

Springer Series in Design and Innovation 38

Claudio Gambardella *Editor*

# For Nature/With Nature: New Sustainable Design Scenarios

 Springer

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Claudio Gambardella  
Editor

# For Nature/With Nature: New Sustainable Design Scenarios

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# Series Editor's Foreword

*Springer Series in Design and Innovation* (SSDI) explores all aspects of design that provide innovative innovation-oriented approaches in the different fields of application and design development, with a particular focus also on cross-cutting approaches and emerging research areas that can represent essential opportunities for economic and social development.

The design culture is committed to addressing the growing environmental concerns carefully considered by the 193 UN member countries that signed the 2030 Agenda for Sustainable Development in 2015. And in order to give adequate answers, I believe that we must look at a broad horizon that includes a technical/humanistic approach.

It is in this frame of reference that the series welcomes the volume *For Nature/With Nature: New Sustainable Design Scenarios* on the crucial theme of Nature, which results from the homonymous call launched in November 2022 by the Department of Architecture and Industry of the University of Campania “Luigi Vanvitelli”.

“What does ‘Nature’ mean nowadays? What effort is required of us to reposition ourselves with respect to it? How can we reconsider our history, our being in the world and the future with respect to a new idea of Nature? Finally, what is our correct position to establish the most effective actions in order to improve the living conditions of men on Earth?” These are the enlightening questions that have been posed to the scientific community by the Publisher of the call and of the book, Prof. Claudio Gambardella.

In our opinion, these ideas are useful for interweaving new visions of nature with new lines of design research.

The book, divided into three parts, Nature and artifacts, Nature and digital technologies, Nature and “fourth environment”, deals with the theme of the relationship with nature from multiple points of view. Starting from the relationship between human and nature, the essays collected in the book investigate the main sectors of intervention of design. From product design to design for living environments, to fashion design, through studies on innovative materials and sustainable industrial production processes, up to the relationship between design, craftsmanship, and innovation.

Particular attention is paid to the theme of technological innovation dealt with in the second part of the book, from the opportunities of digital innovation to artificial intelligence's ethics, from design for robotics to biomedical design, up to sustainable innovation for the "fourth environment" dealt with in the third part.

In conclusion, the book presents a very interesting reflection on a particularly topical theme, offering a broad and articulated reading that opens up new terrains of comparison and debate for design.

Francesca Tosi

# Foreword

## *For Nature/With Nature. A New Awareness*

Today the lifestyle. A sustainable global issues of ecology and consumerism impose a call to the consciousness of design to assume its responsibility with respect to the environmental sustainability of a contemporary process that must use natural resources at a rate so that they can be regenerated naturally. Today, humanity is living in an unsustainable manner, consuming the limited natural resources of the Earth faster than it can regenerate them. The collective social effort to adapt the human consumption of these resources within a level of sustainable development is a matter of paramount importance for both the present and future of mankind.

Since the 1980s, the term “sustainability” has been used in the sense of human sustainability on planet Earth and this has resulted in the definition of sustainable development as a development that meets the needs of the present without compromising the ability of future generations to meet their own needs. While raising the living standards of the developing world, the challenge for sustainability is to limit Western consumption without increasing the use of the resources as well as the environmental impact. This must be done by using strategies and technology that break the bond between economic growth and environmental damage.

In the context of development economics, the concept of economic sustainability is at the core of the considerations. In this perspective, consumers are using their purchasing power for ‘ethical consumerism’ practiced through either “positive buying” (the ethical products are favored) or “moral boycott”. A major hurdle to achieving sustainability is the alleviation of poverty, one of the main sources of environmental degradation. It is therefore futile to attempt to deal with environmental problems without a broader perspective that encompasses the factors underlying world poverty and international inequality. In this sense, the environmentally conscious design is the philosophy of designing physical objects, built environment, and services to comply with the principles of social, economic, and ecological sustainability. The intention of sustainable design is to eliminate negative environmental impact completely through skillful, sensitive design, that requires renewable resources, minimizing the environmental impact, and relating people with the natural



environment. Beyond the elimination of negative environmental impact, sustainable design must create innovative projects capable of shifting behavior, generating the respect of both the environmental and social differences.

In a memorial service held in Tucson (Arizona, 2011-01-12), President Barack Obama called on the Americans to sharpen the instinct for empathy to become a more civil people. In the opinion of Jeremy Rifkin (*The Empathic Civilization: The Race to Global Consciousness in a World in Crisis*), being empathic means being open to the plight of others. For Rifkin, empathy is the emotional and cognitive means by which we express intimacy and sociability. To empathize is to experience another's condition as if it were our own. It is to recognize their vulnerabilities and struggle to flourish and be. Empathy is the real "invisible hand" of history. Today, empathy includes the whole of humanity. We are coming to see the biosphere as our indivisible community, and our fellow human beings and creatures as our extended evolutionary family. In this sense, empathic design is a user-centered design approach that pays attention to the feelings toward a product.

In 1967, the first long play by the Italian singer-songwriter Francesco Guccini, *Folk Beat No. 1*, contained a song, *Noi non ci saremo* (We won't be there) that told of the rebirth of life after an atomic war, a threat considered at the time as very likely. The lyrics, poetic like all of Guccini's songs, drew an apocalyptic vision of a planet that, destroyed by a fiery event "greater than the sun", like a phoenix "after a thousand centuries at least" was able to rise from its ashes, bringing once again the waves of the sea to resound on the beaches, snow and fir forests to cover the mountains, rainbows to shine high in the sky. One bleak truth accompanied the rebirth: the "new world" witnessed the self-destruction of the human species and the crumbling of houses, buildings, and cities. The refrain that accompanied each verse, *Ma noi non ci saremo/Noi non ci saremo* (but we won't be there/We won't be there), thundered like an epitaph and drew the bitter vision of a definitive disappearance, whose conscious and historical reference to the dramatic events of Nagasaki and Hiroshima attributed the cause to the human hand.

The recent events between Russia and Ukraine have reawakened the fear of nuclear war throughout the world. But there is now an equally powerful, possible, and imminent risk: the disappearance of the human species from planet Earth due to harmful climate and environmental change. This risk makes it necessary to speak out on urgent issues such as building a healthy continent, combating climate change, and environmental challenges, and an economy at the service of people: an awareness of a countdown that, if not reversed, cannot avoid asking in the near future: but won't we be there?

Aversa, Italy

Ornella Zerlenga

## Preface

July 16th, 1945—the date of Trinity Test in Alamogordo, New Mexico, just three weeks before the launch of “Little Boy” on Hiroshima City—is considered the symbolic date of the end of Holocene and the beginning of Anthropocene, the name created in 2000 by Paul Crutzen in order to indicate the present glacial era. The latter has this name because to condition the terrestrial environment is the «telluric force» of man—as Stefano Mancuso defines it—so much so that in 2020 “[... ] the weight of materials produced by man—cement and plastic—has exceeded the weight of life on the planet” (Tonfoni 2021). However, it is relevant to declare that the increasing of CO<sub>2</sub> and CH<sub>4</sub> concentrations in the atmosphere is the most significant signal that human actions negatively influence life conditions on the planet; that means they cause desertification, pluvial wood destructions, increasing of ground karst phenomena, loss of usable surface for agricultural crops due to erosion or over-fertilization, ozone hole, and climate alterations. In order to oppose such events, the 193 UNO member countries signed the 2030 Agenda for Sustainable Development in 2015 (Nazioni Unite n.d.). The 2030 Agenda indicates 17 Sustainable Development Goals and 5 key concepts such as to grant prosperous and full lives in harmony with nature; to protect the natural sources and climate of the planet for the future generations. On the basis of its 2050 long-term strategy (Unione Europea n.d.), the EU has the ambitious objective to reduce net emissions by 55% by 2030 in respect of 1990 levels and to become the first climate-neutral continent by 2050. It needs to consider how much the recent energy crisis due to the Ukraine war will slacken decarbonization plans and the process of abandoning fossil fuels by modifying the European Green Deal program and its timescale.

Nevertheless, “[...] to say that the nature is in a dangerous situation is senseless”, Salvatore Natoli says in his *lectio magistralis* in 2011: (Festival *Filosofia* dedicated to the Nature theme). “Man hasn’t the [...] force to destroy something more powerful than him and in which he was generated [...] eventually man by abusing of nature or not using it in the right way destroys the conditions of his life and so puts himself in danger [...]” (Natoli 2019). This behavior is due to the consideration that man doesn’t feel, as in the ancient world, “[...] a being created in the φύσις [...] its own product”, but he is separated from it (Natoli 2019). Science has increased the sense of alienation

toward nature lived in tragic way by our present society by arriving at paradox “[science] identifies itself with nature in order to allow men to detach from it as possible [becoming the manipulative dimension], in these two centuries in particular; this means science has become our natural way to live [...]” (Natoli 2019) through the use of “[...] technique which has become the essence of science” (Galimberti 2019). “This industrial society had upset the relationship between man and nature by subjecting the nature to man so the technological society that was born through the quantitative increase of industrial society produces qualitative transformation which is the subordination of nature and man to technology” (Galimberti 2016, p. 356). “The unfolding of the Baconian formula [scientia est potentia] has changed the scenario: no longer the power of man over nature, but the power of technology over man and nature. In this type of condition, the anthropocentric horizon is already dissolved because the power belongs to technique now and no longer to man. The technique imposes to the supposed holder of power (man) its correct use, so man becomes a passive executor of the technical possibilities that are exercised over nature, which suffers them passively” (Galimberti 2016, p. 524). The self-governing of technique which “moves over the human-nature relationship” (p. 524) emphasizes the skill to diagnose—one by one—in a “technical” way the pathologies affecting the planet and to answer with right “technique” remedies to the same pathologies. Plants are considered machines—that set humidity, produce oxygen, absorb CO<sub>2</sub> and microparticles—in green architecture and urban furniture in order to give the present towns a way to live better.

What does “Nature” mean nowadays? What effort of repositioning is required of us with respect to it? How can we reconsider our history, our being in the world also future with respect to a new idea of Nature? Finally, what is our correct position to establish the most effective actions in order to improve the living conditions of man on the Earth? These “human” questions are necessary to find our nature vision, to found it again and put it into new topics of research in disciplines which seem so far from philosophy.

First of all, the culture of the project such as scientific research and training is involved in the necessary change of course to establish a new balance between man and nature because “Many problematic situations of our world are the result of planning decisions” (Thackara 2005, p. 1). They are often wrong decisions not due to mistakes of calculi but to the approach they are derived from. Nature is considered as consumer goods in exhaustion because of a pervasive and reductive economic vision of the world. Therefore, we prefer simpler names instead of Nature to avoid philosophical or religious problems and to keep it under the easy control of a fragmenting thought, so we use words as “planet”, “earth”, “biosphere”, etc.

The German philosopher Gernot Böhme (2012), overcoming the representation of a world shaped by circulating conceptions of Nature and the Man-Nature relationship, shows new scenarios in which “[...] nature presents itself today [...] as a task that is in front of us” (p. 5). Therefore, we are invited to “[...] recognize as our great collective task not the defense, but the construction of nature as a foundation for human life, and to work in a serious way in respect of it” (p. 24). Böhme’s suggestion (2012)

can wisely be taken up by the person who works within the project culture in order to feel fully involved in this “task”.

Scholars have been invited to contribute to the construction of a multi-voice mosaic on the theme of nature and the relationship between Man (understood as designer) and Nature through the call *For Nature/With Nature: New Sustainable Design Scenarios*, which was issued in the autumn of 2022 by the Architecture and Industrial Design Department of Vanvitelli University. To be more precise, innovative, and sustainable proposals from the field of design were requested, in its many facets and interdisciplinary contributions. Although it is indisputable the creative and economic effort that designers, institutions, and companies carry out for years to improve human living conditions, in this volume preference has been given to scientific contributions (unpublished or not yet fully known case studies, projects of strategies, products, systems and services, theoretical contributions, communication) that are the expression of a new approach to Nature, seen as our ally and subject of an Ethic of Care.

The focus was the design both in its role as innovation driver and interpreter of social evolution that must be considered within the human-nature relationship.

The following topics identify some of the most relevant fields of development in which “Design Driven Innovation” can be developed in the respect of perspective of a new relationship with nature.

#### A. Nature and artifacts

- biomimicry and biocompatible materials in industrial, fashion, and textile design;
- project, production, design management for sustainability (packaging, communication, etc.);
- memory and innovation of processes and products in handmade design.

#### B. Nature and digital technologies

- toward sustainable, humancentric, and resilient industry 5.0;
- smart mobility and green vehicles;
- pervasiveness and sustainability of apps.

#### C. Nature and “fourth environment”

- Orbiting stations: design for living;
- dress design and new materials for space tourism;
- the design of new low orbit habitats.

Many scholars responded to the call and among the numerous papers received, after a first screening of the abstracts, sixty-one were selected through a process of double-blind peer review. The result is reasonably satisfying, especially given the brief time spent promoting the call. Certain authors have focused only on some of the subtopics

indicated in the call, while others have preferred to compete on a mainly theoretical treatment and, for this reason, they have been placed at the beginning of the first part. Moreover, it was not always easy to find the exact location of a paper within the first and second parts of the book relating to the first two topics. While it was obvious the placement of papers in the part related to the fourth topic, definitely specialized and, therefore, treated only by some scholars. The succession of papers within each part was made starting from broader arguments, proceeding successively along the lines of subtopics and, therefore, for increasingly specialized themes. For these reasons, each part is named with the topic only, without specifying subtopics.

Aversa, Italy

Claudio Gambardella

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Claudio Gambardella



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# **Nature and Artifacts**



# Design, Handicraft and Made in Italy for Sustainability and Innovation: The Tuscany Case Study



Francesca Tosi , Claudia Becchimanzi , Mattia Pistolesi ,  
Ester Iacono , and Alessia Brischetto 

**Abstract** Made-in-Italy companies, capable of producing products of the highest quality and of imposing themselves on markets at the international level, have always strived to transfer into design innovation a non-reproducible cultural and productive heritage.

A distinctive feature of a production system based on “know-how” is the strong connection between different companies within the same territory and the presence of excellent workmanship and established production traditions, impossible to reconstitute in contexts other than the original one. Like many Italian regions, Tuscany is characterized by craft excellencies that have contributed significantly to the cultural and economic growth of the region. Many of these, however, fail, due to economic size and cultural background, to keep up to date with the ever-changing demands of a market that wants new products, access to new technologies and attention to sustainability and the life cycle of each product.

On this basis, we outline the key role of design as a tool and driver for innovation, capable of guiding the company’s strategic choices, including in relation to the sustainability of products and processes.

This paper presents the research project “Art, Design and Enterprise for New Young Talents” aimed at proposing and developing new training and production patterns and processes through the placement of young talents, designers and artists, within companies in the Tuscan territory. In fact, putting young creatives in contact

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with companies can help companies in the path of research and innovation and allows young artists to translate the theoretical framework acquired into a finalized design.

**Keywords** Design · Made in Italy · Handicraft · Sustainability · Innovation

## 1 Introduction: Design and Made in Italy

### 1.1 *A Made in Italy: The Limitless Value of “Know How”*

Made in Italy, marked by the synthesis of artisan knowledge, entrepreneurial skills and the capacity for continuous innovation, constitutes the original core of many companies operating within Italy’s production systems of excellence.

One of the challenges for Made in Italy companies, which have always been able to produce products of the highest quality and to impose themselves on markets at the international level, concerns the ability to translate a cultural and productive heritage that cannot be reproduced into design innovation (Becattini 2000). This phenomenon is even more evident in the perspective of Re-shoring (Di Stefano and Fratocchi 2019), i.e., the re-location of production activities at home by many companies, with the aim of guaranteeing higher product quality, better traceability and absolute competitiveness from the point of view of human resources and the enhancement of Italian know-how (Barbieri et al. 2020). In fact, the intrinsic value of Made in Italy products finds its essence in multiple factors, which are often intangible and cannot be measured quantitatively.

A further point is the ability of Made in Italy companies to embrace the market’s opportunities, meeting even the very specific demands of users: it is precisely the attention to the desires of the final consumer, together with the craftsmanship that characterizes their aesthetic value and the quality of their manufacture, that has made Made in Italy synonymous with luxury products and excellence. The goal of quality is closely welded to the goals of product innovation and diversification, which allow the company and the production system in which it operates to address even different sectors of the market. Attention to the final recipient translates, in fact, into the particular ability to interpret, quickly and with appropriate design responses, the expectations of the market and to be able to grasp the rapid changes in expectations and desires as they are being defined or, in many cases, even before they become explicit.

A first and peculiar feature of the production system based on “know-how,” is the strong connection between different companies within the same territory and the presence of workmanship of excellence and established productive traditions, which are impossible to recreate in contexts different from the original one (Palano 2005). The set of established productive knowledge and the links between firms and people define and characterize the local context, which, therefore, represents a place of accumulation of productive and life experiences and an environment of production

of new knowledge, that exactly because of its richness of skills and relationships, constitutes a non-reproducible competitive advantage.

From this perspective, “know-how to do things well” is important but not sufficient: in order for Made in Italy companies to distinguish themselves internationally, the need to re-localize production in the country of origin clearly emerges. The aim is to strategically blend corporate innovativeness on the level of non-imitable product qualities and the ability to translate a cultural and productive heritage that cannot be reproduced into design innovation, while continuing to guarantee the high quality and excellence that have always distinguished Made in Italy (Savi 2019).

## ***1.2 The Contribution of Design for the Strategic Enhancement of Know-How***

In this scenario, design can play a decisive role in re-addressing the company’s production strategies and enhancing its vocation for quality.

Like many regions of Italy, Tuscany is characterized by handicraft excellence that has contributed significantly to the area’s cultural and economic growth. Many of them, however, fail, due to economic size and cultural background, to keep up to date with the ever-changing demands of a market that wants new products, access to new technologies and attention to sustainability and the life cycle of each product.

On this basis, design plays a key role. In fact, design today represents a primary tool for re-launching and innovating those quality features and competitive ability that a traditional approach is no longer able to guarantee. Moreover, the key role of the designer emerges as a professional who works both for the definition of new products and for the innovation of their design and development processes, and for the synthesis and connection among the many skills involved in these processes (Tosi 2020).

Design has long been recognized as a tool and driver of innovation, capable of leading the company’s choices, both in the creation of new products and in its strategic choices. Also, in regard to the product and process sustainability, design represents a fundamental tool for revitalization and innovation, both in terms of quality and competitive ability, which a traditional approach cannot guarantee (Barr 2012). Some current trends in the production system, and the growing interest in design and its innovation-oriented methods of intervention, from design thinking to design-driven innovation, make it feasible today to concretely develop the action of design as a disciplinary and methodological approach and as a tool for innovation in the production and social system, while at the same time developing the professional action of the designer within and/or in collaboration with companies, starting with the construction of shared knowledge and tools of intervention.

On this basis, the “Art, Design and Enterprise for New Young Talents” project was developed, aimed at boosting innovation in Made in Italy by proposing and developing new models and training and production processes. The overall goal

of the project was achieved through the placement of young talents, designers and artists, within companies in the Tuscan territory. In fact, putting young creatives in contact with companies can help companies in the path of research and innovation and allows young artists to translate the theoretic framework that they have learned into a finished project.

This paper presents the activities carried out and the results achieved by the project. This research aims to promote the study of new products, the search for new markets and the definition of new forms of exploitation of knowledge and “know-how” held by companies.

## **2 The Tuscan Case Study: The Project “Art, Design and Enterprise for New Young Talents”**

### ***2.1 Background and Objectives of the Project***

Tuscany is a region characterized by artisan excellence which has made a significant contribution to the cultural and economic growth of the area. Many of these, however, fail, due to economic size and cultural background, to keep up to date with the ever-changing demands of a market that wants new products and access to new technologies. Connecting young creatives with companies is helping them along the path of research and innovation and allows young artists to translate the theoretical framework they have acquired into finalized design. The project, funded by The Presidency of the Council of Ministers, whose partners are the Luigi Pecci Association, Pecci Museum (lead), City of Prato, University of Florence/Department of Architecture DIDA,<sup>1</sup> aims to promote and support youth creativity in relation to the cultural and economic background of the area. The project aims to encourage the actions of listening to the economic realities of the territory, contributing to recreating the cultural climate that will make Tuscany a great workshop of ideas and innovative works. The intervention aims to promote the active and responsible involvement of young artists by supporting them with innovative tools in the phase of professional transition. So, the overall objective of the project is to promote the job placement and self-entrepreneurship of young creatives, facilitating the entry of youth artistic productions into economic circuits. The specific objectives are:

1. Support the professionalization of creative youth work;
2. To help young artists and designers enter the world of work by putting themselves at the service of business and the craft system to renew the system through innovative pro-positions, research and experimentation;

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<sup>1</sup> University of Florence/DIDA Department of Architecture working group: Francesca Tosi (Scientific Responsible), Claudia Becchimanzi, Mattia Pistolesi, Ester Iacono, Alessia Brischetto, with Giancarlo Bianchi.

3. Activate in-company training paths, aimed at the insertion of young talents in the production cycle and the study of new products, the search for new markets and the definition of new forms of valorization of the knowledge and “know-how” possessed by businesses;
4. Offer placement and orientation services to young artists;
5. Reduce the time it takes to enter the labor market and increase the chances of finding employment in line with the studies undertaken.

The main targets of the project are young artists and designers between the ages of 15 and 28 who wish to specialize their university and art education on economic, managerial and strategic issues associated with arts and industries. So, the target groups are high school students, undergraduates or recent graduates of arts faculties, unemployed and NEETs. There were 22 young direct recipients of the project, while there were about 200 direct and indirect beneficiaries.

The project had a time duration of 25 months.

## ***2.2 Phases, Framework and Specific Actions***

The project included four phases, each with specific sub-activities. The most relevant phases from the point of view of the contribution of Design in relation to the project objectives are phase 2 and phase 4. They are described in detail below:

Phase 1: Management coordination and reporting of the project.

Phase 2: Implementation of planned activities. This phase involved the following actions:

2.1 Identification of companies: identification, through a public open call, of 12 companies interested in hosting young artists for an internship aimed at the modernization and innovation of production lines. With the companies that expressed their willingness, the University of “Art, Design and Enterprise for New Young Talents” initiated a supportive training course in order to define the innovative products and professional figures required.

2.2 Open call for young talents: national open call to identify young artists interested in a career path related to the professions required by companies or to take advantage of the project’s placement services. The call was diffused through the Internet, social media and the press. The whole project partnership participated in the dissemination. The selected young talents participated in a guidance counseling course. A panel of experts selected the 22 young talents to be placed in companies through the review of resumes and artistic portfolios.

2.3 Launching internships in companies: the skills and creative potential of the selected young talents were explained to the companies, leading to the development of a prototype project to be entrusted to the young person. The internship at the host companies lasted about 12 months. The young talents were supported by

a mentor with relevant professional experience who supervised the project and the enterprise/artist relationship.

2.4 Career advice paths: seminars for high school and university students to learn the most popular and effective techniques and tools for job search and for setting up their study and work careers: individuating one's professional project, personal budget for a job interview, setting up one's job search strategy.

2.5 Background survey: cognitive survey of the training and professional needs of enterprises to identify the professional figures most in demand in the labor market and most innovative. Interviews were conducted with insider testimonial in the enterprise, company managers and experienced business interviewers. At the end of the survey, a list of occupations with the main professional profiles in demand was created. The document was then used for the selection of young talent matched with enterprises.

2.6 University Placement: based on the results of the survey, university placement paths were initiated as a tool for training and transition between university and work, 2 Career Day Labs were organized specifically for young talents, with presentations of placement-oriented companies, and 2 job orientation seminars were organized.

Phase 3: Monitoring and evaluation.

Phase 4: Communication of the project.

4.1 Communication plan tools: development and design of a page dedicated to the project where each artist can document the activity and progress completing the sense of the experience with reports and images. In addition, social packs related to the dissemination of short pills taken from the interviews with the youth and the businesses matched with them were published. The social packs were disseminated through the social pages and official websites of the companies and the young talents. A photo campaign, disseminated through institutional channels, targeting the young talents and staff of the companies was also created.

### ***2.3 Activity Planning and Preliminary Stages of the Project***

During the preliminary meetings related to the "Art, Design and Enterprise for New Young Talents" project, the modalities of conducting and organizing the 6–12 months internships that the selected young talents carried out within the partner companies were defined, with the aim of realizing innovative projects. The main objective is to offer young designers the opportunity to insert themselves within the Tuscan production system to develop and implement an innovative design project, both from the point of view of materials and production processes.

So, in relation to matching young designers with project partner companies, the role of expert tutors has been defined in detail, who are to follow and monitor the internships, supporting both companies and young designers in the implementation of design solutions and the establishment of new professionalism. In fact, the innovative

ideas that the young designers designed within the companies can be engineered and commercialized, including through the involvement of companies in the sector and the support of professional designers.

The role of mentor involves monitoring the internship carried out by young designers, aimed at breaking down any barriers that may hinder their early career stages. This required in-depth research and analysis of the companies involved and their production processes in order to identify the state of the art in each sector and support the design of an innovative and marketable proposal.

The partner companies represent a heterogeneous set of the excellences that represent the variety of the Tuscan production system. They, specifically, are: “Smartex srl (textile sector); Savio Firmino srl (furniture sector); Collevilca (crystal-glass sector); Alabastro Ducceschi (alabaster sector); D.E. DESIGN (marble sector); Dini Engineering (3D printing design sector); Pistolesi Caminetti (fireplace and stove design sector); Poliart (eps design and modeling sector for art/design); Calamini Urbano srl (pietra serena design sector); Artenova Terrecotte Artistiche (terracotta sector); Tuscany Art (ceramic sector); Ceramiche d’Arte fratelli Bartoloni (ceramic sector)”.

With a view to the promotion and enhancement of the project, the planning of communication and dissemination of initiatives related to training/information was defined from the earliest stages. A series of conferences aimed at analyzing the relationship between art, design and business, through the collection and dissemination of experiences and specific cases of intervention in the productive sectors of which the partner companies are representatives, have been planned and implemented. So, the case studies are related to the sectors of ceramics, terracotta, technological innovation, marble, crystal, alabaster, and furniture.

At the end of the internships, each innovative project and idea was enhanced through the creation of a catalog and through a series of exhibitions.

### **3 Project “Art, Design and Enterprise for New Young Talents”: Results and Outputs**

As stated earlier, the most relevant phases from the point of view of the contribution of Design in relation to the objectives of the project are phase 2 and phase 4. Specifically, the results concern: the series of conferences aimed at analyzing the relationship between art, design and business in relation to the themes of Made in Italy and the innovation of “know-how”; the innovativeness of the projects carried out by the young artists and designers during their internships in the company; and the nationwide dissemination and diffusion of the project, through an exhibition and the publication of a catalog, in collaboration with all the partners involved.

### ***3.1 The Conference Series: Reflections on Made in Italy and Intervention Cases***

In connection with the project's training activities, a series of conferences have been planned and implemented to analyze the relationship between art, design and business through the collection and dissemination of specific experiences and case studies in the production sectors of which the partner companies are representatives. So, the case studies are related to the sectors of ceramics, terracotta, technological innovation, marble, crystal, alabaster, and furniture.

A program was drawn up for the implementation of the lecture series, shared by the twelve companies involved in the project and the experts, identified as speakers and professionals for each application sector. The program included the holding of six meetings, each relating to two companies belonging to related or complementary sectors, with a view to implementing a comparison between the various sectors and production processes and on the relationship between art, design and business. The topics discussed dealt with product and process innovation in each of the sectors involved: each company presented its work (products, processes, innovations and excellences) and/or intervening cases-to while each young artist/designer winner of the call for proposals presented the innovative project to be developed and/or already developed during the internship (see Fig. 1).

With a view to the dissemination and communication of the conduct of the lecture series, the activity of designing posters specifically structured for dissemination on the institutional channels of the project partners but also on the relevant main social media, so as to ensure the dissemination of the widest possible audience, was carried out. In order to make the conferences further usable, they were recorded, shared with all participants and disseminated on corporate communication channels. The meetings were also an opportunity to share individual experiences (of both companies and young talents) and explore possible future directions of the project.

### ***3.2 Young Talents and Companies: Communication and Dissemination of Innovative Projects***

Throughout the project, close monitoring of the status of the internship carried out by the young designers was conducted, so as to support the design of an innovative and marketable proposal. At the end of the internship, each innovative project and idea was valorized through the production of a catalog and through a series of exhibitions held at the "Pecci Center in Prato, the spaces of Officina Giovani in Prato, the Design Campus of the University of Florence".

The overall goal of the dissemination activities is to valorize each project and innovative idea developed within the internships. Additional objectives are: the dissemination of information about both the "Art, Design and Enterprise for New Young





**Fig. 1** Some of the projects, carried out by young people in collaboration with partner companies, showcased during the exhibition. *Source* Made by the author

Talents” project and the specific activities and products developed within it, highlighting their added value; the strengthening and broadening of the participation and involvement of the target groups identified within the project proposal.

The final exhibition was opened on September 10. To publicize and publicize the exhibition, a press release was prepared for publication in local and trade newspapers. Figure 2 shows some of the projects, created by the young people in collaboration with partner companies, displayed during the exhibition.

Concurrently with the organization of the exhibition, meetings were held to define the technical specifications of the final catalog, and subsequently, coordination activities were carried out to collect and systematize all the useful material (abstracts, sketches and project renderings, images and photos) for the definition of the contents of the catalog. Through the final catalog, the collaboration between art, design and business was highlighted, thus contributing to the creation of a replicable model and *modus operandi*.

Following the definition of the design specifications and contents of the catalog, the development and graphic design activities of the catalog itself began, in relation to the thematic paths of the exhibitions of the young talents’ works. A series of initial concepts were then produced, from which the priority and most appropriate elements for the final publication were selected. Following the proposal and evaluation of several possible layouts, designed based on the technical specifications required by the online publication, the final layout for the development of the catalog was defined. This includes an initial section describing the partner companies, with photos and images describing their activities, reference sectors and, above all, highlighting the know-how and/or innovativeness of the workings. Contextually, photographs of the projects, talents and companies taken by professional photographers have been collected and systematized as required by the project. The publication includes a short section on biographical and professional descriptions of the young talents and one on the abstract and images of the project.

The catalog includes a series of introductory essays written by the project leaders, aimed at analyzing the relationship between art, design and business. The essays focus both on the promotion and enhancement of the project itself and on issues related to product and process innovation in each of the sectors involved.

### **3.3 Conclusion and Acknowledgment**

Overall, the activities carried out as part of the “Art, Design and Enterprise for New Young Talents” project made it possible to establish a strong synergy between excellent Made in Italy companies and young talents, artists and designers. The project made it possible to translate this synergy into strategies to implement innovation and sustainability of Made in Italy.



**Fig. 2** More projects, carried out by young people in collaboration with partner companies, and some pictures of the final exhibition. *Source* Made by the author

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