

VERTICALITY/HORIZONTALITY IN ARCHITECTURE

At the beginning of the last Century, the dichotomy between horizontal and vertical development of urban settlements found its formal and utopian formalization in opposing visions of cities, permeated by the confidence in the technological progress. The belief that cars could revolutionize modern life gave the possibility to design new diffused and rural communities based on a renewed mastery of time and space; confidence in the enormous progress of building techniques and materials gave rise to city plans, where land would be restored to nature, men and social life thanks to vertical architectures. Although anticipating growth strategies of the cities — later implemented in a hybrid and confused manner — the proposed models considered projects of difficult implementation; a condition, which led to urban sprawl, mono-functional arrangements of vertical development areas and the multiplication of mobility and service infrastructures.

The dialectic between the vertical and the horizontal models of growth and development of cities continues in contemporary times, extended to all continents. In response to the massive phenomenon of urbanization, emerges the need to identify new convincing strategies for growth. At the same time, new technical advancements offer considerable opportunities, not only proposing innovative methods of constructing architecture (structural and material), but also concerning the soft and smart dimension of infrastructures for the distribution of energy and information flows in cities.

The increasingly pushing verticalization of south-eastern Asian cities is counterposed to the prevalent spread and horizontal expansion of the European ones, which propose an increase of 20% in built-up areas in relation to a population growth of only 6% (Istat, 2017). In Europe, during the last twenty years, although to a lesser extent than in the past, suburban areas observed the continuation of expansion phenomena. On one hand, the lower land rent of suburban areas was considered a response to the demand for affordable housing costs. On the other hand, the conditions of big urban areas raised the demand for houses immersed in a rural context, for those in search of a bucolic and less stressful dimension — a clear sign of the persistence of a **horizontal and centrifugal growth model**. Albeit in a more measured form compared to Asia and the United States, for historical and cultural reasons, even in Europe a **vertical and centripetal growth model** begins to be affirmed. The creation of vertical architectures in the 'core' of some European cities — symptomatic of the effective functioning of public transport infrastructures, which allows the vertical densification of the city without incurring the danger of congestion of central and peripheral districts — has given new life to research on structural and technical issues, on places 'in between' and on public spaces, on sustainability and on energy embodied, consumed and produced by skyscrapers. Nowadays, vertical constructions represent an opportunity to design and innovate not only analysis and building methods, but also design

and building tools, as well as material and immaterial components of the building process. At the same time, except for some excellent cases, and despite the potential offered by low-tech systems that would allow optimization of building time and costs, extensive constructions seem to resort systematically to technologies which follow the tradition, impoverishing their quality and highlighting the backwardness from a formal, technological and typological point of view.

In Italy, the debate on **land consumption** identifies new measurements and proposals of law, which, on one hand, tend towards densification and compactness of cities through the reuse of the built asset, through architectural graftings and building substitution; on the other hand, the tendency is towards vertical development and the proposition of new high-rise buildings, which introduce the question of landscape integration and the opportunity to propose a new aesthetic of cities. Focusing on vertical and horizontal approaches for urban development means to highlight issues related to **building density**, infrastructures and **mobility, energy and knowledge networks**; to **functional mixité** and distribution of services; to spaces of cultural interaction thought to improve the quality of life; to complex and non-linear correlations between environmental, economic and social sustainability of transformation processes.

It is also up to technology to give concreteness and substance to the various technological and environmental approaches, identifying the perspectives of innovation, defining correct technical information that can support constructive choices, proposing indicators, assessment methods and integrated strategies for the urban and architectural project.

In light of these considerations, the call identifies some areas of reflection concerning programs, processes, strategies, projects and technical tools, aimed at encouraging the development of new policies for the transformation of the territory and the built environment. With regard to the different realities of scale, it will be possible to understand tools and methods aimed at updating the form of the city in the medium and long term, with the aim of improving the quality of life and ensuring the sustainability of transformations.

The main thematic areas concern:

- **density and settlement logics:** *models and intervention techniques for urban density; tools and design strategies for land consumption reduction; hard and soft territorial infrastructures for a fair access to the resources.*
- **growth and development processes:** *circular economy growth models for urban and peri-urban areas; "ruralisation" of the compact city and production for subsistence; functional mixité in horizontal/vertical development models.*
- **typological and technological experimentation:** *new research and typological/technological experimentation fields; technological and design innovations in vertical/horizontal architectures; role of production and of the industry in the densification project.*

PUBLICATION DATE TECHNE | 17 APRIL, 30th 2019

Authors are invited to send an abstract of **4000 characters** (spaces included) in Italian (or English, in case of foreign author). The abstract is intended to report the main contents planned to be proposed in the article.

The abstract has to be written in a clear and concise manner, showing an effective correspondence to the topic of the call. **Each author can submit only one abstract.**

Abstracts have to follow the following structure:

- object of the proposal and aim of the article;
- approach and/or methodology.

Authors are invited to specify if their contribution is targeting the “research and experimentation” or “essays and viewpoints” section. In particular, the “research and experimentation paper has to outline:

- results: analytical aspects, proposals, debates;
- originality: by explaining what is new and for whom;
- limits of the research and significant results;
- cultural implications (practical or socio-economic) when present;
- reference to research/researches, relevance of the topic, subjects involved, fundings.

In the case of an “essays and viewpoints” proposal, attention has to be given to:

- cultural and scientific background with regard to the proposed topic;
- analytical aspects, the state of the art of the critical fields and debates on the topic.

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Once the abstract has been accepted, the authors are invited to submit the paper by **September, 30th 2018**. The paper has to respect the limit of **max 20.000 characters**, spaces included, in the case of single author; **max 24.000 characters**, spaces included, in the case of multiple authors. The papers will be submitted to a double blind review and the authors, whose papers

have been accepted, will receive further information starting from **November, 19th 2018**. The final version of the paper, integrated with the suggestions given by the referees, will have to be submitted by **January, 13th 2019**.

Texts, bibliographic references, images and notes have to follow the editorial rules for the authors, available at the following address: <http://www.fupress.net/index.php/techne/information/authors>. **The non-compliance with the editorial rules is a reason for exclusion.**

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Section

Research and experimentation

Essays and Viewpoints

Advanced Search (Under35)

Title

Keywords (5)

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Abstract (max 4000 characters - spaces included)

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CALL FOR PAPERS | TECHNE | 17

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1. After the Call for Papers, authors propose an abstract of a maximum of 4000 characters -spaces included-, which are collectively selected by the Board (composed by the President, the Editor in Chief, the Editorial Board, the Assistant Editors). The abstracts are forwarded by the editorial staff, once purified by any element of possible identification.

2. On average, 25 to 30 abstracts are selected per number.

3. Each author agrees not to include specific identifying elements in the text of the abstract, without making any reference to the affiliation and, in the references, with a maximum of one bibliographic contribution, where the author of the abstract appears as an author of the reference. Each author can submit only one abstract, also considering contributions with multiple authors. Submitting more than one abstract for each author is a reason for exclusion of all the abstracts presented.

4. The selection is based on the correspondence:

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4.2 to the declarative mode, which must be typical of a scientific contribution;

4.3 to the requirements of the typology of the contribution. In the case of Critical Essays or Critical Review of Cultural and Scientific Literature, the paper -not be excluded- has to highlight (also through bibliographic references):

- object of the proposal and the purpose of the contribution;
- approach and/or methodology;
- cultural and scientific background related to the subject matter;
- analytical aspects, critical framing or debate on the subject;

Each of the aspects listed above must not exceed 1000 characters, including spaces.

4.4 to the requirements of the typology of the contribution. In the case of Research and Experimentation, the paper -not be excluded- has to highlight (also through bibliographic references):

- results already achieved by research: analytical, propositional, and debate aspects;
- originality, which novelty is expressed and for whom;
- limitations of research and possible significant developments;

Each of the aspects listed above must not exceed 1000 characters, including spaces.

4.5 to specific additional features required in the call.

Please note that, in the case of a Research and Experimentation article, quoted researches must be formalized by administrative acts and by the presence of third parties; the subjects involved must be indicated also in the abstract (excluding the department of affiliation. You can anyhow quote the University, which does not represent an element of recognisability). The relevance of the topic has to be highlighted and eventual fundings have to be mentioned.

Considering also the contributions by several authors, an author can appear only once in the same issue of the magazine, and cannot publish on two consecutive issues.

Board members and the Scientific Committee may publish papers over a year and a half, also considering contributions with multiple authors.

