

# CALL FOR PAPERS TECHNE no. 2

Call deadline: 20 July 2011

Publication of the new issue: October 2011

---

## **TITLE**

**Technological design**

---

## **THEME**

TECHNE issue no. 2 aims to contribute to the definition of areas of knowledge, research and experimentation for the design of architecture and transformation of the built environment, focusing on the role of technological design in a multidisciplinary context.

Technological design in architecture is traditionally described as design expertise that relates to the functional, structural and procedural aspects, and the assessment of compliance with regulatory requirements and provisions. Traditionally, technological design was predominately located at the hinge between conceptual design and construction **(1)**.

Today, the distinctive competencies of technological design are still its capacity to analyse, synthesize and assess design factors, in order to propose and implement solutions that satisfy needs, performances, production criteria and construction process criteria, in compliance with cost, time and quality requirements. Nevertheless these competencies are performed in a series of design activities on different scales and in several phases of the life cycle of the project and the works. Two aspects, not the only ones but certainly among the most important, determine this new vision of technological design: the theme of sustainability **(2)**, and innovation in design technologies and material technologies **(3)**.

This vision calls for a reflection on the development of disciplinary competencies on the one hand, and the relations between different design disciplines on the other.

In academics, in Italy, there is currently a disciplinary reflection on design in architecture in relation to the redefinition of scientific disciplinary fields in the area of Architecture and Civil Engineering **(4)**.

More generally, the theme of planning as a *design science* **(5)**, planning as a research laboratory and design as a product of research **(6)** emerges.

For universities, design is not only placed in the context of traditional didactic (design laboratories) and research (planning laboratories) missions, but also in the context of what is today called the third mission of the university, understood as an active role in the economic and social development of the region with contributions of excellence aimed at raising the qualitative level of the social and production offer **(7)**.

With the aim of developing the themes outlined above, TECHNE issue no. 2 will have a section dedicated to technological design as an activity of excellence in training, research, experimentation and technological transfer, and this call is directed at such experiences.

## **SUBMISSION OF ARTICLES (articles will be subjected to a peer review process)**

---

Articles must be sent **by 20 July 2011** to the following address: [redazionetechne@tecnologi.net](mailto:redazionetechne@tecnologi.net).

When preparing the articles, all in Italian and English, you must refer to the "instructions for authors" available on the magazine's online platform. The text of each article in Italian must not exceed 18,000 characters with spaces.

Each contribution must include:

- Title (max. 95 characters with spaces). it-en
- Authors: name, surname, affiliation, email
- Type of article
- Article abstract (max. 800 characters with spaces). it-en
- Keywords (5). it-en
- Body of the article. it-en
- Numbered notes at the end of the text
- A maximum of 4 accompanying images (photographs, drawings, graphics, tables)
- Image captions supplied with the article
- Name of the photographer(s)
- Technical details of any projects mentioned in the article. it-en
- References in the original language

## CALL FOR PAPERS TECHNE no. 2

Call deadline: 20 July 2011

Publication of the new issue: October 2011

---

### Notes that appear in the text of the call by clicking on the reference

(1) When technological design first emerged as a specialist expertise in the Sixties, in particular in the context of English-speaking countries, it concerned the development of the working project, detailed design and technical specifications, alongside other expertises such as management and construction economics. The construction process has significantly changed since those years. The required skills have increased in number and are more specific and continuously evolving, and the roles of the design group have been divided and redefined. The traditional role of *team leader* assigned to the architect has been replaced by several design roles, as well as supported by evaluation, management and communication skills etc.

(2) The theme of technological design for the built environment is important, in Europe in particular, as it is in keeping with the strategic objective of creating a society of knowledge aimed at promoting sustainable development. Technological design provides the knowledge, methods and tools to satisfy new demands concerning construction quality with an efficient use of resources.

(3) The great availability, today as never before, of new design and production technologies allows innovations in the creative and decision-making process and in implementation and production processes. The new vision of technological design is an integrated approach that encompasses aesthetic, configurational, material and performance aspects, and allows them to be developed through the design process, in a collaboration between knowledge and skills, through analytical, synthetic and evaluative paths.

(4) The definitions of disciplines and their classification into levels, proposed by CUN (2008-2009), consolidate relations between architecture and engineering, but their schematism does not allow for the enhancement of aspects of human and social knowledge, which is instead partly achieved by the structure of research contexts defined at European level (ERC panel Structure and Descriptors version 2010), and that of RA UK (RAE 2008). In the definitions of the scientific disciplinary sectors of the CUN, design assumes territorial, town planning, architectural and technological specifications; technological design, together with (product and service) design, represents a disciplinary approach based on *system design* and *performance design* in the process of the conception, production, maintenance and management of virtual and material works and artefacts, on different scales for their areas of expertise.

(5) *Design Sciences* represent a system of knowledge and research fields based on design as a tool to introduce innovative and responsible elements into situations, which positively alters the abilities and living conditions of individuals and communities. The following definition may be significant:

*Design science is the comprehensive and anticipatory application of the principle of science to the creative design of solutions to the problems of society. It is a way of changing the world in preferred directions that is based on innovation and thrives on transparency* (Buckminster Fuller Institute Design Science Lab 2005).

(6) It is important to reflect on design as a product of research, relating it to both innovative operating procedures and regulatory developments, and changes in the professional world and Public Administration, as well as current social and ethical demands that steer design towards greater and inevitable complexity. The scientific development plan of the design must also include products that are the result of increasingly important research activity for the design in order to satisfy the requirement to govern and monitor activities concerning the transformation of the region and environment in innovative and original terms. Research activity for the design is expressed through complex and structured products proportionate in value to a design but different in nature, rather appearing as technical tools to support decisions, guidelines, manuals, preliminary studies, strategic guideline documents, technical standards, regulations, etc.

(7) In other European countries (England, Denmark, Sweden, Finland) the third mission has also been regulated in legislative terms and universities have been assigned the task of creating appropriate technology transfer tools and services. For the development of designs, in particular, it is necessary to have

## **CALL FOR PAPERS TECHNE no. 2**

**Call deadline: 20 July 2011**

**Publication of the new issue: October 2011**

---

tools that enable universities to act in compliance with legislation on Public Works and regulations that govern professional services, and compatibly with their organization in terms of human resources and administrative facilities.