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ARCHITECT'S RESPONSABILITY IN THE CONTEXT OF INCREASED CONSTRUCTION COMPLEXITY

Reminder of UIA Accord on International Standards of Professionalism in Architectural Practice:

The UIA Accord gives the architect the following definition: "a person... who is responsible for advocating fair and sustainable development, welfare, and the cultural expression of society's habitat in terms of space, forms, and historical context".

Introduction

The increased construction complexity: The origins of complexity:

The complexity of the construction task is, in general, unanimously agreed. Among the causes of this complexity are:

1. The transcription of the industrial revolution into the domain of architecture which was expressed by:

- the international movement
- the mass production, the abandon of the arts and craft in favour of industrialization
- the growing demand for urban constructions, the drift from the countryside
- the growing demand for decent sanitary conditions and comfort
- the side effects of the passage from the arts and craft to industrial production and the poor quality of mass construction

2. Changes as a result of industrialization

- the "material" progress: as a result of international competition
- the "operational" progress, from "made to measure" to mass production: as a result of international competition
- the "conceptual" progress: as a result of international architecture, the confrontation between architects notably through architectural competitions.
- the conflict between designers and manufacturers, from the invention to innovation, from the concept to integrated production.

3. Awareness of dangers and the progress in communication.

- standards, which accompany the transformation of local crafts know-how into regulations and international standards
- during several decades, the awareness of the effects of human activities on the health and safety of human beings and, in general, on the planet.

Architect's responsibilities

Within an international context, we can note the architect's responsibilities at three levels:

1- At the planetary level

These questions concern:

- the greenhouse effect and climatic change
- the scarcity of energy and the depletion of resources
- the various pollutions and the environmental impact of human activity; threats to the survival of the species, faunae and flora
- the trade beyond borders; from globalization to the need for "fair trading"

These questions concern architects throughout the world

2- At the community level

These are questions related, in particular, to urbanization and regional development which engage the responsibility of the architect in sustainable development; that is the social responsibility, responsibility for economic impact and, of course, cultural responsibility.

These questions also interest architects throughout the world

3- At the building owner level

In this context, it is a question of knowing how we build or develop today.

These questions are also related to construction techniques, and the "way of doing". Of course, this last question varies according to the legislation, the know-how, the economy, the culture and climate of each country.

1 At the planetary level

The question of climatic change, greenhouse effect gas emissions, energy consumption concerns the whole planet; the biggest countries such as the United States, China, India and Europe as well as developing countries or countries under development. The awareness of this climatic change is not the same yet tends to become widespread.

If the question arises everywhere, it is very different depending upon the place. In Europe for example, Poland that is one of the major European polluters, emits 9 tons of CO₂ per capita; twice more than the European average.

Furthermore, at the very fast economic development rate during the last decades, everywhere the subject has become crucial. In China and India for example: in Shanghai, 30 years ago, there were few heating and air conditioning systems.

Today, the average energy consumption in Shanghai is superior to the average of the European moderate zone; China has passed in front of the USA to become the world pollution leader closely followed by India and Russia.

And the more we speak about crisis, the less we want to take the risks to reduce the environmental impacts. At the end of November 2008, the Chinese Vice Minister State Development and Reform Commission, Xie Zhenhua had for the first time officially recognized that Chinese greenhouse effect gas emissions were comparable to those of America.

The EC does not attain unanimity in its ambitious commitments: the agreement reached, 12th December 2008 in Poznan during the preparation of the next Conference of Parties meeting in Copenhagen, did not succeed in satisfying the environmentalists and nor did it satisfy the developing countries. The need to find a consensus compromised the commitments.

However, China, which does not have the same difficulties with taking decisions, recognizes that it did not manage to achieve the ambitious objectives that it had announced on the subject.

In 2005, it had as objective to reduce the quantity of energy that it consumes by 20% per GDP unit within five years. Now, Mr Xie has admitted that the reduction obtained was 5,38% by the end of 2007. Further, the decrease of air and water pollution was only 3 and 4% respectively over the same period, below the necessary reduced rate aimed at for these two indices by 2010.

The part of renewable sources has to attain 15% by 2020 and China has launched very ambitious construction programmes for nuclear power stations, dams and wind turbine facilities.

Architects commitment:

For a long time, for which we can be proud, there exists on behalf of architects an environmental and social awareness of:

- the energy crises
- the climate change
- the population growth
- the threats to the environment and biological diversity:
 - depletion of resources
 - species threatened by extinction
 - problems of waste and consequent pollution

Our concern is to insist that, in this domain, architects also have a responsibility for the quality of their advice.

2 At the community level

The urban civilization that will dominate the world represents:

3/4 of the quantity of energy consumed

2/3 of the greenhouse effect produced

At the European level, this problem is under consideration:

- the European strategy in favour of sustainable development (2006)
- the Leipzig Charter on sustainable European cities (2007)
- the latest deliberations of European Ministers of Culture on architecture and sustainable development (November 2008)

from which arise the questions of:

- the struggle against urban sprawl (for a compact city)
- the control of development land
- the ageing of infrastructures/transport problems
- the urban ecology (green movements, local services, business and planned public transports... the impact on ecosystems),
- the energy efficiency of buildings, efficient construction, the restrained use of resources, favour renewable resources and prohibit those which are not, and
- the role of architecture as the synthesis and innovation element in the application of a "better life together".

These questions concern all countries: in particular, urban sprawl has become a major problem in developing countries because of the widespread over development of capital cities (e.g. Lagos) which has for consequence:

- to empty countryside
- to create an urban poverty related to unemployment
- to accentuate social segregation
- to jeopardise food and water supplies

Not to forget:

- the consumption of energy related to construction and transport, by people, assets and services.
- not least, the deep social mutation which takes place nowadays:
 - soaring demographic growth within developing countries,
 - population migrations which flee the effects of climatic change
 - ageing of population in rich countries, etc....

Consideration of these elements passes by information and the awareness of decision-makers (mayors, politicians, etc.) and the training and making responsible of professionals, (architects, contractors, craftsmen...)

At the building owner level

At this level, the responsibility of the architect concerns questions of:

- the standard and the interpretation of standards for a more efficient building; consuming less, cheaper, better and more beautiful.
- the innovation and its insurance because, generally speaking, insurers are a barrier to innovation and they hide behind national standards. When the economic situation is tight, these brakes react even more.
- the boldness of innovation, how far can we go, how far should we go and by what means?
The questions of innovation and its responsibility are important whichever the country. Yet, they cannot be treated everywhere in the same way. Local resources, wealth or poverty of the place should be taken into account.

Conclusion

We propose for the Commission to study the following themes.

Some questions are already treated by other UIA working parties, in particular, those questions that concern the environment or habitat.

Our proposal is to examine these questions through the architect's cultural and social responsibilities and to have a more political approach.

In this context, our analysis should take into account:

- the problems set by the current and future financial crisis
- the questions of competition, the north/south imbalance and the need for "fair trade"