# CALL FOR PAPERS | TECHNE | 33

*Journal of Technology for Architecture and Environment*

*redazionetechne@sitda.net*
*https://techne/index*

# INTEGRATED DESIGN.
# MULTI-SCALE PROCESS AND SYSTEMIC DESIGN

In response to the ongoing ecological, energy, economic, cultural, and social transitions, architectural design is required to undergo a paradigmatic revision in order to provide effective responses that support sustainable transformations of the natural and built environments (Omrany, 2024). To ensure alignment between objectives and outcomes, both the design domains and the associated management processes require ex ante control and ex post verification of outcomes, also in relation to the increasing availability of data flows (Muscillo et. al, 2023; Lei Y, 2024; Sheikhkhoshkar, 2025). However, there is a growing tendency to shift attention from ends to means, particularly in light of the increasing reliance on artificial intelligence (AI), whose integration into design processes is still in progress. This process, extended to the phases of policy definition, planning, conceptualisation, and implementation of interventions, nevertheless appears fragmented into specialised domains.

Given contextual complexities and the variability of intervention scales, design outcomes often fail to achieve a coherent synthesis between environmental, formal, experiential, and relational qualities, as well as social concerns. Yet, the coordinated objectives of "beautiful, sustainable, together" promoted by the New European Bauhaus—a creative and interdisciplinary initiative introduced in 2020 by the European Commission to address complex societal challenges and to foster inclusion, sustainability, and quality of life—require the adoption of a highly integrated design approach, based on multi-level and multi-scale methodologies, in line with the direction outlined by the NEB Compass. The integration of skills and expertise represents a new value paradigm: achieving decarbonisation and climate neutrality targets, reducing environmental impacts, and improving living conditions require a form of "integral design" (Yang et al, 2023), grounded in effective interactions among the diverse theoretical and practical knowledge of the stakeholders involved (Ikudayisi et. al, 2022).

It is therefore important to investigate the systemic synergies between implementation procedures and planning protocols; between experimentation and design; and between industrial-scale research and the production sector, and to determine through which multi-scale approaches these interactions may effectively contribute to the objectives of the European strategic framework for climate neutrality and decarbonisation in the construction sector. This is not merely a matter of assessing the effectiveness of technology transfer from research to practice, but of promoting a renewed systemic effectiveness: an innovative conception of integrated design as a tool capable of managing, within the design synthesis, the new complexities and multiplicity of competencies, in order to address and implement value chains and pursue transition goals across different scales (Alves et al., 2025).

The call aims to explore which experiences or theoretically grounded models, supported by evidence, may effectively define innovative trajectories for the integration of skills and expertise, seeking a synthesis among actors, phases, and tools that are currently insufficiently interconnected in pursuing transition objectives across different scales, through:
- governance models of processes, from conceptualisation to the design phase;
- scenarios of dialogue-based and operational integration between design and implementation phases.

Within the framework outlined by this call, issue no. 33 of TECHNE aims to collect results, identify verifiable impacts, and assess the transferability potential of findings from studies, research, and design experiments, in order to outline possible innovation trajectories for the effective integration of skills and expertise, and knowledge transfer within the framework of integrated design (systemic and multi-level), also considering the clear and traceable contribution of artificial intelligence in relation to the objectives underlying transitions at different scales. Contributions may address **one the following topics**:

**1. Multi-scale processes and methodological innovation, with a focus on impacts, limitations, applicability conditions, and transferability of:**
- innovative models of integrated process governance;
- comparative studies on collaborative approaches (e.g., multi-stakeholder models);
- multi-level protocols and processes.

**2. Systemic design and quality of outcomes, with a focus on integrated design innovation, including:**
- projects and research based on multi-scale experimentation (building, neighbourhood, city);
- interdisciplinary studies integrating environmental, economic, and social performance;
- case studies documented through quantitative and qualitative indicators necessary for the synergistic evaluation of outcomes.

**3. Implementation, construction techniques, and operational integration of competencies, with a focus on innovation in construction techniques and processes, specifying methodologies, evaluation tools, indicators, and metrics related to:**
- on-site experimentation with environmental performance monitoring of technical and material solutions, including economic sustainability over the life cycle;
- material traceability models and strategies for reuse and disassembly;
- experimental research on advanced materials, innovative construction systems, and engineer-to-order prefabrication, also in relation to the integration of design and production.

## TIMING

| | |
|---|---|
| Abstract submission | *29th May 2026* |
| Abstract acceptance | *6th July 2026* |
| Article submission | *14th September 2026* |
| Reviewed article result | *30th October 2026* |
| Reviewed article submission | *30th November 2026* |

PUBLICATION DATE
TECHNE | 33
14TH MAY 2027

FIRENZE UNIVERSITY PRESS

SITdA Società Italiana della Tecnologia dell'Architettura

OPEN ACCESS

INDEXED IN EMERGING SOURCES CITATION INDEX THOMSON REUTERS

Scopus