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## **DESIGN AND ENVIRONMENT**

Why do modern designers have to think not just about aesthetic?

Designer of environment is modern and demanded profession. They used to work with environment. Designer's aim is to bring something creative, bright and unusual in society's everyday life. Designers always have to improve their skills and get new knowledge to learn how to transform our surrounding to make it better, more productive and more useful for people.

But today, with huge and intensive gain of technology progress, designers of environment have one more important mission. Now future designer have to think not just about beauty of our surrounding, but also about safety of it's creation.

Is this problem relevant?

I think everyone must agree that today the issue of environmental pollution is more relevant than ever. In my opinion every conscious citizen must analyze his lifestyle and think how to make his existence environmentally friendly.

Let's have a look on the history of ecological design.

With active technical progress people began to understand that the process of creating human's artificial environment has not very beneficial effect on natural human's environment. There were figures that realized this and for the first time began to think about environmentally friendly processes and materials in construction. The agreement between the human creator and nature lasted until machine production began to supplant manual labor. John Reskin (1819-1900) and William Morris (1834-1896), the founders of the British "Arts and Crafts

Movement", well-known figures of culture, artists and publicists, first touched upon the problems of the artist's interaction with scientific and technological progress.

In the 1920s and 1930s, notable eco-friendly steps were made by well-known masters of the world of design culture: architects and furniture designers Wright F.L. (USA) and Alvaro Aalto (Finland), who focused on "aesthetics of nature" and "organic design". Over time, this concept has evolved into a design area, called "organic design", and its main principles are:

- structural and plastic pattern of the form, borrowed from wildlife;
- purposeful, logically constructed organization of life processes;
- a holistic vision of the shape of the product (object) as a result of the harmonious interaction of material, construction and technology;
- anthropomorphic plastic that provides ergonomic comfort and optimum combination of the surfaces of the shape of the product with the human body [2].

In the 1950s this trend most clearly manifested in the work of the outstanding American architect and designer of Finnish origin Eero Saarinen (1910-1961).

Founder of another popular environmental trend design - biodesign - became more talented German industrial conceptual designer L. Colani. Its biodesign is not protest against the benefits of civilization under the slogan "back in the jungle". At the same time, designing various products for our equipped the urban world, from camera to piano or truck. Colani often inspired by fish, animals, or birds [1].

Last years the environmental situation has worsened. That's why there appeared a new direction - environmental design (or ecological design). The first to learn the tools eco-design and showed the occurrence of the design culture in the world "green movement" architects and designers industrialized countries: Australia, United Kingdom, Germany, Holland, Denmark, South Korea, USA, Sweden, Japan. They suggested designing household products, eco-friendly housing, transport and clothing using recyclables [3].

What is the aim of ecological design?

Eco-friendly design is one of the areas of global environmental movement. Its purpose is to save and restore environment. The main direction of the solution the idea of environmental protection by the methods of environmental design organic incorporation of man-made technological products in the environment and the environmental approach in the design culture.

The purpose of ecological design is to harmonize relations between humans and environment; sphere of complex design activities aimed at implementation in objects that designed to approximate the requirements of the natural environment with human consumption and aesthetic requirements: environmental protection, saving of natural resources, waste-free technologies production, organization of smart consumption processes and processing of products, including values, achieved by previous generations in the field of relationships between man and nature [1].

Traditionally, the product life cycle ends in a rubbish dump. At least get some benefit from the object that got there almost impossible. Therefore, the dump always puts pressure on environment, and cannot be regarded as ecologically tolerant. Obviously, an alternative to landfill could be continued use of the product or through upgrades (modernization, renewal), or through recycling (reuse or return of materials). Understanding this, the world's leading design schools try to make environmental thinking an integral part project design. Under the new approach, the traditional design tasks as its aesthetic, ergonomic, functional, marketing aspects should give way to the environment. The powerful accent on the environmental component has led to rethinking the traditionally quality category (Quality Scores) and the appearance of the new category that called "ecological quality" [1].

Based on foreign practice and own professional experience, a list of the most common principles and methods of ecological design. Therefore, the most common principles of eco-design:

- recycling (use of secondary materials processing);

- selective replacement (enhancement of product life cycle by replacing not just the entire product, but only the damaged details);
- energy saving (use of "clean", alternative energy sources, energy-saving technologies, hybrid engines, etc.);
- durability (use of reliable materials, structures, coatings);
- consistency (comparison of product service life with the period of its physical and / or moral deterioration);
- alternative proposals (provision of services instead of creation of goods, products);
- compactness (saving space, reducing dimensions products by cleverly assembling parts and elements);
- multifunctional (combination in one product multiple functions, objects);
- address design (design, taking into account the real benefits structure of different demographics and socio-cultural groups of consumers of eco-design products) [2].

To summarize this theme I have to say that modern designer have to use his intellect, knowledge and responsibility to transform his methods to make it better for himself, his artificial surrounding and, of course, natural environment.

As a conclusion can be said that by combining creative imagination with logical thinking, the designer can answer not only the questions of formation human-centred environment or artistic expression of industrial products, but also find the solution of more significant problems.

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