pasqui (coordination);  
P. Beria, P. Galuzzi,  
F. Infussi, A. Longo,  
L. Montedoro, L. Pogliani,  
P. Pucci, P. Vitillo,  
with M. Fior, F. Oppimitti.

<sup>2</sup> Research group:  
A. Arcidiacono, L. Pogliani  
(coordination),  
with S. Ronchi.

In this case, the local administration intended to focus mainly on environmental protection. According to academic research linked to a new urban model based on open spaces and green infrastructure, the scientific support to local government tried to test a new approach for local planning (Arcidiacono et al. 2020). At first, the researchers' role focused on constructing and sharing a joint strategy with the local administrators and citizens. The strategy included limiting land uptake, expanding and improving public services and facilities, adopting strategies to regenerate brownfield, unused and vacant land, enhancing the quality of green spaces, promoting the central role of small, local businesses in healthy communities, protecting the landscape and developing a 'green mobility' plan (including cycle and pedestrian tracks). Secondly, the scientific approach focused on ecosystems' performance to increase habitat quality and implement green infrastructure principles for strategically designing and managing ecosystem services in land use regulations.

Finally, the local Green Network design assumed a structural role in shaping the spatial strategies introduced, protecting landscape values and supporting land consumption mitigation measures. Similarly, it strongly oriented the implementation of the urban planning of public and private projects.

Concerning the educational programmes, in 2018 the School of Architecture, Urban Planning Construction Engineering (AUIC) at Politecnico di Milano decided to start an innovative collaboration with the municipal and metropolitan governments, following previous experience on similar issues, although more limited. The aim was to find creative solutions to design a different urban landscape with a fresh and international approach and share it with local associations and cultural organisations. An educational programme named *Riformare periferie. Milano Metropolitana. (Re-shaping Peripheries. Milano Metropolitan City)*<sup>3</sup> interested studios, workshops and courses at different levels and was publicly illustrated on a website<sup>4</sup>. The programme and its outcomes have been illustrated on different occasions and finally in the Exhibition *Archives for Future* at Politecnico di Milano (Jan-Feb 2020).

Topics involved in all these activities concern the construction of public places for people, the reinforcement of new green corridors and the combination of uses, forms and resources for the city and its socially segregated areas. The aim is to achieve attractive, accessible, green, safe, multi-functional, socially inclusive, innovative and resilient spaces, starting from the renovation of the existing, complex, unsolved urban areas. So far, the programme has witnessed a civil and public commitment in the educational field without failing to take a critical look (Valente 2011, Orsini and Pogliani 2021). Accordingly, it tries to divert attention away from the big transformation projects, often achieved through speculative investments in the richer sectors of the city, and to focus on the

<sup>3</sup> Research group: I. Valente (scientific responsibility); F. Orsini, L. Pogliani (coordination), with G. Gualdrini, G. Meacci, F. Oppimitti, J. Ronchi.

<sup>4</sup> See: <http://www.riformaremilano.it>

renovation of the existing stock, based on investment in networks and services such as environmental goods and affordable housing. The three experiences mentioned briefly above explain some of the different interactions between the University and social actors. In the first case, academic research has a role in the enhancement of ongoing planning policies; in the second case, the scientific knowledge itself creates or contributes to building strategies and tools, while in the third case the educational programme innovates the approaches and produces new imaginative ways of dealing with problems. In general, the immersion in the field and a reflecting distance opens up the possibility of a critical contribution in knowledge and design.

### **Lessons learned**

So far, DASTU has carried out several types of research supporting a practice that allows us further considerations, mainly concerning the appropriateness and usefulness of the academic research for the real world, its necessary selective attitude and its social awareness.

Despite the contingencies and the various partners, the University can develop appropriate and useful knowledge to support local governments facing multiple contemporary challenges. The support can contend with the social, economic, technological, cultural and symbolic processes that define its performance in the educational field (Pasqui 2018). In this respect, a mutual benefit engages the research, the cultural, academic discourse and the social and political challenges to designing projects for improving the present conditions.

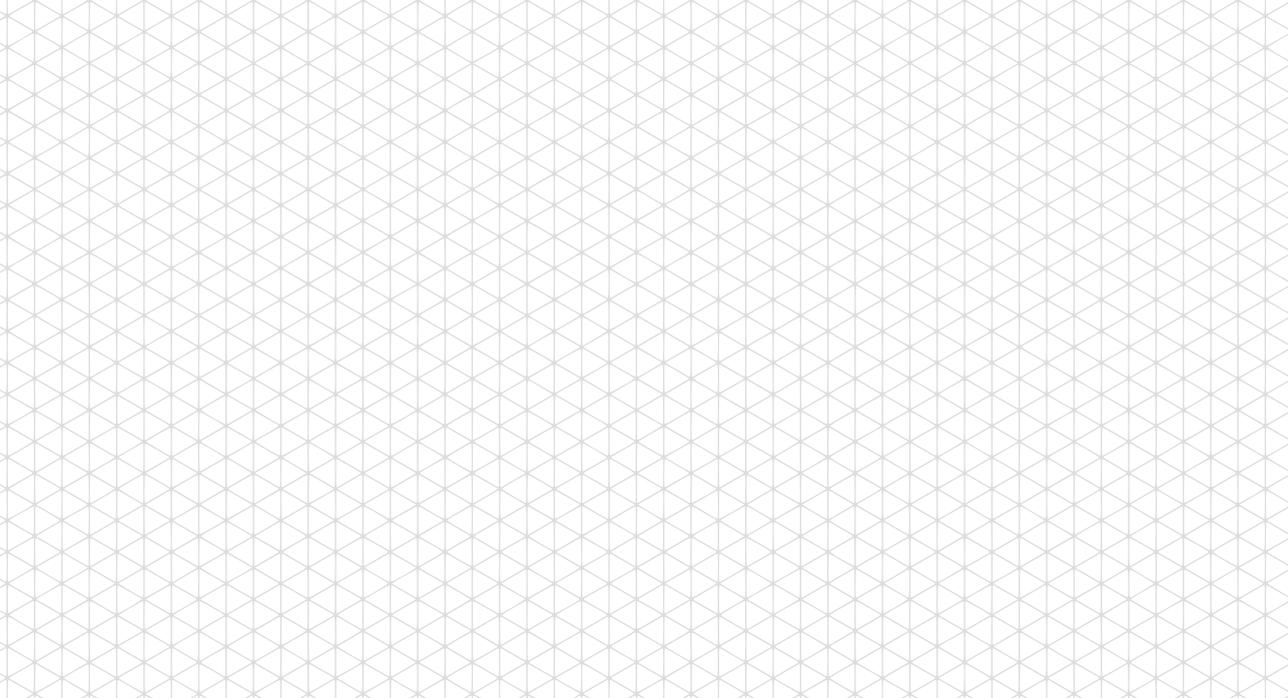
Consequently, it is crucial to adopt a selective approach and a critical attitude regarding the limits and reasons for otherwise indispensable practices (Palermo 2018). Applied research is not limited to providing pertinent answers to questions, but it also holds responsibility in constructing the problems in the social arenas.

Finally, Politecnico di Milano has developed its capability to bring knowledge into practice in the local communities and at the same time to prepare students for more practical and social awareness.

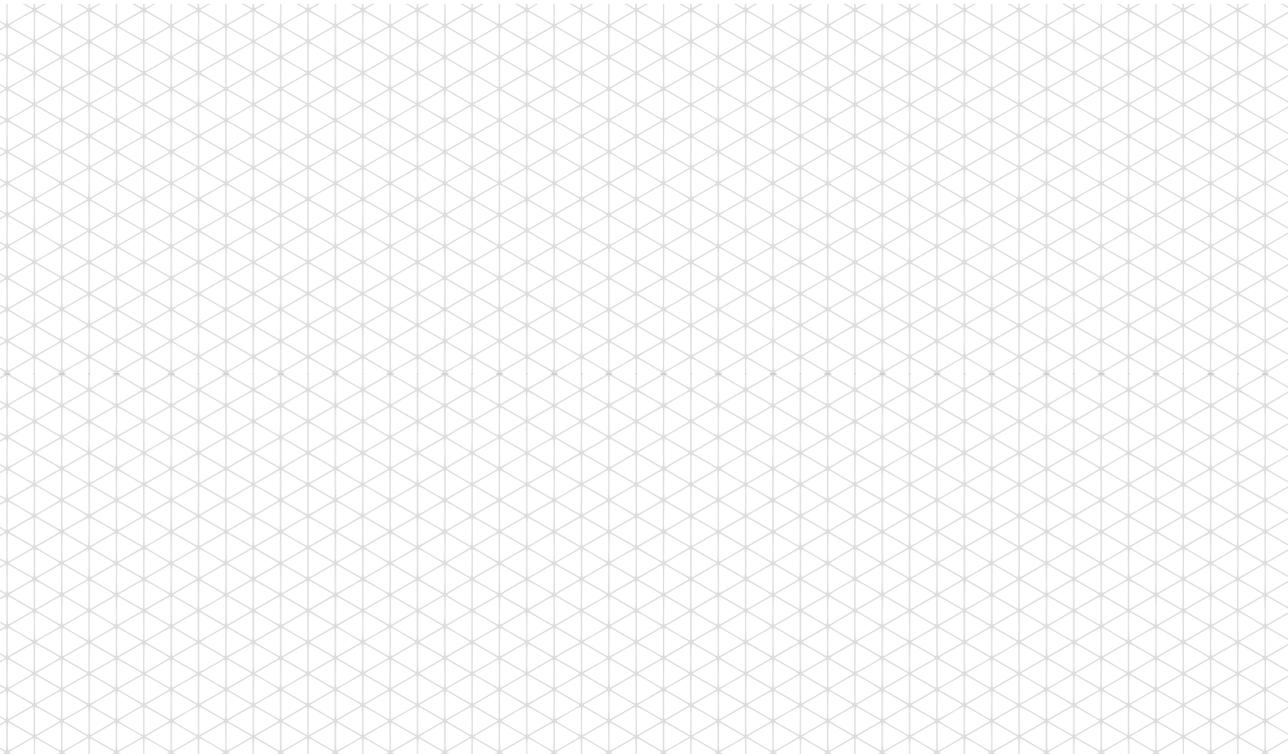
Regarding this last task, it is worth considering to what extent confidence and expertise in activating citizens' and students' participation in social processes can breathe new life into civic passion (Talia 2018).

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