

# Changing the change

Design Visions, Proposals and Tools

An international conference on the role and potential of design research in the transition towards sustainability

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## SYSTEMS DESIGN APPROACH

### Abstract

Over the past 30/40 years design has elaborated and refined its language, it has promptly provided for a new interpretation of the social needs, going alongside with their transformation, and even anticipated new development fields. Design has been able to enlarge its own traditional boundaries, by being in on-going touch with new sectors and offering more open visions of problems. It accounts for a freer communication of knowledge among experts and decision makers, resulting in the discovery of new areas of investigation.

It has deservedly become a credited reference point for innovation development and exploration of new and unusual work territories.

All these efforts have been devoted exclusively to enlarging testing fields aiming to the conception of new products. However problems regarding use of raw materials, energy and production waste disposal, have been relegated to the mere technical sphere; but the environmental issues are not extrinsic to the design process, on the contrary they form an integral part of the very product. By doing so we boost the development of new a productions know-how where resources and energy are properly used.

A more expanded, interesting and complex project is conceived, embracing the whole productive chain including all the issues regarding rejects as well as the equally important ones of raw material supply and use.

Up to now we have been focussing exclusively on quantity and quality of raw materials and on their precise features. From now on more attention will need to be devoted to how much can enter a system, and especially to how much can exit a system.

We need to increase output qualities, not only quantities, as the effective future employs arise from the former, rather than the latter ones. This implies connecting different productive situations so as to turn the specific qualities of the output generated by a given production, into inputs within another one.

If we look at things in perspective, we can't help but see how indispensable it is to conceive a "multidisciplinary vision" bringing together different types of scientific know-how, hoping to generate an innovation inspired to the actual working dynamics of nature.

By doing so, design can thus embrace this innovative project approach of matter and energy flows, investigating the positive transformations occurring within the production processes, the opportunity to outline new business models in this renewed and fluent "flowing" of matter, as well as the positive influence on the local culture, leading towards a new life and launch of the peculiarities of the territorial identifications.

To establish these kinds of industrial reality, we need to develop multi tasking skills, by maintaining profitability and sustainability constant. As a result the need to respond to different demands, whilst working in complex markets, leads towards new teaching models and schools suiting the cultural requirement of the next generation of designers.

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At the same time, another important need deriving from the planning orientation outlined so far seems to be the change in the approach of the outputs of the production systems.

Nowadays the existing laws seem to be based on the belief that rejects of the industrial processes are, somehow, of low value compared to the product, or highly polluted. This is why the legislator is keen on protecting both the environment and people by making binding regulations which aim to trace the whole route followed by substances regarded as hazardous.

As suggested by an old Italian proverb, the flaw is in the broomstick. If the outputs went from being regarded as a problem to being looked at as a resource, providing useful economic value for other production systems, interest may be aroused in using them as an active part of a process. As such we would try to enhance their intrinsic qualities and we would be keen to change work procedures and polluting processes that degrade these "new resources". We could plan new systems to maintain all those properties that make them more appealing than other systems, so as not to lose their economic trading value.

I don't believe the difficulty is the opportunity to change the current linearity of process but is the pre-set ideas of people that were shaped by the consolidated and reductive Cartesian culture.

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