

# Trade Associations as Mediators between Designer Professionals, SMEs, and Regional Development

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## ABSTRACT

Creativity and industrial design may play an important role in the innovation processes of companies and the competitiveness of territories. Italian SMEs must be creative and internationally competitive, but many remain unaware of the importance of collaborating with industrial designers. By the same token, many professional designers have difficulties contacting SMEs and forging collaborative relationships with them. This paper deepens the discussion by introducing the role of trade associations to bridge this gap. A knowledge hub model, managed by trade associations, constitutes a platform for training young designers in unconventional ways and where they collaborate with enterprises looking for creativity through an action learning approach, thus reducing the gap between the local demand and supply of creativity. This model has been tested in the province of Pesaro and Urbino and may be applied in other contexts.

**Keywords:** Designer professionals, Industries and territories competitiveness, SMEs, Trade association

## 1. INTRODUCTION

What makes the Italian entrepreneurial model stand out is the fact that it can bring together master craftsmen, industry, and designers in a cooperative arrangement that, for now, has no rivals anywhere else in the world. However, as consumers today are more demanding and in search of beautiful “well-made” products, and international competition is growing, creativity needs to be further enhanced, especially in SMEs. This can be accomplished through collaboration with industrial designers, qualified professional figures who are called to liaise between technology, communication, and meaning, while keeping unwavering attention on the aesthetic dimension.

While *design* in the past was a niche phenomenon tied to the small-scale production of luxury goods, today it has become something more mass-orient, more democratic, in the sense that it fits seamlessly with industrial design. In the new scenario of collaborative capitalism, innovation includes not only the functional aspects of a product but also its intangible and symbolic aspects (Bettiol & Di Maria, 2014). The aspect that can differentiate products and garner long-term, sustainable competitive advantage for Italian enterprises in international markets, is a mix of functionality, technology, and aesthetic form and dimension, along with additional services and complex meanings (brand, design features, and so on) that add to the product, as part of the value proposal offered to the consumer (Bettiol & Micelli, 2005; Sabbadin, 2011).

What we see today is that, on the one hand, there is an ample supply of design from young professionals who have yet to establish themselves, while on the other hand, there is a lack of awareness on the part of many companies of the potentialities of such professionals (Valentino, 2014). Thus, the supply does not match the demand for creativity.

In order to bridge this gap, as well as to safeguard and enhance the competitiveness of Italian enterprises (especially SMEs) abroad, design should be given new consideration in firms’ creativity management and strategic processes. It should also be promoted at the district or territory level in order to enhance the chances of employment for young, newly-graduated product designers in manufacturing enterprises with a high potential for innovation.

Interest manifested in the management literature on the topic of trade associations acting as intermediaries able to support enterprises competitiveness, is fairly recent. As yet, there are no studies that specifically analyze the role of these mediators in the support of creativity and the diffusion of design *culture*. In light of this, the present paper aims to analyze the role played by institutional mediators, like trade associations, who match designers and enterprises, thus enhancing the creative capabilities of firms, helping young creatives to start their career, and increasing the competitiveness of territories. More specifically, the focus is placed on the Innovation and Design pilot project launched in the province of Pesaro and Urbino, in Central Italy. Through this project, local industry associations and other stakeholders are playing a central role in enabling young industrial designers to collaborate with enterprises in an innovative way and in spreading the concept of industrial design culture within the manufacturing district of Pesaro.

## 2. A REVIEW OF THE MANAGERIAL LITERATURE

### 2.1 Creativity, Innovation, and Industrial Design

There is ample managerial literature on creativity and innovation and on the relationship between these two variables (Goldenberg & Mazursky, 2002; Colurcio, 2005). In the setting that is the object of the present study, i.e.,

local contexts with high numbers of SMEs, the relationship between creativity and innovation can be observed from two perspectives: the individual view of the single enterprise (shown below) and the systemic view of the interrelations between companies and stakeholders in the district or territory (par. 2.2). At the individual enterprise level, creativity is a distinctive competence qualified as *creative capability* (Napier & Nilsson, 2006), while at the systemic (district or territory) level it can be a strategic factor that can differentiate geographical areas (Florida, 2002; Sacco, 2012).

In this work we assume that creativity and innovation are the cornerstones of competitiveness and economic growth in all sectors (Nebenzahl & Jaffe, 2008; Bilton, 2007; Sacco, 2012). By *creativity* we mean the capacity of the organization to generate new and useful ideas (Schilling, 2004; Stenberg & Lubart, 1999) and by *innovation* we mean the possibility to transform ideas into action (Drazin & Schoonhoven, 1996). Therefore, the first variable is necessary but not sufficient for the second one.

The relationship between creativity and innovation may be understood by adopting a *knowledge-based* view (Nonaka, 1994) according to which knowledge is the main resource for the development of the enterprise (Rullani, 2005) and the basic material that favors creativity. Creative ability is the source of new ideas, especially but not necessarily, in the early stages of the innovation process. To make new ideas become new knowledge requires a process of scientific or social validation (Csikszentmihalyi, 1999). Only through the application of new knowledge production and/or new combinations of existing knowledge is innovation accomplished. Ultimately, knowledge, creativity, and innovation are closely connected and feed each other in a potentially endless process (Pencarelli, Migliaccio, Rivetti, & Spendiani, 2011).

The output process of innovation ranges from minor changes in existing products to radical types of innovations (Thomke & Von Hippel, 2002) and also includes more or less radical improvements in processes such as production, communication, and distribution. Bilton (2007) argues that the creative process is difficult to manage and laborious rather than spectacular, as it is based on gradual shifts and on the reconfiguration of existing elements. Therefore, creativity management requires many competencies such as the capacity to tolerate contradictions, to balance diversity and coherence, to move between apparently opposing perspectives, to accept uncertainty, and to act with humility. According to this author, “creativity management requires a split focus, between present realities and future possibilities, between individuals and teams, between organizations and systems” (Bilton, 2007, p.173).

At the firm level, creativity can be influenced positively or negatively by individual, organizational, and relational factors, and by inputs from the external environment (Montanari, 2011).

The literature on creativity has shifted to the focus from individuals to organizations, in conjunction with the recognition of its strategic value to the enterprise (Woodman, Sawyer, & Griffin, 1993; Bilton, 2007). Among the organizational factors that foster creativity we would like to stress the importance of the existence of a creativity culture, a leadership style characterized by the definition of clear objectives, open and collaborative relationships with subordinates (Bailyn, 1985), and with the *work team* which should be characterized by heterogeneous skills, balanced freedom from constraints in performing tasks, and the presence of individuals able to play multiple roles and to step in and out of character (Bilton, 2007).

The creative capacity of individuals and groups is strongly influenced by the structure of the rela-

tionships in which they are inserted (Perry-Smith, 2006) and by the elements of the context. Strong and stable relationships can enhance trust, reduce opportunism, and encourage risk-taking and the ability to experiment (Hansen, 1999; Larson, 1992).

Among the inputs of the external environment that foster creativity, we mention talent, tolerance, and technology (Florida, 2002), cultural heritage (Hesmondhalgh, 2002; Throsby, 2008), and, as we will explain in paragraph 2.2, being part of external networks and systems. Cultural heritage, for which Italy takes the front-running lead in terms of quality and geographical spread (Sacco, 2012), influences the creative capability of the economy as a whole, as creativity develops in contexts that are rich in history, art, and culture, but the first industries to benefit are the creative and cultural ones.

There is a strong, often latent, demand for creativity, especially in industrial design, on the part of Italian SMEs that have structural limitations (lack of competences and resources) which prevent them from innovating on their own, through their own creativity. This means they often require the support of external professionals (Valentino, 2014). Design, conceived as an activity based on an original combination of technology, aesthetics, function, and meaning of a product (Hirschman, 1982; Ravasi & Rindova, 2008), requires a strong dose of creativity (Dorst & Cross, 2001; Walsh & Roy, 1985), is an essential element for innovation to occur in an enterprise (among others, Perks, Cooper, & Jones, 2005; Bogers & Horst, 2013), and contributes to the firm's competitiveness (Roy & Riedel, 1997).

One must look at the concept of industrial design, or product design, and interpret it from its original engineering perspective in which the industrial dimension outweighs the aesthetic (Lojacono, 2001), the second being a consequence

of the first. Today, however, product design is more complex as it must contribute to the building of emotions (Norman, 2004), values, reputation, and meaning through stories and narratives, rather than merely through products and solutions (Fortunato & Di Lucchio, 2007). This would explain why the more innovative enterprises look to young designers who use new expressive languages and even, to artists who can interpret the project in a fresh and ironic key (Valentino, 2014).

The professional figure of the industrial designer integrates well with the most recent models for new product development (NPD) which view the enterprise as an integral part of a network of companies (clients, suppliers, competitors, consultants, etc.) that manage the process from a collaborative and co-productive perspective (Von Hippel, 1988; Rothwell, 1994; Nonaka & Takeuchi, 1995). Therefore, the determinants of innovation cannot be sought in technological change (push) or in market demand (pull) alone, but in a combination of factors that includes the addition of design (design-driven innovations).

In sum, while there is ample literature on creativity and innovation, specific studies on industrial design as a creative input in the innovation process remain scarce. Furthermore, no studies investigate the gap between the demand for creativity, especially by SMEs, and the supply of creativity especially from professional designers. Further, no studies propose possible solutions to such a gap. In the next paragraph we suggest that trade associations may play an important role in this arena, thus enhancing design-driven creativity in enterprises.

## **2.2 Trade Associations, Creativity of Firms and Territories, and Careers of Creative Professionals**

At a systemic level of analysis of the relationship between creativity and innovation in the district

or territory where there is a high interdependence of many enterprises and institutions, the focus shifts from the enterprise's stock of knowledge to its ability to transfer knowledge and to let knowledge circulate at the inter-firm level. In strategic network theory (Shaw & Williams, 2009), SMEs implement creative thinking and the innovative process through external capital (human resources, information, knowledge) obtained outside the enterprise, especially from collaboration with creatives. Bilton (2007) argues that in networks of different-sized enterprises that can and do cooperate successfully, managers should not seek to centralize the network. Rather, they should foster complexity and diversity at the point of idea generation. In this type of network, mediators such as trade associations may enhance the firms' creativity and facilitate young professionals' careers as they come to know the enterprises and their professional needs.

The innovation system literature has recently re-evaluated the role played by industry associations among intermediaries tasked with facilitating the exchange of knowledge and the development of relationships between policy makers and innovative companies (Powell, 1993; Callon, 1994; Howells, 2006), in creating favorable conditions and incentives for innovation (Frankel, 2006; Watkins, Papaioannou, Mugwagwa, & Kale, 2015), and in contributing to developing/strengthening industry sectors (Howells, 2006; Watkins et al., 2015). Essentially, they represent professional hubs that facilitate the matching of supply and demand for services in enterprises. They can also play unique and important roles as professional hubs which incentivize finding the meeting point between supply and demand in the area of industrial design.

These associations can go beyond the mere role of service intermediaries and become actual knowledge hub institutions similar to universities (Youtie & Shapira, 2008), that actively foster

knowledge exchange, learning, and innovation through new methods and the development of boundary-spanning activities (Harrison & Leitch, 2005; Hagen, 2002). The processes of creation, acquisition, diffusion, and deployment of knowledge are at the core of these functions, hence the term, *knowledge hub* (Youtie & Shapira, 2008).

We argue in this paper that trade and professional associations, in collaboration with universities, could actively seek to combine tacit and explicit knowledge (Nonaka & Takeuchi, 1995) and create new knowledge as well as use knowledge to promote local development and new capabilities in their region and beyond, following the action learning approach (Revans, 2011) which integrates theory and practice to combine reflection and action. These approaches contribute to individual, group, and organizational learning through concrete experiences in which new ideas are found to solve problems with the help of a coach, i.e., the process manager who helps the group to focus on the key points for learning and optimizing the group's function (Revans, 2011). The knowledge hub model is also part of the debate on career theories as it can promote inter-firm communication and interpersonal networks by nurturing *know-whom* competencies (DeFilippi & Arthur, 1994) useful for young creatives in launching their career, both as professionals and as employees within a single firm.

In particular, career and management studies that adopt the competency-based view see individual competencies as broadly related to a firm's culture, know-how, and networks (Hall, 1992). Ongoing changes in organizational, occupational, and industrial community contexts favor inter-firm mobility and work through project-based contracts. Over time, careers cross company boundaries, thus becoming boundaryless. This is in contrast to stable, hierarchical, and clearly defined job positions for career progression (DeFilippi & Arthur, 1994). A professional with a

boundaryless career profile has specific competencies such as identity, values, and interests that are employer-independent (know-why), flexible skills, entrepreneurial, and marketed-oriented abilities that are accumulated by non-mobile organizational careers, (know-how), and the awareness of the importance of inter-organizational and non-hierarchical networks (know-whom). DeFilippi and Arthur emphasize the asymmetries in the development of boundaryless careers: deficiencies in social networks (know-whom) may preclude inter-organizational mobility. A person whose career identity (know-why) is highly bound to his/her current employment may underuse the network, while a person whose job skills (know-how) are too narrowly customized to his/her current employer may not be able to find work in other firms (DeFilippi & Arthur, 1994).

We argue that mediators can create efficiency networks (know-whom). In light of the current changes in organizational, employment, and industrial community contexts, two career profiles are conceivable in territories with heterogeneous SMEs, bounded and boundaryless, discussed further below.

### 3. METHODOLOGY

The present work adopted a qualitative methodology, an explorative-descriptive approach, and the case method (Eisenhardt & Graebner, 2007; Yin, 2009). This method was considered suitable for understanding a phenomenon that has been under-researched in the managerial and marketing literature. Specifically, the following research techniques were used for the empirical study:

- (1) Two focus group meetings with the eighteen designers at the beginning and at the end of the project (April and June 2015);
- (2) Two focus group meetings with the sixteen enterprises at the beginning and at the end of the project (April and June 2015);

- (3) Personal interviews with the mediators (members of the board of directors of the professional association); and
- (4) Participatory observation by one of the Authors who took part in all of the activities with the designers and the participating companies.

Multiple information sources were used to increase the internal reliability (Yin, 2009) of the study.

Best practices models are arguably good candidates for a case research methodology (Eisenhardt, 1989, 1991; Yin, 1984). The 'Innovation & Design' project was selected for this study as it represents a rare and successful initiative in Italy for fostering the diffusion of industrial design to stimulate competitiveness, especially of SMEs, within a territory and which was promoted by the most influential local association of firms that belong to different sectors. This association knows well what the needs of local enterprises and designers are, and it has competencies in training and networking.

## 4. THE INNOVATION & DESIGN PROJECT

### 4.1 Background to the Project: The Pesaro Manufacturing District

The industrial sector in Pesaro experienced a growth surge just after WWII thanks to artisans who became industry leaders in the wood furnishings sector, so much so that Italy is the main European exporter and Pesaro, second only to Brianza and the Treviso-Pordenone axis, represents the third largest district system in Italy (Mussolino, 2007). In the 80s design began to be used by companies in the mechanical sector, such as Montedison (boilers) and Benelli (motorcycles), but also by companies that manufactured machines for furniture production, such as edgers and perforators, that later became part of the Biesse Group, a multinational with over 2,000 employees.

In the early years of economic development within the Pesaro furniture district, however, furniture models were copied from companies in the Lombardy and Veneto regions, and then personalized somewhat but without using designers. Basically, *design* as we know it was non-existent at that time. At the 1976 furniture show in Pesaro, designers Isao Hosoe and Cortesi were invited and subsequently, in the years that followed, a core group of local companies that paid attention to design, such as Fiam, Scavolini, Berloni, and TVS, was formed. At the national level, the *Associazione del Design Industriale* (ADI)<sup>1</sup> was instituted. In that same time period, companies in Pesaro began collaborating with designers in Milan, producing a strong innovative impact on the strategic vision of the product.<sup>2</sup> However, over the last 20 years, companies located in Pesaro have not placed great faith in design.

#### 4.2 Purposes and Actors

The Innovation & Design project (hereinafter, ID) represents an innovative solution sponsored by *Confindustria Pesaro e Urbino*<sup>3</sup> in collaboration with the Employment Center to meet two needs: those of enterprises, especially SMEs, that need to strengthen creativity, and those of young industrial designers who need work. The pilot ID project (April - December 2015) had three objectives: (1) provide emerging product designers with a training program to help them increase their knowledge base, acquire new competences, and foster collaboration with enterprises so as to facilitate the early stages of their career; (2) sensitize enterprises, especially SMEs, to industrial design through meetings with mediators and young designers and temporary collaboration with designers to enhance creativity and innovation; and (3) translate the new and useful ideas developed by young designers into concrete product or process (distribution, communication, point of sale display)

innovation and prototyping with the support of the mediators acting as tutors.

The project was managed by a team of institutional mediators (or Project Leaders): the head of the Pesaro and Urbino Confindustria training services, the CEOs of two major manufacturing firms with a strong design culture, Ernestomeda<sup>4</sup> and TVS<sup>5</sup>, a senior designer<sup>6</sup>, and a research fellow from the local University of Urbino<sup>7</sup>. It involved eighteen designers from the Marche region and sixteen enterprises from the province of Pesaro and Urbino, primarily associated with Confindustria, which hosted the designers (one each, except for two enterprises that took on two). The designers were fairly evenly distributed in terms of gender (56% men and 44% women), age (average age was 31), and education (50% with a degree in architecture, 39% in industrial design, and 11% in fine arts). All of the designers had little experience in the field of design in various sectors, especially in furnishings, interior design, objects and some of them in boating, jewelry and design processes. They were open to working in other sectors. Only 22% of them had never worked with companies.

The participating companies were largely medium-sized (56%) and small enterprises (25%), with fewer large ones (only 19%), especially in metalworking/mechanical engineering, furniture, and wood. The other companies were operating in the textile/clothing, glass, chemical/rubber, boating, and interior design sectors. Apart from the larger enterprises, the SMEs had little or no experience in industrial design.

#### 4.3 The ID Project Phases in the Knowledge Hub

The ID project was broken down into four phases that encompassed the training program for designers, the sensitization to industrial design plan for enterprises, and the collaboration phase for both the actors, within the knowledge hub

<sup>1</sup> *Associazione del Design Industriale* (ADI) or Association for Industrial Design. More information on the Association can be found in [www.adi-design.org](http://www.adi-design.org)

<sup>2</sup> Source: inaugural lesson taught by architect Marco Gaudenzi at the Training Course for Industrial Designers, held at Confindustria Pesaro and Urbino headquarters on 8 April 2015.

<sup>3</sup> Confindustria Pesaro e Urbino is a provincial trade association of 600 enterprises of all sizes, with a total workforce of approximately 20,000. Source: [www.confindustria.pu.it](http://www.confindustria.pu.it)

<sup>4</sup> Ernestomeda Spa, part of the Scavolini Group, manufactures high-end custom-built kitchens where design is a key element. [www.ernestomeda.com](http://www.ernestomeda.com)

guided by institutional mediators according to the action learning approach (Figure 1).

The core of the model is made up of the mediator team that passionately and efficiently manages a knowledge hub. The knowledge hub is an open organizational platform on which heterogeneous and complementary professional figures (a trade association, expert designers, creative driven companies, academics, young professionals, SMEs) share knowledge and develop competences in a stimulating context, living theoretical and practical training experiences, both individually and collectively. This type of professional hub enables finding the meeting point between an often latent and unexpressed demand for industrial design on the part of

enterprises and the supply of design on the part of young creatives who struggle to get the exposure they need in the world of work.

Mediators create added value by, first of all, acculturating all of those involved to industrial design, an idea that is not only tied to the aesthetical restyling of a product but to the functional, aesthetic and/or technological innovation related to the product, the productions processes, or both. In this view, the designer represents an external figure, with a different training background and a different point of view, who is assigned to work alongside the entrepreneur and his/her co-workers to discern those areas that the company never thought of where even very small changes can be made. Figure 1 shows that the mediators

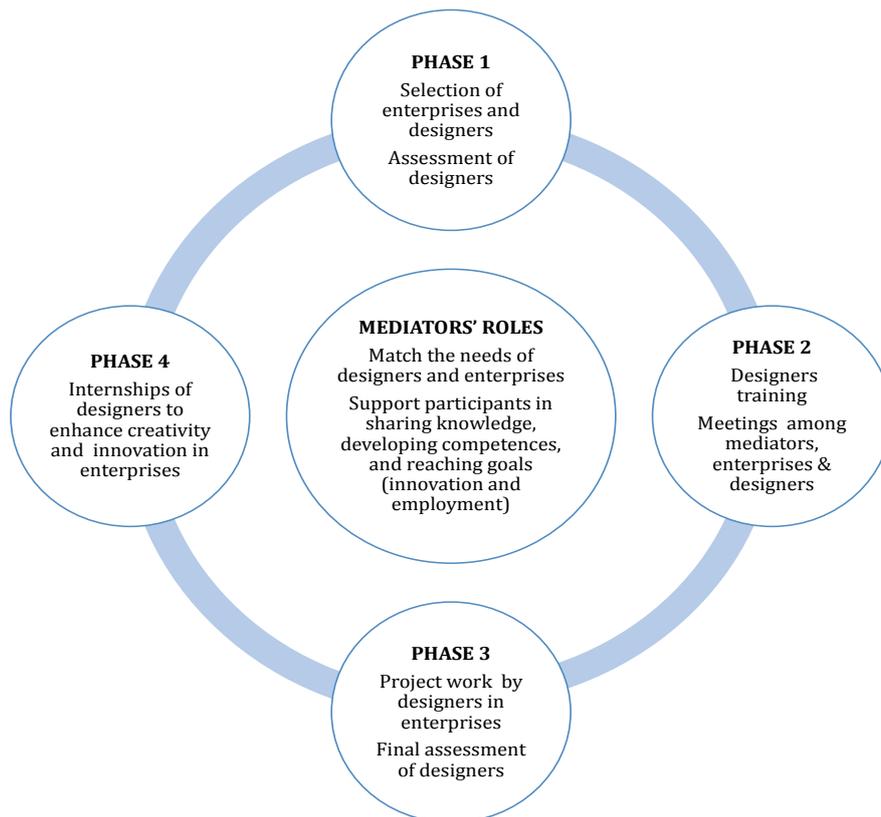


Figure 1. The knowledge hub phases of the ID project carried out in Pesaro  
Source: Authors' data and concepts

<sup>5</sup> TVS Spa manufactures aluminium pots and pans with a non-stick coating and careful attention to design; they are sold worldwide. More information on TVS is available on [www.tvs-spa.it](http://www.tvs-spa.it)

<sup>6</sup> Marco Gaudenzi is an architect and designer, owner of the firm "Marco Gaudenzi & Associati Architettura e Design" which is backed by many years' experience in design for both private and public sector construction. More information on Marco Gaudenzi: [www.marcogaudenzi.it](http://www.marcogaudenzi.it)

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hold regular meetings with the designers and/or the companies, and they monitor all of the activities that take place in the four phases of the project which are described below.

In the **first phase**, the designers and the enterprises were selected. Designers were selected by means of a public contest<sup>8</sup>. Through both written<sup>9</sup> and oral<sup>10</sup> exams, the candidates “starting” knowledge and competences were assessed, along with their creative aptitudes and their interest in participating in this type of project. Out of a total of fifty applicants considered (a degree in industrial design, architecture or fine arts, unemployed, and a resident of the Marche region were required), eighteen young professionals were selected. During the oral assessment there emerged a pessimistic perception of the likelihood of employment for young designers in companies.<sup>11</sup>

The enterprises were selected among those that expressed a specific or latent need for creativity.<sup>12</sup> One of the greatest difficulties in recruiting enterprises, especially small and medium-sized ones with little or no experience in design, was the entrepreneurs’ fear that they would not get a concrete return on their investment of 350 euros per month for the four-month internship period in the form of a valid, creative and innovative contribution from the young designer assigned to them. In the **second phase** (a total of 172 hours), the designers took part in a series of unconventional training activities, such as teacher-led lessons supplemented by workshops taught by expert designers and visits to local companies known for their strong design culture (Benelli Armi Spa, TVS Spa, Ernestomeda Spa, Ifi Spa, and Biesse Group). The young designers involved had little practical experience, so it was decided that theory lessons on subjects such as the history of design and how to plan design projects would be offered in order to give them a professional

“refresher” course, along with business administration, marketing, and business communication courses in order to help the designers get a feel for how a company works. In this phase, the meetings between enterprises, mediators, and designers made it possible to discern the best or most compatible designer-enterprise combinations, on the basis of the designer’s know-how and motivations, also evident from his/her CV, and the enterprise’s needs.

In the **third phase**, the designers became directly involved in the Project Work (PW) within the company assigned to them for a period of six weeks, in order to know the inner workings of the enterprise and to discern those areas targeted for innovation. By the end of the PW phase, it was evident from the final written and oral assessments that the designers had not only acquired new knowledge but had also developed new competences, in particular, an active, collaborative, and entrepreneurial approach to working with the companies and networking abilities. As one of them stated:

*After the PW we learned how to approach the companies and, thanks to the intermediation of Confindustria, we were able to make ourselves known. What we most fear is that in this time of crisis companies will not be encouraged to forge lasting relationships with designers. However, we are sure that the more enlightened ones will.*

At the end of the Project Work phase, the participating companies, too, were favorably impressed by the innovative experience had with the designers and the mediators. One entrepreneur declared:

*I have considerably benefitted from the wide-ranging competences of the designer assigned to me; not only was he competent on technical aspects, but also in his understanding of the market and in his ability to create a rapport*

<sup>8</sup> The contest had been publicized through a communication campaign primarily on Facebook and organized by Communications majors at the University of Urbino.

<sup>9</sup> The written assessment consisted of open-ended and closed questions designed to evaluate the candidate’s aptitude for working in a company, personal competences, and preferences regarding the industrial sector and type of project to become involved in (choice between gradual innovation and radical product and/or process innovation).

<sup>10</sup> The oral assessment (interview) served to understand what approach the young designer would adopt in order to bring his/her own creativity to a local firm (chosen at random among those already selected) that does not currently use design as a strategic competitive lever.

*with various people within the company. I have decided to involve him in an innovative project and to propose that he become a partner in order to motivate him and reward him financially as well.*

The **fourth phase** of the project (September – December 2015), encompassed the internship period in which the designer was assigned to a company for four months. The purpose of the internship was to contribute to product and/or process innovation, through concrete proposals for product and/or process design, followed by prototyping. Specifically, seven designers contributed to making incremental product innovation and seven designers contributed to radical innovation; four of them also contributed to making improvements in the companies' production processes.

Despite the short internship period and the fact that most of the innovations still need to be

prototyped and attractive well-made products are not yet available, the ID project was successful for enterprises, designers, mediators and districts (Figure 2). The participants developed a positive approach to enterprise-designer collaboration, especially for SMEs. In particular, all of the designers reported high satisfaction (a mean of 4 on a Likert scale from 1=not at all, to 5=very much), especially for the practical experience, the good integration of the designer with company staff, and the employment opportunities. Seven designers have continued the collaboration with the enterprises out of the total of fourteen designers who completed the project.

The main suggestion that emerged from the pilot project refers to the local upgrading of networks led by intermediaries who aim to spread the culture of industrial design and more generally, to support creativity in SMEs with little or no experience in the field.

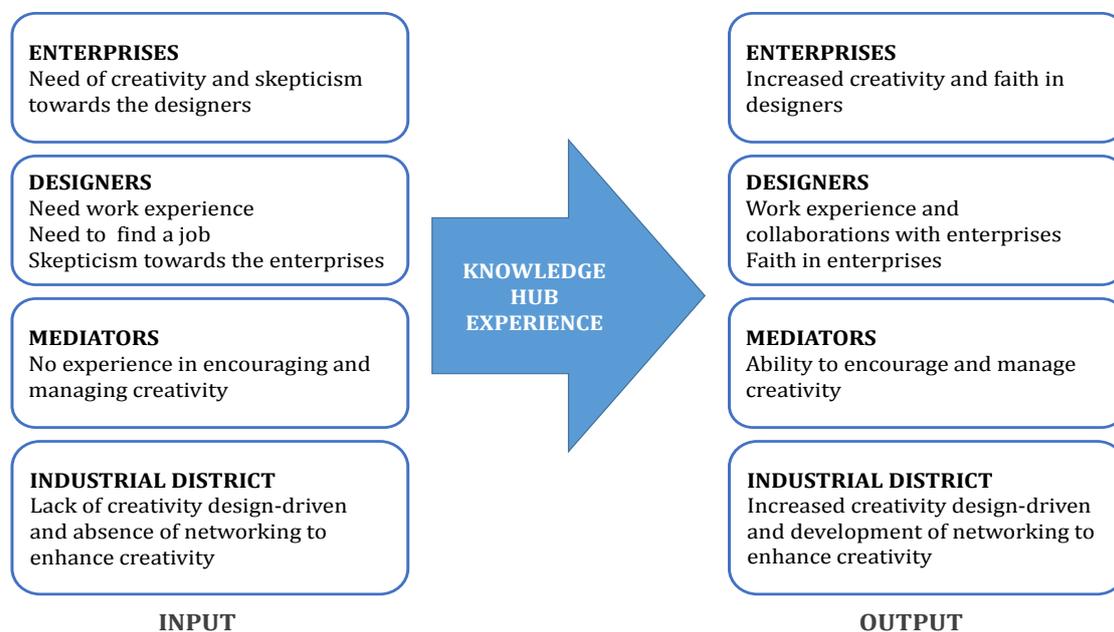


Figure 2. The research outcome: Input-output dynamics of the knowledge hub

Source: Authors' data and concepts

<sup>11</sup> There are three main reasons behind the skepticism on the part of the designers vis-à-vis the companies: 1) the perception that Italian entrepreneurs do not appreciate the contribution brought by designers to the company; 2) the perception that they are "exploited" economically by earning starvation wages; 3) the fear that the companies could "steal" the designers' ideas and patent their inventions.

<sup>12</sup> The entrepreneurs were informed, first of all, by personal visits to the company and also through the communication campaign on the local media, the press conference in which the project was presented to the Employment Center, and the Confindustria website and newsletter.

## 5. CONCLUSIONS

Although the main limitation of the present study is that it only takes into consideration one experience that facilitated the meeting between the supply and demand of industrial design, it is possible to suggest research implications for creativity management at the enterprise level, the individual professional designer and industrial district level or the systemic level.

Enterprises involved in the ID project increased internal creativity through their participation in an interesting network. Therefore, enterprises that intend to increase their competitiveness through creativity should pay attention not only to individual, organizational and relational factors which may positively affect creativity, but also to inputs from the external environment, in particular the use of industry associations or other networks (e.g. collaboration with industrial designers) in order to enhance internal creativity.

The designers who were involved in the ID project improved their competencies not only in design and in management (*know-how*), but also in building relationships within the network (*know-whom*). They also acquired attitudes and motivation (*know-why*), all of which was useful for their career, either as a permanent company employee or as a freelancer. The case study has confirmed that changes in the current contexts continue to offer opportunities for boundary-less careers, on the one hand, but that they also allow room for traditional boundary careers, on the other hand, because there are some professionals who prefer to work only in one company and enterprises that require internal creatives who have acquired specialized competences (DeFilippi & Arthur, 1994).

Future research studies should delve more deeply into defining a measurement system for the various competencies (know-why, know-how, know-

whom) that can assess and compare competencies at the start and at the end of the experience, in a context that supports creativity. In the ID project, the initial meeting between the designers and the enterprises happened directly and by means of submitted CVs. Nevertheless, having a “competencies file” on each designer would make it possible to create a territorial database of professionals, thus making it easier to match them with local enterprises. Moreover, future research should answer the question: which sectors prefer freelance designers and which ones prefer to have a more stable relationship with an internal creative?

The ID project adopted a top-down approach to reinforcing creativity at the systemic level, but we ask, what is the best way to favor creativity, top-down or bottom-up, in a context in which a pool of enterprises and/or designers propose the creation of a network to support creative processes?

The ID project used a heterogeneous mix of enterprises, expert designers, and academics who acted as mediators, with design experience both practical and theoretical. To create the most effective system, what is the most suitable mix of competencies for a team of mediators who aim to promote the diffusion of industrial design culture, specifically, and of creativity, more generally? The ID project team, for example, included only large enterprises. Would it be desirable to also have SMEs in the team?

The mediators (trade associations, in particular) between demand for and supply of creatives are now being called to take on innovative roles and to provide new services and networks to the companies they represent. Among the Pesaro-based mediators, there was only one woman. Building creativity is a difficult process that implies having an aptitude for multi-tasking, tolerance, humility, stereotypical women’s traits. Would it be useful to increase the number of female creativity mediators?

The focus of the empirical research was an experience that brought together enterprises of diverse sizes and sectors, but what would be the most effective mix of enterprises to support creativity? Should they belong to the same or to complementary sectors, thus creating thematic and more specialized networks? Or is it important to participate in an “open” network and, at the same time, operate in more focused, or ‘closed’ one?

In light of this, what should the ratio be between the two contributing sides and what should the sequence be so as to best involve the participating enterprises? In particular, how many classroom hours and how many practicum hours are necessary? Should the sequencing be changed? Does it necessarily have to follow the pattern of theory first, practice second?

Therefore, future research studies should to measure the results of similar projects in wider timeframes as well as explore whether the enterprises involved also participate in other, similar projects contemporarily, and whether they collaborate with creatives in a more constant way.

In an industrial district, policy makers and universities should help to manage creativity. Policy makers should promote and financially support similar initiatives, and support copyright protection in an effort to guarantee the match between supply of and demand for creativity in enterprises. These policies can support the maintenance and growth of competitiveness in smaller firms, often deficient in organizational and financial resources, while also providing new channels of employment for young professionals. Moreover, universities should contribute useful resources in the form of methodologies, knowledge, and creativity to favor innovation processes and the crossover between industrial design and enterprises. Their role should also include teaching students and managers how to develop and manage creativity.

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