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# Multidisciplinary Aspects of Design

Objects, Processes, Experiences and  
Narratives

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Editors

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Objects, Processes, Experiences and Narratives

### Editors

Francesca Zanella   
Department of Engineering “Enzo Ferrari”  
University of Modena and Reggio Emilia  
Modena, Italy

Giampiero Bosoni   
Department of Design  
Politecnico di Milano  
Milan, Italy

Elisabetta Di Stefano   
Department of Humanities  
University of Palermo  
Palermo, Italy

Gioia Laura Iannilli   
Department of Philosophy  
and Communication Studies  
University of Bologna  
Bologna, Italy

Giovanni Matteucci   
Department of Philosophy  
and Communication Studies  
University of Bologna  
Bologna, Italy

Rita Messori  
Department of Humanities, Social Sciences  
and Cultural Industries  
University of Parma  
Parma, Italy

Raffaella Trocchianesi   
Department of Design  
Politecnico di Milano  
Milan, Italy



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# Introduction

This book is the result of a long research process. The work started in 2020 with an exhibition held in Parma (*Design! Oggetti processi esperienze*, CSAC Università degli Studi di Parma), and a book of the same title, edited by F. Zanella (with essays by G. Bosoni, E. Di Stefano, G.L. Iannilli, G. Matteucci and R. Trocchianesi) and published in 2023 (Electa Milano) centered on the role of archives as memory repositories and agents for contemporary design. This first period of reflection was followed by an international conference: *Design! O.P.E.N.* (<https://www.designopen.it>) held in Parma on May 5–6, 2022. The present volume contains most of the papers presented at the conference.

Starting from the first volume (*Design! Oggetti processi esperienze*), the research was always characterized by a multidisciplinary approach, which became even more multidisciplinary at the international conference held in 2022.

In fact, the conference was organized by a network of scholars from the world of design, philosophy and history of art, whose aim was to intertwine several types of knowledge. Consequently, multidisciplinary is also the main feature of this second volume whose objective is to reflect, in an integrated manner, on the different dimensions of design, using competencies from the field of design and from that of humanities.

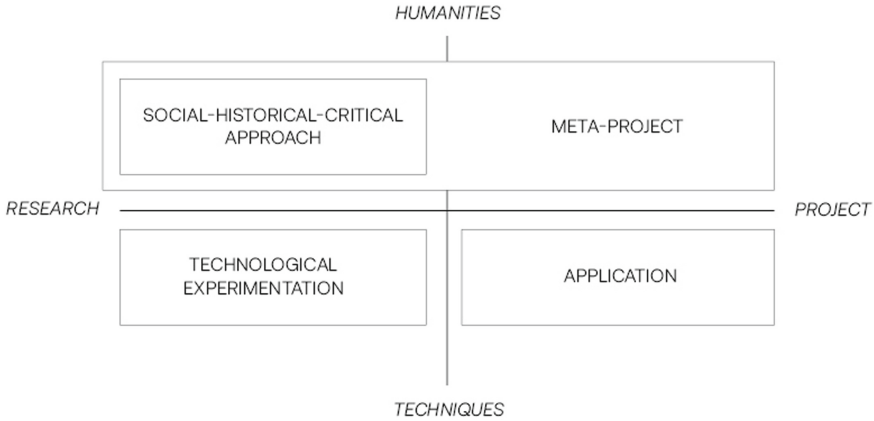
The aim of this project is to create a repertoire of opportunities of exchange and of relation among the culture of designers and the applied marketability of humanists in the project and in the innovation processes, in particular those design processes characterized by an important social and cultural impact.

In this context of exploration and experimentation in the territory of bordering subjects, stands the interpretative model in Fig. 1. It represents the potentialities in the interdisciplinary relations which verify the logics and dynamics in the “behavior” of a designer dealing with some project variables. On the vertical axis, humanities and techniques can be found, and on horizontal one, research and project.

Where these variables intersect, there can be four types of intervention:

- The intersection of techniques and research generates technological experimentation considering techniques and technology fields in continuous and fast evolution.
- Where research and humanities intersect, we are in the field of a historical/social/philosophical approach in which the analytical and critical dimensions of the research itself are developed.
- Between humanities and project, we are in the area on which our project focuses: here the meta-project approach becomes the synthetic expression of the relation among the two poles.
- Finally, between project and technique, we are in the area where the executive component of the project itself emerges.

There have already been significant studies which have stressed the importance of humanities for design and have shown that design can be a stimulus for humanities; this



**Fig. 1.** Potential synergies between design and humanities [1]

is why the conference *Design! O.P.E.N.* intended to be an opportunity for research and debate with the objective of continuing this fundamental line of work.

Some crucial issues which interdisciplinary research must tackle are:

- The research of “new problems for design”, that is, the collective need, as a scientific community, to find new directions toward which work must be periodically re-oriented, and this can be done only through a process of joint reflection.
- Research investigating the “meanings” that the product can have for design.
- Research that investigating the “value” that the design product shows.

As far as meanings are concerned, design and humanities integrated research can challenge, in a theoretically sounder way, “sustainability” by enhancing those concepts that are on the boundary between ethics and esthetics. Today, design cannot afford to dismiss ethical reflection, and, in this direction, humanistic culture can help to reinterpret the reflection on the mere functionality, in the more philosophically complex terms of the concept of “suitability for the purpose”.

With regards to the analysis of the value generated by the action of design, it may be interesting to speak of “technology of value”, which only humanistic investigation can help to process and fill with tools useful to produce not only ex-post critical knowledge, but first and foremost, oriented toward experimentation and to showing new corridors for contemporary design [1].

The volume follows the paths of reflection which structured the conference *Design! O.P.E.N.*, focusing on current themes and issues that are still at the center of the multi-disciplinary debate on design, investigated through four keywords: objects, processes, experiences and narratives, which correspond to the book chapters.

The first chapter focuses on object-oriented design, enhancing its functional narrative and experiential values. In fact, objects, beyond their value in use, bear symbolic, anthropological, political and social meanings and worldviews. This section also develops a theoretical reflection on the esthetic categories used to interpret the design object

in relation to the classic dichotomy useful-beautiful, to the category of game, to artistic values and the relation between ethics and esthetics.

The second chapter is on the designer's self-reflective moment which is focused on the analysis and on the definition of processes in various contexts, spanning innovation, social engagement, reflection on emergencies or forecasting. This section investigates how designers develop and test their models, both at production, implementation and research levels. The areas of investigation are those addressing innovation, social engagement and pursuing a reflection on emergencies or forecasting. The section is intended as an arena for discussion on topics revolving around both the different moments in the history of design and the contemporary condition. The contributions collected in the Processes Section reflect the current condition of the disciplinary debate, which is strongly characterized by a profound transformation of design processes due to the comparison with scientific research methods, with a prevailing interest for methodologies and contemporary priorities as the environmental one, or to the dematerialization of processes.

The third chapter focuses on as a theoretical and practical strategy aimed at facilitating and fostering experiential interactions among people, between people and objects or environments. This section aims at investigating the foundations and the implications of a specifically experiential turn in design from various perspectives and in various disciplines. Due to the multifaceted nature of this turn, both theoretical and practice-based research are testified by contributors.

Finally, the last chapter is on narrative. The narrative vocation of design represents a crucial key of interpretation in contemporary cultural expressions such as making history, representing through different media, archiving and exhibiting. This section explores narratives in three different "dimensions": narrative as a scenario (envisioning new contexts, behaviors, uses, spaces); narrative as a tool (creating new ways to trigger innovation); and narrative as a process (framing new methodologies to face complex issues).

Each chapter reflects the results of the conference held in Parma and is constituted by the analysis of concrete case studies and theoretical and methodological proposals aimed at highlighting the "multiverse" character of design. It is organized in the thematic subsection defined for the conference program, just to emphasize the prevailing interpretative trajectories.

A special thanks to the institutions that have funded the conference and the present publication (The Department of Humanities, Social Sciences and Cultural Industries and CSAC, University of Parma; the Department of Philosophy and Communication Studies, University of Bologna; the Department of Humanities, University of Palermo; the Department of Design, Politecnico di Milano; and the Department of Engineering Enzo Ferrari, University of Modena and Reggio Emilia) and all those who, in different ways, have contributed to reach this result (particularly Alice Biancardi and Marta Elisa Cecchi, and also: Okuniev Avhustyn; Katia Botta; Gabriela Del Rosario Abate; Giorgia Ferri; Salvatore Martino; Serena Massimo; Diego Valle; and Laura Xhaja).



Without their help, it wouldn't have been possible to make this event and this volume happen. We hope that this book will become a useful tool of reflection on the theoretical and methodological aspects between humanities and design.

The scientific committee and book editors:

Giampiero Bosoni, Elisabetta Di Stefano, Gioia Laura Iannilli, Giovanni Matteucci, Rita Messori, Raffaella Trocchianesi and Francesca Zanella.

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# How to Use Strategic Design Process to Address Complex Challenges

## A Practical Case of Application to Discuss Strategic Design Process' Fundamental Traits

Gianluca Carella<sup>(✉)</sup>, Michele Melazzini, and Francesco Zurlo

Department of Design, Politecnico di Milano, 20158 Milan, MI, Italy  
gianluca.carella@polimi.it

**Abstract.** In recent years, new market rules have forced changes in how companies relate to their customers. It is necessary to create new solutions precisely adapted to customers' needs. To do this, companies must expand their boundaries and adopt a transdisciplinary approach. In this panorama, the adoption of Strategic Design meant as an approach to creating innovative product-service systems that characterize the company and its market positioning - appears fundamental and decisive. This paper deals with a practical case of application of the Strategic Design approach from a company operating in a non-traditional sector. The aim is to show the fundamental steps the company took in order to develop a new strategy thanks to the adoption of Strategic Design. As a result of adopting Strategic Design, the company created a new offer comprising a coherent and innovative product-system. This paper presents the positive implications emerged for the company from its adoption of Strategic Design.

**Keywords:** Strategic Design · Strategy innovation · Design strategy · Design methods · Competitive advantage

## 1 Introduction

Contemporary society presents a rapid evolution and change in demand that require new solutions, different from those created in the last years [1].

To respond to the changing demands of their customers, companies must become systems organizers and solution providers. This means they must organize themselves to provide a consistent and integrated set of products and services that are specifically adapted to the needs of their customers [2].

Companies cannot continue to work and produce within their own perimeter: it is necessary to consider the collaborations among different disciplines and players.

In this panorama, in recent years Strategic Design has played a key role in enabling various companies to differentiate themselves in the market.

Strategic Design aims to define, through a design approach, the strategy embracing product, service and communication elements that a company uses to create an identity,

define itself on the market and shape its mission [3]. The use of Strategic Design allows the company to develop a set of specific strategic results [2].

Such an approach provides a competitive advantage that is generally linked to good market positioning [4]. This strategy helps an organization to create original and defensible products, a recognizable brand and a clear identity that will attract the attention of potential customers and investors [3].

This is possible because Strategic Design by its very nature gives direction to more vertical competencies. It provides the possibility to manage teams and solve complex problems quickly and efficiently [4].

This paper aims to discuss how it is possible to apply a Strategic Design process to innovate a company, defining the steps to be followed and discussing the benefits of a Strategic Design process.

The example of a real case from a traditional sector will be presented to support the discussion. The case is related to a company operating in the field of prefabricated steel constructions that in the last years decided to adopt a Strategic Design approach to identify new design directions. The company aimed to position itself on the market with distinctive and innovative elements.

The research and design guidelines applied within the company included the adoption of Strategic Design processes combined with scenario building once in order to identify a new clear strategy to reposition the company in the market.

The aim was to create a new offer that could be implemented in the future, to compete against the traditional offers of the industry in which the company operated.

The paper adopts a qualitative single case study methodology, describing as results the methodological framework and process implemented and discussing the benefits that Strategic Design can bring to companies.

## 2 Theoretical Background

Contemporary society features a rapid evolution and change in demand that require new solutions, different from those created in the last years [1].

Companies need to create a competitive advantage, which Porter [4] believes they can achieve by positioning themselves differently from their competitors in the market. According to Porter's 'competitive advantage' theories, in order to gain this competitive advantage companies must focus on original solutions, a different production structure, and a brand that can be easily recognized.

The aim is to go beyond competition in order not to operate in what Mauborgne and Kim [5, 6] call a 'red ocean', i.e., an environment where competition rules are clear and companies compete with their rivals in order to share a slice of the market.

In 'red ocean' contexts, companies find themselves sharing profits among competitors and very often have an offer that for customers represents standardized and worthless objects defined by Peters [7] as commodities.

What companies should do instead is to work on creating a 'blue ocean' strategy [8, 9], i.e., a situation where they can operate in a market that is not over-competitive and where they can explore a new type of customer demand.

Therefore, companies' efforts are focused on innovation, which for Barrett and Sexton [10] represents the end and a path to competitive advantage.

In this condition of necessary creation of competitive advantage, the use of Strategic Design can be the way through which companies can position themselves effectively on the market [11].

Strategic Design "is the project activity co-opted in the formulization and development of an organization's strategy. Its objective is to give shape to the strategy, which is meant mainly as a system-product, the organic and coherent set of various media (product, service, communication) with which an enterprise builds its identity, positions itself on the market, and defines its mission in society" [3].

The use of Strategic Design represents the possibility of making profitable decisions in a turbulent and uncertain environment (Landry 2000; Manzini and Meroni 2007).

Over the years, the contexts within which Strategic Design can make a contribution have increased in number, as they are no longer limited to a corporate context. Strategic Design can provide support within enterprises, companies, consultancy firms, institutions, governments, territories, and associations. (Zurlo 1999). It has become something that is not just a 'nice to have' but is a 'must have' to achieve a diverse and competitive offer.

The possibility of large-scale use can be attributed to the characteristics of Strategic Design: it allows a dialogic process between several actors, it creates value in response to identified needs, it acts and sets goals according to the context in which it has to act (Zurlo 2010).

Strategic Design not only makes it possible to understand how to solve a problem, thus acting as a problem solver, but also acts as a problem setting by evaluating different elements of the problem and considering other issues, before moving on to mere resolution (Zurlo 1999).

In elaboration of future strategies, Strategic Design identifies a series of signals of the present, references to possible changes taking place, and uses them to devise future visions the company could embrace in order to respond in advance to new changes.

It is therefore possible to say that Strategic Design in its work also focuses on Scenario Building activities. Manzini (in Manzini and Jegou 2003) asserted that the future cannot be predicted, but the present can contain clues of what will happen in the future and above all that what will happen in the future is the result of what we do from now on.

In any case, it must be emphasized that this new way of operating for companies requires a not inconsiderable transformative effort. This is because it requires new ways of interacting with customers, new strategies for operating in the market, and new ways of involving stakeholders.

### **3 Research Methodology**

The purpose of this paper is to demonstrate, through a practical case, how Strategic Design can contribute to the creation of new strategies in companies, including in non-traditional sectors, and how this may lead to a winning positioning and the creation of competitive advantage.

Considering the setting of the study and the typology of the “how” question, it was decided to adopt a case study methodology, described in the literature as the most appropriate (Eisenhardt 1989; Yin, 2011) and the most effective for answering ‘how’ questions in support of investigations (Easton 1995).

The case study methodology can help to understand in detail the role that Strategic Design can play in the realization of a new winning offer. Furthermore, several scholars suggest using this methodology when it is necessary to understand how a certain method can foster organizational innovation (Eisenhardt 2021), leveraging on a single and particularly inspiring case (Siggelkow 2008).

This study tried to research and identify a case of a company that had applied Strategic Design to revolutionize its offer, thus completely transforming its strategy. Furthermore, companies were skimmed by discarding all those big established sectors with available innovation studies.

Preference was given to companies operating in traditional sectors, which are often commodity-like offerings and where innovating strategy is more complicated.

All the above mentioned parameters led us to select for our case study a company operating in the steel structure sector and established in the mid-1990s.

The chosen company was founded as a spin-off from another family business operating in the steel sector, for the production and processing of steel.

In recent years, the company has tried to offer something new, focusing on steel prefabricated housing. This choice was made in order to be able to offer something different compared to the industry landscape.

However, the strategy deployed has not led to positive results, as steel constructions are associated by users with cold and uncomfortable elements.

The company therefore decided to seek Strategic Design driven consultancy in order to devise a new strategy and elaborate engagement and communication methods that would be successful with its target customers.

The aim was to create something new that would allow the company to position itself differently, while also overcoming the problem associated with the ‘cold element’ that the company had encountered so far and that was characteristic of the steel structure sector.

This study is based on both primary and secondary sources. All data available in trade magazines, youtube, and several websites were used as secondary sources.

Furthermore, in order to understand how and why certain decisions were made, semi-structured interviews were conducted with the CEO and the marketing manager of the company.

These two interlocutors were chosen because they represent the key figures behind the Strategic Design driven project. This choice thus made it possible to discover a series of data from behind the scenes and to have more references on the positive implications obtained from this project.

Table 1 shows the data collection details.

**Table 1.** Overview of the different data and related sources analyzed

Data sources	Use in the analysis
Semi-structured interviews	Understanding the managerial decisions taken and the role of Strategic Design in the new strategy
Recorded interviews and events	Understanding the history of the company Understanding the role of design in the previous strategy Understanding the main steps of the new strategy Understanding the main project steps
Press	Compare other information and studies on the company's strategy both ex-ante and ex-post Studying ex-ante and ex-post communication artifacts to compare the new and the old strategy

## 4 Results

Following the analysis of the company, based on both primary and secondary sources, it was possible to identify the main steps implemented in the new strategy developed through the Strategic Design approach.

The main steps are presented below, together with a brief description of how they were conducted in order to highlight the benefits identified for each action.

### 4.1 Mapping the Company and Assessing the Market

The first step was to study the company and the related market.

For this purpose, a SWOT analysis was first carried out. This tool, through the study of Strengths, Weaknesses, Opportunities and Threats (SWOT), is a well-established tool for strategic planning and quality control.

The purpose is to identify and examine the company's existing resources, both internally and externally, including the impact of current trends in order to identify possible positive and negative implications on the business (Hill and Westbrook 1997).

The second step was to develop a positioning map, a tool that gives information about "the place a product occupies in the mind of its target audience". (Andrei, Ecaterina and Ionut 2010; Bell 2008).

The last company analysis step was carried out through the 'ten types of innovation' tool, which aims "to assess how companies are approaching innovation internally, to help in analyzing the competitive environment and to reveal gaps and potential opportunities for doing something different and upending the market."

The tool presents ten levers that companies should consider in order to innovate. It can provide insights into the company's own situation and also into the situation of the

target market. This provides insights into both the areas of innovation the company may explore in order to compete with other companies, based on the market distribution.

The first analysis phase allowed the company to understand both the market and the innovation characteristics on which its competitors were focusing.

This made it possible to identify aspects that the company had not yet developed but that it was required to cover in order to be competitive; at the same time, some preliminary opportunities were also identified on which the company could focus in order to differentiate itself.

#### **4.2 Analyzing the Most Important Stakeholders**

The second step for the development of the new strategy involved the analysis of the different stakeholders.

This analysis was then deepened by focusing on end users: this activity represented a key step to understand how to take future decisions about the development and design of a product or service that should meet user needs.

End-users were analysed using the Personas tool.

Personas is a user archetype that helps guide decisions on product characteristics, interaction and design including visuals. (Pruitt and Grudin 2003)

#### **4.3 Building Scenarios**

All data obtained in the analysis phases were elaborated and used to develop future scenarios through the scenario building tool.

Scenario building is a tool to support the creative process, useful to create ‘stories’ of possible solutions from research results and related data analysis.

Scenarios represent “stories about the future, but their purpose is to make better decisions in the present” (Wilkinson and Kupers 2014).

Scenario development helps to identify possible paths towards a future vision, creating consistent descriptions of possible future situations.

The obtained result was the generation of four possible scenarios for new contexts and applications that the company could undertake.

The two most feasible scenarios, with respect to the company’s core competencies, were selected, representing two new solutions, one in the residential and one in industrial segment, with design directions hitherto unexplored by the company.

#### **4.4 Developing Both a New Services Set and a New Identity**

The last step of the new strategy saw the development of a new set of services to be associated with the selected scenarios and the creation of a new brand strategy.

Using the insights gathered in the research phase and considering the characteristics of the new scenarios, the company defined the set of new services to be offered in relation to the new design solutions it would develop.

The decision on the set of services took into account both the strategic analysis of what the competitors were offering and the needs that in the research phase had emerged from the analysis of user needs and trends.

Finally, the company studied the tone of voice used in related industries featuring particularly high-performance communications, and developed a new brand strategy to communicate the new designed solutions and to position them effectively in the market. For the definition of the new brand strategy, the company took into account also the relationship with the company’s previous brands, in an attempt to convey the same values.

Communications focused on both the performance and features offered by the new solutions, in order to overcome prejudices (particularly the one about steel structures as cold elements) in the minds of end users.

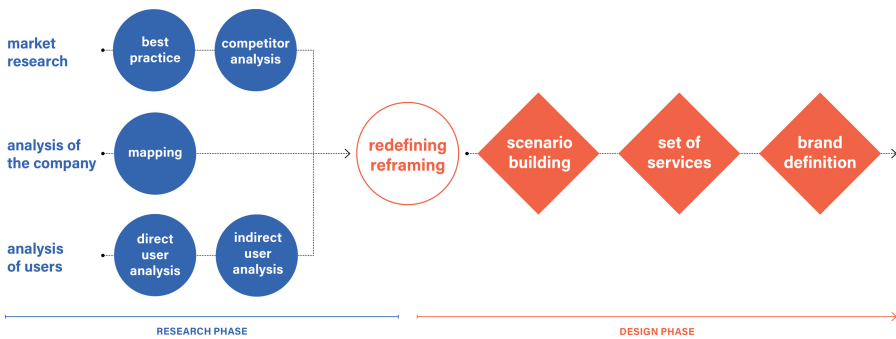
### 5 Discussion

This study has identified a successful best practice for the use of Strategic Design in companies resulting in the creation and effective definition of a new strategy and defining a new path to reach innovation inside companies.

This paper was conceived as a contribution offering a new strategic process to be put into practice by different companies, scaling up to other contexts, in order to offer them new opportunities, being able to produce a new strategy to operate on the market and to communicate with customers.

One of the main results emerged from this study is the definition of the main steps to be followed to effectively apply Strategic Design in a company.

Figure 1 summarizes the path to follow and includes all the main steps emerged from the case study analysis and commented in the findings.



**Fig. 1.** Representation of the Strategic Design process adopted in the company.

The obtained results and the related effects allowed to verify the effectiveness of the use of this strategy with reference to the main objectives that Strategic Design should enable to achieve.

Zurlo (2010) states that Strategic Design should produce as an outcome an original offer, with a recognizable brand and a clear identity, with the power to attract both new customers and investors.



Furthermore, it was possible to confirm the validity of the process represented in Fig. 1, thanks to a series of positive effects that the company was able to verify on the market.

The first positive effect was the creation of new partnerships: the development of the new offer required the establishment of new connections that gave to the company the possibility to expand its offer and the systemic vision of the brand. Thanks to this achievement, the company can now offer its customers systemic solutions.

Another recognized positive effect of the new strategy was the market differentiation: considering the analysis made and the opportunities emerged, the company has decided to follow different phases associated to the new solution. In particular, the design, the implementation, the finishing, and the installation processes will be internalized by the brand itself, thus differentiating its offer.

Moreover, another positive effect has been the creation of new streams of revenues: new possibilities have emerged for the company to offer its services not just in relation to its finished products but also as stand-alone services. The company has realized it has in-house capabilities that enable it to also operate as a support operator disconnected from the vertical offer of the company.

Finally, another positive effect was that the company realized it can enter new markets: the company therefore grasped the possibility of being not only “a supplier of the material” but also a key actor in different contexts. The company will produce solutions for the construction and office markets, where it was not present before.

Through the described case study, we have therefore identified a Strategic Design driven methodological process that companies can adopt to achieve satisfactory results. We have also identified the benefits this adoption can bring, enabling effective market positioning and gaining a new competitive advantage.

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