POLITECNICO MILANO 1863
SCHOOL OF MANAGEMENT

OSSERVATORI.NET digital innovation

Observatory DESIGN THINKING FOR BUSINESS

Which Kind of Design Thinking is right for you?

IN COLLABORATION WITH

POLITECNICO MILANO 1863
DIPARTIMENTO DI DESIGN

POLIHUB INNOVATION DISTRICT & STARTUP ACCELERATOR
BY FONDAZIONE POLITECNICO DI MILANO

March 2018

Table of Contents

POLITECNICO
MILANO 1863
SCHOOL OF MANAGEMENT

OSSERVATORI.NET
digital innovation

Observatory
DESIGN THINKING FOR BUSINESS

INTRODUCTION

The role of Design Thinking in the Leadership and Innovation landscape

INTRODUCTION

The role of Design Thinking in the Leadership and Innovation landscape

Roberto Verganti, Francesco Zurlo and Alessandro Perego

Heroes.

In the early 2000's, those lucky people who could send an email through their mobile phones were heroes, celebrated by their friends and colleagues. They had the coolest, most advanced devices. But this was not the reason why they were celebrated. No. This was the easy part.

They were considered heroes because to send that sacred email they managed to survive the painful odyssey of setting up their phone and getting the email through. At that time, you bought a phone, read the instruction manual, navigated menus through keys, answered mysterious questions, encountered snares, asked for help from a remote person in a call center who would ask you to wait while she secretly called a friend in the engineering department of the telecom provider to find a solution, tried a different setting, and so on and so forth. This journey produced many casualties. Only a few geeks were resilient and survived until they managed to get the email to its recipient. These were the heroes. Only for one day, because the next day their phone would be stuck again. Fast forward to today. We buy smart phones built with technologies that are much more sophisticated than those tamed by those geeks. And yet, everyone in a few minutes moves from a phone in a package to a phone in their hands, sending messages to friends.

This journey, that enables everyone to use the most advanced technologies, does not happen by chance. It has been carefully designed. It is a gift of design.

Videos about the convention available on www.osservatori.net

Design has become central in our world. A key source of value for people and society. And Design Thinking, its declination in terms of innovation processes and leadership, has become a major point of interest for any business. From an accessory suited only to niche consumer firms, to a necessary factor in any industry and organization.

Why? And why now? For two reasons.

First, we live in a world where technological opportunities are cascading on society at an unprecedented speed. A world awash with technologies and information. We have more. Our technological mines keep generating an enormous quantity of technology ore. And digital media are producing an enormous quantity of data. But humans do not use ore, or data. They need products, services, understanding. Organizations need design to make this wealth of opportunities accessible to people. To capture the potential value of technological innovation. Design Thinking is what helps us navigate an overcrowded world. It is what helps us transform the "more, and more, and more" of our society into "what is meaningful".

Second, Design Thinking is a catalyst for change in organizations. In a world that is rapidly evolving, everyone wants (and needs) to participate in change. Especially in light of the Digital Transformation. Innovation is nowadays not confined only to R&D. It happens everywhere in the organization: in any single internal process and any single moment of interaction with customers. Everyone has a call to innovate. And again, technology is the easy part. The challenge of the digital transformation is not the "digital", but the "transformation". How can we innovate, change, transform? We cannot rely on the innovation processes that were crafted to engineer new technologies or IT systems. Nor on traditional "change management" paradigms, where innovation pours from the top down. Organizational transformation requires a different mindset and process. One that engages everyone. That sees people in organizations not as recipients of change, but as creators and actors. And Design Thinking brings exactly this: widespread engagement, creativity, commitment to change.

Hence, Design Thinking is key in our world transformed by technologies, because:

- It is needed for **value creation**, to turn this wealth of technologies and information into real value for customers;
- It is needed for **organizational transformation**, to engage people in a widespread process of change.

But what is so unique in Design Thinking compared to other well-known approaches to value creation and organizational transformation? There are many definitions of Design Thinking. You will find a map in the next chapters of this booklet. Yet, all these definitions share a common trait: Design Thinking is an approach that looks at value and change from the perspective of **people**. Or, even better, from the perspective of what is **meaningful** to people.

When we seek to improve and innovate how things are, we need to combine three factors:

- **technologies**: how things are made and their performance improved;
- **people**: how these things are valuable for customers;
- **business**: how organizations can profit from offering them.

These factors are always there simultaneously. We always need them all. Yet, the outcome of innovation completely changes according to where we start from, i.e., which factor informs our journey and which one supports it. A **technology driven perspective** starts from the search for technological opportunities. It focuses on creating more and new technologies, and then finding people who are interested in what these technologies can do and businesses that can profit from this. You start from the technology, with the assumption that somehow along the way someone (a designer, for example) will find a way to make it accessible to people. The fact that accessibility comes second leads us back to the story of heroes and geeks that opened this chapter.

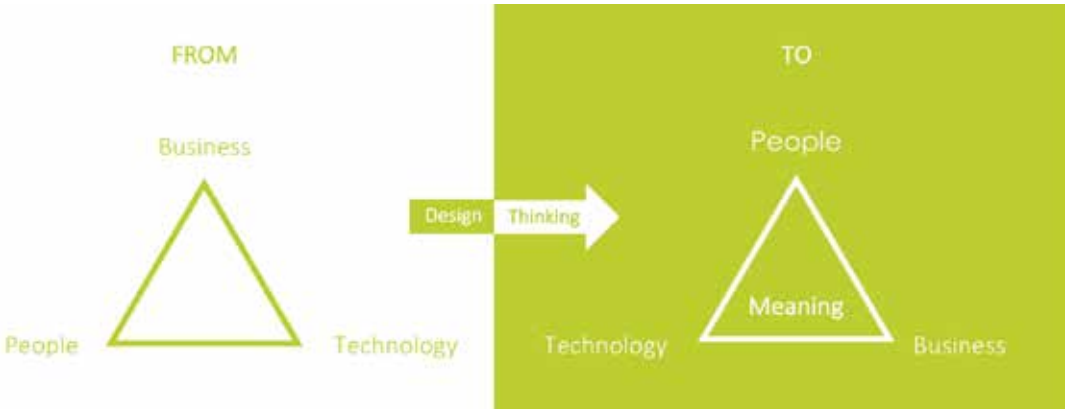
Videos about the convention available on www.osservatori.net

A **business driven perspective** starts from the search for profit and shareholder value. You want to create business, and therefore you need great products that are meaningful to people. You want to create value for your customers. But you get there as a consequence of a search for business. This is the classic perspective of management scholarship. I need to create business, and therefore I need great products.

A **design driven perspective** starts from people. You want to generate value for people by creating amazing meaningful things. You then search for a profitable business model to turn this people value into shareholder value. You still need the three factors: people, business, and technologies. But the assumption here is that if people find value in something, then business will follow naturally.

And when I mean people, I mean both the user of the products (the customers) and the makers (people in your organization). Design creates products by starting from what is meaningful for customers. Design creates organizational transformation by starting from what is meaningful for people in your organization: by engaging them in creating innovation instead of adopting it, in collaborating, in nurturing their creative confidence, in bringing their work closer to the purpose of their life.

Design Thinking, whatever nuance you consider, always has this perspective: to do business by starting from what is meaningful to people. It is a **people-first approach** put into practice. To use an analogy, Design Thinking applies a basic fundamental rule of life to business: you do not find happiness by searching for it. **Happiness is a consequence of a meaningful life**. The same is true for profit. You do not create profit by searching for it. **Profit is a consequence of making meaningful things for people**. Design Thinking is rooted in a fundamental understanding: if something is meaningful for the people who receive it, and for the people who create it, how can business value not easily ensue?



So, in a way, Design Thinking starts simply from a change in perspective. But this change in perspective brings with it a disruption in terms of mindset, processes, and tools. In a time when Design Thinking is spreading into the business community, we commit to helping organizations benefit from it.

The purpose of the Design Thinking for Business Observatory is to join forces with all those pioneers who want to be at the frontier, who want to understand what Design Thinking is, where it is going, who is doing what, how Design Thinking can provide value to their organization and to them as individuals.

It is a challenge, because Design Thinking is a simple principle, but has a kaleidoscope of possibilities for implementation. And these possibilities change at an amazing speed, with new tools, experiences, players emerging every day. For this reason, this endeavor joins different forces. On the one hand, the thought leaders from our partner organizations who operate in different areas of Design Thinking: from strategic design, to design for digital transformation, from service design to organizational transformation. On the other hand, our team at Politecnico di Milano blending management and design, and coupling the fresh minds of young talent with the experience of our scientists (our team gathers the same members who in the mid 90's conceived the seminal Master of Strategic Design at Politecnico di Milano, who shaped the study of design systems and were awarded the Compasso d'Oro in 2001, who brought design since 2003 to major business outlets, such as the Harvard Business Review). And finally, our community: because Design Thinking is a living movement, a journey of exploration whose borders are yet to be found. Everyone is needed. Anyone is welcome to join.

Roberto Verganti
Scientific Committee

Francesco Zurlo
Scientific Committee

Alessandro Perego
Scientific Committee

POLITECNICO
MILANO 1863
SCHOOL OF MANAGEMENT

OSSERVATORI.NET
digital innovation

Observatory
DESIGN THINKING FOR BUSINESS

1. FRAMEWORK

The Evolution through 4 Kinds of Design Thinking

Claudio Dell'Era
Research Direction

Roberto Verganti
Scientific Committee

The Evolution through 4 Kinds of Design Thinking

Claudio Dell'Era and Roberto Verganti

The detailed analysis of over 40 organizations providing advisory services based on the Design Thinking paradigm allow us to map 4 different and particular kinds of Design Thinking. More specifically, as detailed in the Research Approach chapter, the case studies of 17 Design Studios, 6 Digital Agencies, 13 Strategic Consultants, and 11 Technology Developers demonstrate that the Design Thinking paradigm can assume different forms and interpretations according to the nature of the companies involved (service provider and client), the specific challenges, and the objectives of the innovation project:

- Creative Problem Solving: Solving wicked problems adopting both analytical and intuitive thinking;
- Sprint Execution: Delivering and testing viable products in order to learn from customers and improve the solution;
- Creative Confidence: Engaging people to make them more confident with creative processes;
- Innovation of Meaning: Envisioning new directions that aim at proposing meaningful experiences to people.

To some extent, the 4 kinds of Design Thinking describe a historical evolution of the original paradigm that in the last 10 years required further development to face the digital revolution (see Figure 1.1).

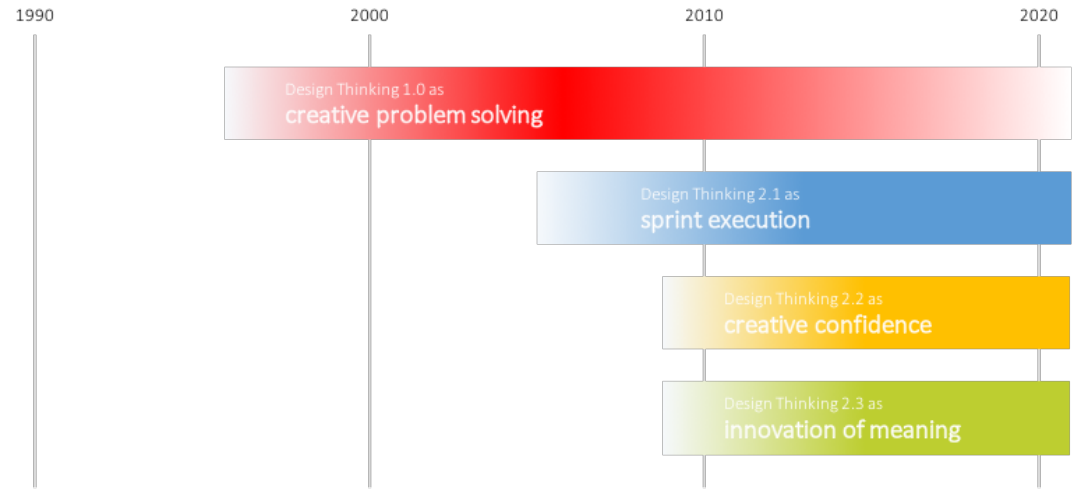


Figure 1.1: *The evolution of Design Thinking*

Videos about the convention available on www.osservatori.net

1.1. Design Thinking as Creative Problem Solving

The diffusion of Design Thinking in the managerial arena has significantly accelerated in the last 20 years through the initiatives and projects developed by leading design firms such as IDEO or WhatIF. The increasing attention of practitioners to Design Thinking is evident when looking at the recent moves of large innovation consultancies. The acquisition of Lunar by McKinsey or Fjord by Accenture are just two examples of a broader phenomenon. Accenture, Deloitte, IBM, KPMG, and PricewaterhouseCoopers rank among the most aggressive players in acquiring design studios to renew their offering and refresh their innovation services. Design Thinking is booming in those industries where the digital transformation requires new competences and capabilities to develop effective customer experiences. Also software developers and integrators, such as Adobe, Microsoft, or Oracle extensively adopt Design Thinking practices.

According to Tim Brown, CEO of IDEO, Design Thinking can be defined as "*a human-centered approach to innovation that draws from the designer's toolkit to integrate the needs of people, the possibilities of technology, and the requirements for business success*". Design Thinking employs divergent thinking as a way to ensure that many possible solutions are explored in the first instance, and then convergent thinking as a way to narrow these down to a final solution. Although since its birth Design Thinking has given rise to different interpretations, four features represent the fundamental ingredients:

Key reference:

Brown T (2009). Change by Design – How Design Thinking Transforms Organizations and Inspires Innovation. Harper Collins Publishers, New York

- Wicked problems: Design Thinking is a problem solving methodology adopted to address very ambiguous problems; a wicked problem is defined as a problem that is difficult or impossible to solve because of incomplete, contradictory, and changing requirements that are often difficult to recognize;
- Human-centered perspective: Design Thinking adopts the human perspective in all steps of the problem-solving process; human involvement typically takes place in observing the problem within the context, brainstorming, conceptualizing, developing, and implementing the solution;
- Abductive reasoning: Design Thinking integrates analytical thinking (deductive and inductive logical thinking that utilizes quantitative methodologies to arrive at conclusions) and intuitive thinking (knowing without reasoning). The ideation process in Design Thinking projects aims to support creativity in generating a large quantity of ideas that the team can then filter and cut down into the best, most practical, or most innovative;
- Prototyping: Design Thinking makes use of artifacts, drawings, role-playing and more, to create preliminary models leading to a testable solution; experimentation forces asking questions and making choices; the most important goal of prototyping is obtaining feedback from the ultimate users. In other words, prototypes are rapid and effective sources of communication and learning among stakeholders.

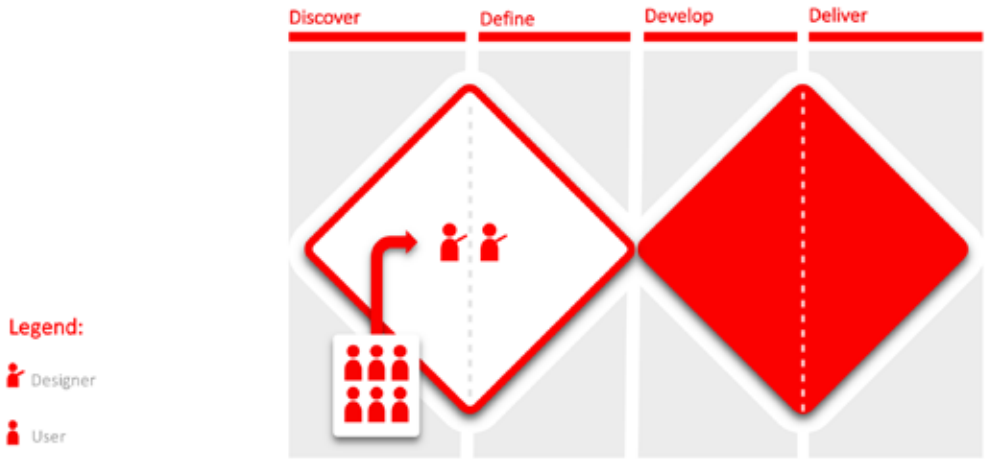


Figure 1.2: *The process of Creative Problem Solving*

Videos about the convention available on www.osservatori.net

Although several models have been developed to describe the dynamics characterizing the Design Thinking paradigm, the alternation of convergent and divergent phases is a clear feature of Design Thinking 1.0.
Creative processes are usually characterized by a mix of the divergent phase, where several ideas and proposals can be created, and the convergent phase, where ideas and proposals need to be refined and narrowed down to identify the most promising one. The Design Thinking paradigm suggests applying these creative dynamics (divergent + convergent) not only to developing the solution, but also to defining the problem. The Double Diamond is a visual representation of the design process: while the first diamond aims at properly framing the problem (designing the right thing), the second aims at effectively developing the solution (designing things right). It can be organized into four distinct phases (see Figure 1.2):

- Discover: Through a range of discovery methods (e.g., interviews, focus groups, ethnography, observation, cultural insights, etc.), teams dive deep and broad into the current landscape to create empathy for the end user and uncover insights depicting both the user and business needs;
- Define: Leveraging the insights gathered, interpreting, and aligning the user needs and business goals, teams identify and converge on the project objectives and set the scope for what outcomes are feasible, viable, and desirable;
- Develop: To identify the best solution, teams use methods such as 'How might we?' to generate hypotheses and test them internally. Through prototyping and rapid iteration processes, a Proof of Concept emerges. To ensure that teams are on the right track, they need to externally test and validate the Proof of Concept with end users. Through this validation, abstract concepts become more concrete;
- Deliver: In the fourth phase, the resulting project (product, service, or system) is refined and launched.

1.2. Design Thinking as Sprint Execution

As Govindarajan and Trimble underline in their book *The Other Side of Innovation: Solving the Execution* Challenge published by Harvard Business Press in 2010, companies cannot survive without innovating, but most place far more emphasis on generating big ideas than on executing them. According to these authors this is because "ideating" is energizing and glamorous. By contrast, execution seems like humdrum, behind-the-scenes dirty work. The execution challenge is becoming even harsher due to the opportunities digital technologies provide. On the one hand, crowdsourcing and idea management platforms, but also mockup software and 3D printing, greatly support both the development of new concepts and access to ideas generated by someone else to the point that conceiving is no longer the real challenge companies face in the innovation arena. In the last two decades, both education and economic systems have lavished great efforts on nurturing individual and team creativity. On the other hand, the opportunities provided by this incredible amount of ideas frequently do not correspond to effective results because of the associated execution issues (see Figure 1.3).

The analysis of over 40 organizations providing advisory services based on Design Thinking shows that an intriguing evolution of this paradigm is the shift from conceiving to executing. This kind of Design Thinking, called **Sprint Execution** (Design Thinking 1.1), emerges from the hybridization of the original **Creative Problem Solving** (Design Thinking 1.0) and lean movement. The book *Sprint – How to Solve Big Problems and Test New Ideas in Just Five Days* by Jake Knapp, former Design Partner at Google Ventures, is probably the key reference in this debate on Design Thinking accelerating creative processes.

Key reference:

Knapp J (2016). Sprint – How to Solve Big Problems and Test New Ideas in Just Five Days. Simon & Schuster, New York

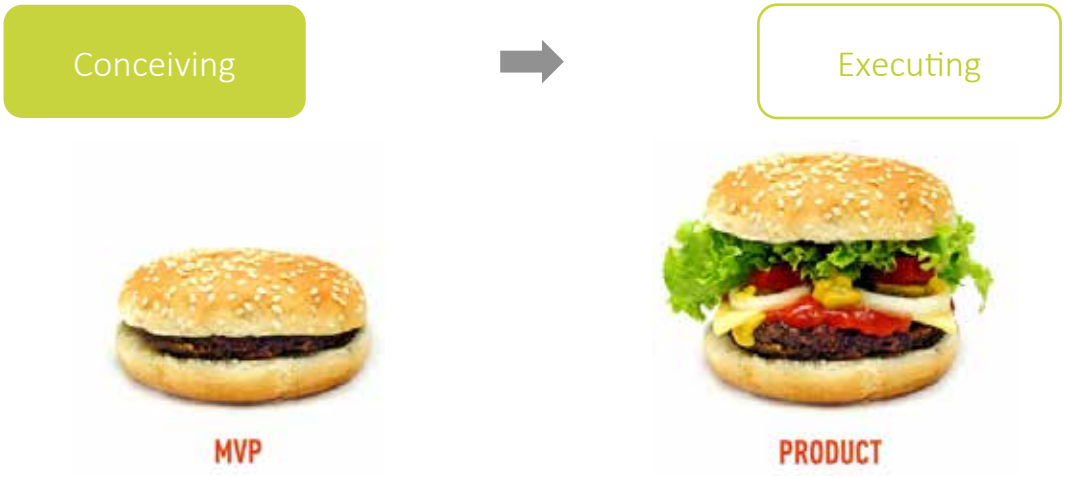


Figure 1.3: *The change behind Sprint Execution*

Videos about the convention available on www.osservatori.net

If the **Sprint Execution** approach shows some similarities with the **Creative Problem Solving** approach, such as the iterative nature of the process or the core role of prototyping, interesting differences connote the emerging approach, such as the focus on the solution (instead of the problem) or the emphasis on convergent phases (instead of divergent phases). Also from a process point of view, interesting particularities emerge (see Figure 1.4):

- **Map/Decide**: the availability of detailed data on individuals in different settings changes the role of the Discover phase. Differently from the Creative Problem Solving approach, the initial understanding of users is embedded in data collected through daily and permanent processes; users do not trigger the process, even if they indirectly provide the initial knowledge managed by the designers and experts (e.g. business developers, product managers, marketers, etc.);
- **Build**: The emphasis given to the role of prototypes in the Creative Problem Solving approach is even extended in Sprint Execution. The Prototype concept evolves into the Minimum Viable Products (MVP): even if not refined, the MVP must deliver value to the user, and as a consequence, it is no longer a prototype, but a product;
- **Measure**: One of the fundamental principles of the lean startup approach is innovation accounting; the identification of the appropriate metrics is fundamental to assessing the results achieved by the MVP and consequently understanding the (direct or indirect) feedback provided by users;
- **Learn**: The aforementioned metrics are even more fundamental to validate the lessons learned.

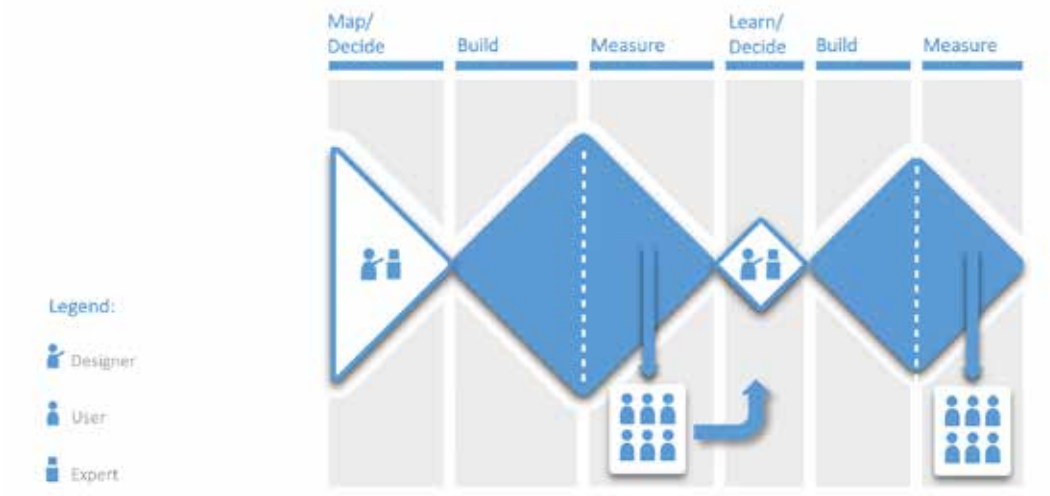


Figure 1.4: *The process of Sprint Execution*

1.3. Design Thinking as Creative Confidence

Organizations are facing new and significant challenges in engaging and keeping their employees motivated for several reasons. On the one hand, the digital revolution has enabled incredible entrepreneurial opportunities for individuals and small businesses. Technological developments in the last few decades have undeniably reshaped our current economy. The past ten years have seen a small number of young start-ups develop into billion dollar businesses. In this new era of entrepreneurship, such businesses will no longer be the exception. Small start-ups are becoming increasingly important in our society not only for economic reasons, but also for aspirational ones. On the other hand, people are giving more and more importance to work-life balance or the possibility to discover a personal and intimate purpose in their job. According to Forbes, as employees continue to log more hours every week and stay connected with work well after they've left the office, the need for work-life balance is changing to the point that some prefer "work-life integration" or "work-life flexibility" (see Figure 1.5).
In this scenario, innovation and leadership are becoming fundamental in every organization. In a world that keeps changing, innovation and leadership are the two fundamental ingredients to succeed. They are intrinsically connected to people, more than methodologies and tools. Several consultancies are reinterpreting Design Thinking through organizational lenses leveraging its particular features, human centrality, and empathy. In their book *Creative Confidence – Unleashing the Creative Potential Within Us All*, Tom Kelley and David Kelley introduce the concept of Creative Confidence and claim that most of us tend to abdicate the mantle of creativity to 'creative types'.

Key reference:

Kelley T and Kelley D (2013). Creative Confidence – Unleashing the Creative Potential Within Us All. Crown Business, New York

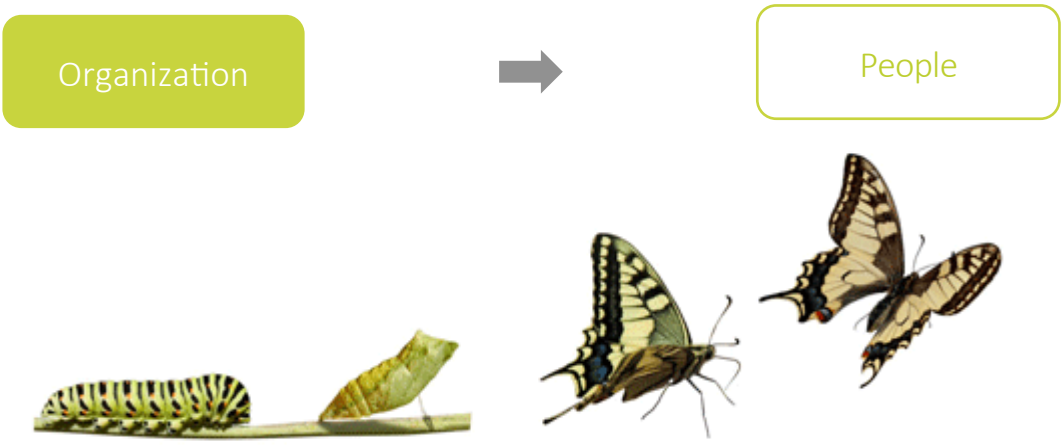


Figure 1.5: *The change behind Creative Confidence*

Videos about the convention available on www.osservatori.net

Design Thinking is increasingly adopted not only to innovate products and services, but also with the aim of reshaping the organizational culture and enabling digital transformations. Leveraging the core features of Creative Problem Solving and fine-tuning complementary traits, the Creative Confidence approach is overwhelmingly emerging. In this vein, human-centeredness and deep empathy have always constituted the core elements of Design Thinking and are even more relevant in projects that aim to change the organizational culture and mentality. While entrepreneurs face the challenge of creating an organizational culture and mindset through a bottom-up approach, intrapreneurs usually challenge established and shared beliefs, assumptions and practices through a top-down approach. As a consequence, successful intrapreneurs need to create a shared sense of purpose that inspires action across employees. From a process perspective, the core ingredients are empowering individuals to create change, and fostering collaboration (see Figure 1.6):

- Engage: In the initial phase, it is crucial to engage key stakeholders who can become intrapreneurs in driving the change;
- Co-design: Using the information collected in the first phase, identify the strongest cultural barrier that is holding back innovation in the organization; engaging employees in co-designing the new organizational model reduces traditional inertia towards change;
- Involve and Co-develop: In the last phases, the involvement of larger portions of the organization and the identification of "small wins" are fundamental practices to successfully drive the change.

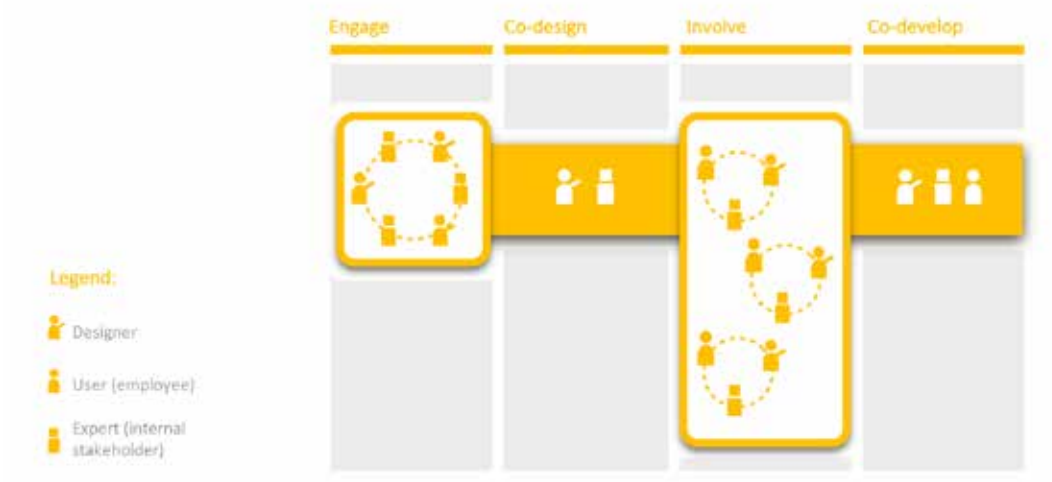


Figure 1.6: *The process of Creative Confidence*

1.4. Design Thinking as Innovation of Meaning

The incredible opportunities that digital technologies provide allow us to access an unprecedented amount of novel solutions. Idea Management Systems and Crowdsourcing Platforms significantly support both creation and access to innovative ideas. As a consequence, in a world overcrowded by ideas, real value comes from a different kind of innovation. Innovation of solutions is about better ideas to solve established problems. It is a new how, a new way to address the challenges considered relevant. A novel solution may provide incremental or even radical improvements, but always in the same direction: they are "more of the same" innovations. Innovation of directions instead is about a novel purpose that redefines the problems worth addressing. It takes innovation one level higher—not only a new how, but especially a new why. A new value proposition. A new interpretation of what is meaningful (see Figure 1.7).

Key reference:

Verganti R (2017). Owercrowded – Designing Meaningful Products in a World Awash with Ideas. MIT Press, Boston

As Roberto Verganti argues in his book *Overcrowded – Designing Meaningful Products in a World Awash with Ideas*, in a world where options are abundant, without a shared purpose, companies fall into the paradox of ideas: the more ideas they create, the more they move in different directions, the less innovation happens. Furthermore, in a rapidly and continuously changing world, what is meaningful to people also changes. Focusing on solutions, companies inevitably end up solving problems that meanwhile have become meaningless. Innovating the meaning of things (products, services, business models, etc.) is an emerging challenge for the established Design Thinking. The process of designing a new meaningful direction (Innovation of Meaning) is completely different, even opposite to the process of designing a new solution (Creative Problem Solving).

Figure 1.7: *The change behind Innovation of Meaning*

Videos about the convention available on www.osservatori.net

The innovation of solution approach is based on the outside-in paradigm. For example, the Creative Problem Solving approach suggests starting by going out, observing how users use existing products, and obtaining insights from the analysis of users' behaviors. The innovation of direction approach instead works the other way around. Innovation of Meaning advocates designing meaningful directions through the outside-in paradigm. In other words, to start from ourselves. While innovative solutions can be borrowed from the outside, since they enable achieving a goal or superior performance, new directions must come from ourselves, because no one can go in a direction that is not meaningful for themselves. Furthermore, differently from Creative Problem Solving that is built on the art of ideation, Innovation of Meaning requires the art of criticism. Criticism enables digging deeper in challenging and making our initial beliefs more robust. These two particular features of the Innovation of Meaning approach also imply significant changes in the required process (see Figure 1.8):

- Envision: The initial direction needs to be developed individually and conceived by internal people; it is fundamental to start with personal insights about what is meaningful to every one of us; then, to create a shared purpose, these insights must be contrasted and compared;
- Criticize: Enriching and making the individual direction more robust essentially requires leveraging criticism that can initially come from colleagues (who share the same context and culture) and then from external experts (named interpreters);
- Probe and Talk: Developing probes able to embody and significantly represent the new direction is crucial to obtain the final critique from end users.

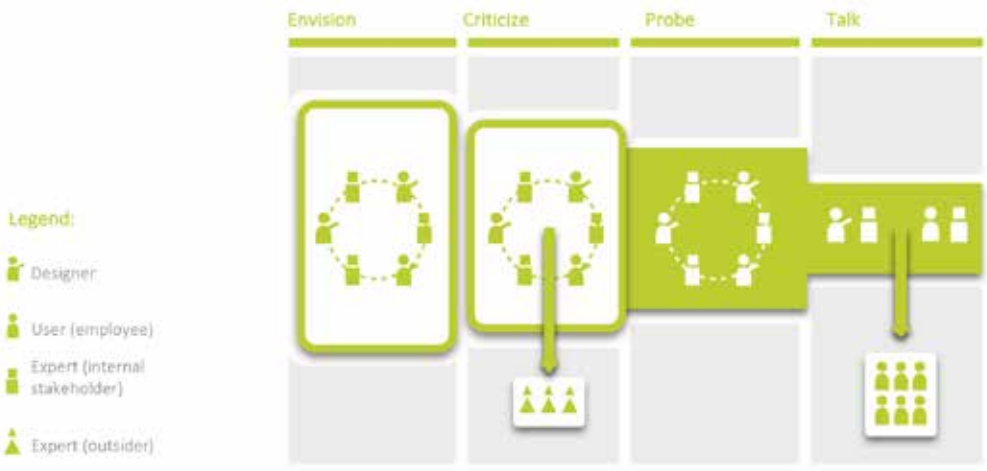


Figure 1.8: *The process of Innovation of Meaning*

POLITECNICO
MILANO 1863
SCHOOL OF MANAGEMENT

OSSERVATORI.NET
digital innovation

Observatory
DESIGN THINKING FOR BUSINESS

2. RESEARCH RESULTS

Creating Value through Design Thinking

Claudio Dell'Era
Research Direction

Stefano Magistretti
Senior Research Team

Creating Value through Design Thinking

Claudio Dell'Era and Stefano Magistretti

As briefly introduced in the previous chapter, the study of the approaches adopted by 47 organizations providing advisory services based on the Design Thinking paradigm underlines 4 kinds of Design Thinking (see Figure 2.1). The present chapter details each of these along five different dimensions:

- Principles: Each kind of Design Thinking addresses a specific challenge, in other words, this study clearly shows that there is no unique and consistent Design Thinking approach able to cope with all types of innovation issues, and that it must be framed and shaped according to the specific challenge (Aim). In addition, the mechanisms that stimulate the reflections and the design dynamics significantly differ in the 4 kinds of Design Thinking to the point that they mainly leverage the power of ideation or focus more on building and forging innovative solutions (Thinking). Finally, the dialectic and the relationship with users can vary along the 4 kinds of Design Thinking according to their interpretation as a source of knowledge triggering the design process or as one of the stakeholders to consider in the design process (Direction);
- Practices: The 4 kinds of Design Thinking can be connoted along two main practices. On the one hand, they significantly differ in terms of learning processes and mechanisms, in other words, they differently deal with knowledge creation and absorption in the design process (Learning), on the other hand, they employ different participation frameworks foreseeing the involvement of diverse categories of actors (Participation);
- Diffusion: To estimate the diffusion of the 4 kinds of Design Thinking, the study shows the percentage of adopters according to the four categories of organizations providing advisory services based on the Design Thinking paradigm;
- Relevance: With the aim of defining the relevance of each kind of Design Thinking, the study reports the percentage of annual revenues of each organization providing advisory services based on the 4 kinds of Design Thinking;
- Domains: Finally, the case studies highlight the percentage of annual revenues obtained through adopting each kind of Design Thinking to address a specific domain. According to the model that Roberto Verganti proposes in his book *Overcrowded – Designing Meaningful Products in a World Awash with Ideas*, the study identifies three main categories of domains: Direction (vision and brand, business model), People (culture, organization and processes), and Solution (product, service, communication, retail, experience).

Key reference:

Verganti R (2017). Overcrowded – Designing Meaningful Products in a World Awash with Ideas. MIT Press, Boston

Figure 2.1: *Organizations providing advisory services based on the Design Thinking paradigm*

2.1. Creative Problem Solving: Principles, Practices, and Diffusion

The Creative Problem Solving approach is based on three fundamental principles rooted in the origins of Design Thinking (see Table 2.1). The main aim of this kind of Design Thinking is to **solve problems**; it assumes that users have a need or a problem, and they search for the best solution. This approach implies that organizations innovate by understanding the user needs (what problems customers currently have), and then creating ideas to better solve these problems. If solving problems is the main aim of this kind of Design Thinking, **ideating** is the activity to be nurtured and stimulated to originally solve the problems addressed. The assumption is that the more ideas are generated, the greater the chance of finding a good one. Ideating is about sharing insights with the team, make sense of a vast amount of data, and identifying opportunities for design to generate many ideas. Creative problem solving is not about coming up with the 'right' idea, it is about generating the broadest range of possibilities. Ideating is the principle that suggests exploring broad landscapes in terms of concepts and opportunities. Ideation provides both the fuel and the raw materials that enable building prototypes and getting innovative solutions into the hands of users. Ideating allows crossing the bridge between identifying the problem and creating the solution for users by combining understanding of the problem with team imagination to generate solution concepts. As the Creative Director of one of the Design Studios involved in the study highlighted:

"The adoption of the human-centered design methodology allows developing several interesting ideas and solutions. This happens through ideation workshops where designer and clients can co-create the final solutions."

PRINCIPLES	
Aim	**Solve problems**
Thinking	**Ideating**
Direction	**Outside-in (users at the beginning)**
PRACTICES	
Learning	**Prototypes**
Participation	**Naïve mind**

Table 2.1: *Principles and Practices of the Creative Problem Solving*

In terms of practices, the Creative Problem Solving approach moves from the **outside-in**. It starts from going out and observing how users use existing products; then it requires the ability to interpret these observations to create original solutions. Recognizing relevant insights requires empathizing with the users. Transforming the selected innovative ideas into tangible, even if rough, **prototypes** allows interacting with the users, receiving feedback, and learning from failures. A prototype can be anything that a user can interact with. As the Experience Leader of one of the Strategic Consultants involved in the research noted:

"Testing and rapid prototyping allow identifying 85% of problems and potential improvements related to products and services"

The Creative Problem Solving approach relies on combining the conscious and unconscious mind, rational thoughts, and imagination. The contribution of the **naïve mind** allows addressing the problems in a fresh and lateral perspective. Innovation teams adopting the Creative Problem Solving approach need to be optimistic and demonstrate an experimental attitude; they need to empathize and iterate, looking for inspiration in unexpected places.

The data collected on the diffusion of the Creative Problem Solving approach in the 47 organizations providing advisory services based on the Design Thinking paradigm clearly show that it is **significantly adopted in all four categories (81%)**: 38 out of 47 organizations adopt the Creative Problem Solving approach (see Table 2.2). Undoubtedly this kind of Design Thinking is the dominant paradigm in the Design Studios category, to the point that 94% adopt the Creative Problem Solving approach.

Design Studios	Digital Agencies	Strategic Consultants	Technology Developers	All
16 (out of 17)	4 (out of 6)	9 (out of 13)	9 (out of 11)	38 (out of 47)
94%	**67%**	**69%**	**82%**	**81%**

Table 2.2: *Diffusion of the Creative Problem Solving*

2.2. Creative Problem Solving: Relevance and Domains

Not only is the Creative Problem Solving approach particularly diffused (81%), but 22 service providers (47%) concentrate more than 50% of their annual revenues on services based on the Creative Problem Solving Approach. Focusing on the 38 organizations that adopt this kind of Design Thinking, on average, **65.5% of their annual revenues derive from providing advisory services based on the Creative Problem Solving approach**. This means that this kind of Design Thinking is not only particularly widespread, but it is also highly relevant in the portfolio of approaches adopted by service providers (see Figure 2.2).
Interestingly, the average distribution of the annual revenues of the 38 service providers that adopt the Creative Problem Solving approach across the domains highlights a somewhat polarized position (see Figure 2.3):

- **Direction**: On average, **18.6%** of annual revenues obtained through adopting the Creative Problem Solving approach concern the Direction domain;
- **People**: A marginal portion (**8.7%**) of annual revenues obtained through adopting the Creative Problem Solving approach concerns the People domain;
- **Solution**: The largest portion (**72.7%**) of annual revenues obtained through adopting the Creative Problem Solving approach concerns the Solution domain.

	Creative Problem Solving
# of Service Providers adopting Creative Problem Solving	38 [81%]
# Service Providers adopting Creative Problem Solving as **CORE (>50%)**	22 [47%]
Average % **of annual revenues** obtained by Creative Problem Solving	65.5%

Figure 2.2: *Relevance of the Creative Problem Solving*

Videos about the convention available on www.osservatori.net

Analyzing the detailed domains addressed by the 38 organizations providing advisory services based on the Creative Problem Solving approach, interesting to note is that on average, more than half the annual revenues obtained from adopting this kind of Design Thinking concern two specific domains belonging to the Solution level:

- **Service**: On average, **32.6%** of annual revenues obtained through adopting the Creative Problem Solving approach concern the Service domain;
- **Product**: On average, **21.0%** of annual revenues obtained through adopting the Creative Problem Solving approach concern the Product domain.

Finally, over 10% of annual revenues obtained from adopting the Creative Problem Solving approach concern the **Business Model** domain (**12.4%**). In other words, this kind of Design Thinking suits specific challenges. As partially introduced in the previous chapter, the Creative Problem Solving approach is particularly effective in designing better ideas to solve established problems. As a consequence, this is an innovative way to address the challenges that are considered relevant. A novel solution may provide incremental or even radical improvements, but usually in the same direction.

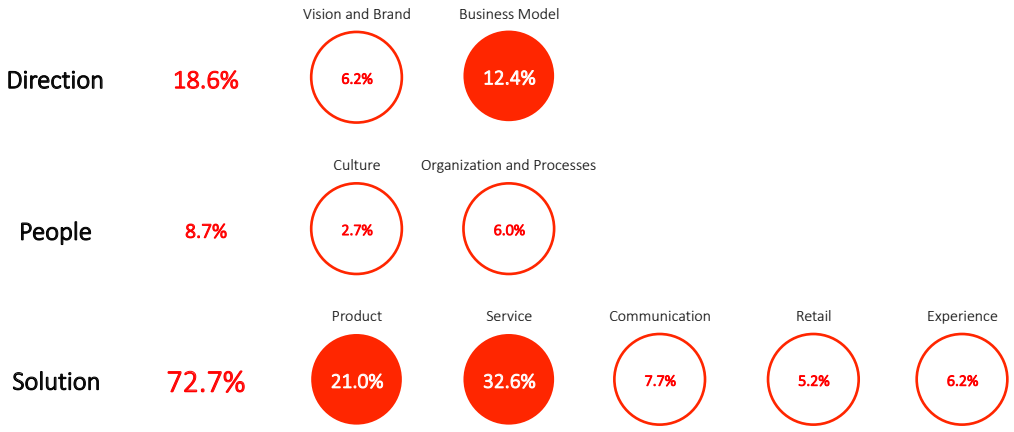


Figure 2.3: *Domains addressed adopting the Creative Problem Solving [% of annual revenues]*

2.3. Sprint Execution: Principles, Practices, and Diffusion

As briefly introduced in the previous chapter, the Sprint Execution approach to some extent represents the linear evolution of Creative Problem Solving to the point that both the principles and practices highlight some similarities (see Table 2.3). The aim of the Sprint Execution approach does not consist in just designing a product concept or an innovative idea, but aims at **delivering** products ready to be launched on the market in line with user needs. The product is the principal vehicle to both capture the value and learn from the reactions of the market. If one of the main principles of the Creative Problem Solving approach is ideating, Sprint Execution addresses the acceleration that digital transformation requires with significant tension in quickly building products to launch on the market. The way of thinking adopted in the Sprint Execution approach is constantly driven by a practical attitude: everything that is thought in the initial phase has to be delivered at the end of the process in realistic and working products. As the CEO and Head of Design of one of the Digital Agencies involved in the study underlined:

"We cannot think about an extraordinary solution which is not consistent with the actual users' needs and the constraints implied by all stakeholders: even if creative ideas represent the engine of our approach, we have very clear in mind that our customers want working and effective products, instead of intriguing concepts."

In the Sprint Execution approach, users have a fundamental role, but interpreted in a very different way from Creative Problem Solving. They are fundamental stakeholders to interact with in order to collect their feedback and reactions, but they are not considered the main source of information at the beginning of the design process.

PRINCIPLES	
Aim	**Deliver products**
Thinking	**Building**
Direction	**Inside-out (users at the end)**
PRACTICES	
Learning	**Minimum Viable Products**
Participation	**Experts (internal stakeholders)**

Table 2.3: *Principles and Practices of the Sprint Execution*

Videos about the convention available on www.osservatori.net

In other words, the direction pursued by the Sprint Execution approach is **inside-out**: this means that the product is initially conceived by the team, and then the team brings the product to users to get feedback. This does not mean that service providers adopting the Sprint Execution approach do not consider knowing the market they are addressing as fundamental, but they strongly believe the valuable knowledge they need to be innovative can only be obtained through the interaction with products. As the Founder and CEO of one of the Digital Agencies analyzed during the study underlined:

"Research is very important, but it's also fundamental to receive realistic feedback from the users and get them on board. We usually interact with users just after the first round of the Sprint Execution, in order to understand possible improvements or eventually radical changes."

From the practice point of view, Sprint Execution significantly leverages the contributions provided by **minimum viable products**, defined as a product with just enough features to satisfy early customers, and to provide feedback for future developments. The need to quickly create products able to bring value to users requires design teams composed of **experts** (usually internal stakeholders) able to deal with different categories of constraints and opportunities.

Almost **half the 47 organizations** providing advisory services based on the Design Thinking paradigm adopt the Sprint Execution approach (**49%**, see Table 2.4). Undoubtedly, this kind of Design Thinking is the dominant paradigm in the Digital Agency category to the point that all adopt the Sprint Execution approach (100%). It is also particularly diffused among Strategic Consultants (46%) and Technology Developers (45%), while about 1/3 of Design Studios adopt the Sprint Execution approach.

Design Studios	Digital Agencies	Strategic Consultants	Technology Developers	All
6 (out of 17)	6 (out of 6)	6 (out of 13)	5 (out of 11)	23 (out of 47)
35%	**100%**	**46%**	**45%**	**49%**

Table 2.4: *Diffusion of the Sprint Execution*

2.4. Sprint Execution: Relevance and Domains

As previously noted, the Sprint Execution approach is significantly diffused especially among some categories of service providers (49%). At the same time, it is complementary in the service portfolios developed by the analyzed organizations: only 6 service providers concentrate more than 50% of their annual revenues on services based on the Sprint Execution approach (13%). Focusing on the 23 organizations that adopt this kind of Design Thinking, on average they obtain **47.6% of annual revenues from providing advisory services based on the Sprint Execution approach**. This means that this kind of Design Thinking is not only significantly widespread, but is also relevant in the portfolio of approaches adopted by service providers (see Figure 2.4). The average distribution of the annual revenues obtained by the 23 service providers that adopt the Sprint Execution approach across the domains shows a very polarized position (see Figure 2.5):

- **Direction**: A marginal portion (**9.7%**) of annual revenues obtained through adopting the Sprint Execution approach concerns the Direction domain;
- **People**: A marginal portion (**4.7%**) of annual revenues obtained through adopting the Sprint Execution approach concerns the People domain;
- **Solution**: The largest portion (**85.6%**) of annual revenues obtained through adopting the Sprint Execution approach concerns the Solution domain.

	Sprint Execution
# of Service Providers adopting Sprint Execution	23 [49%]
# Service Providers adopting Sprint Execution as **CORE (>50%)**	6 [13%]
Average % **of Annual Revenues** obtained by Sprint Execution	47.6%

Figure 2.4: *Relevance of the Sprint Execution*

Videos about the convention available on www.osservatori.net

Data on the detailed domains that the 23 organizations providing advisory services based on the Sprint Execution approach address show that on average 2/3 of annual revenues obtained from adopting this kind of Design Thinking concerns two specific domains belonging to the Solution level:

- **Product**: On average, **34.7%** of annual revenues obtained through adopting the Sprint Execution approach concern the Product domain;
- **Service**: On average, **32.5%** of annual revenues obtained through adopting the Sprint Execution approach concern the Service domain.

All other detailed domains show percentages lower than 10%. Similarly to the Creative Problem Solving approach, Sprint Execution is particularly effective in designing new solutions, as demonstrated by the fact that this is usually adopted to address detailed domains belonging to the **Solution level**: product, service, communication, and retail. They show percentages above 5%. Only the business model domain belonging to the Direction level exceeds this threshold.

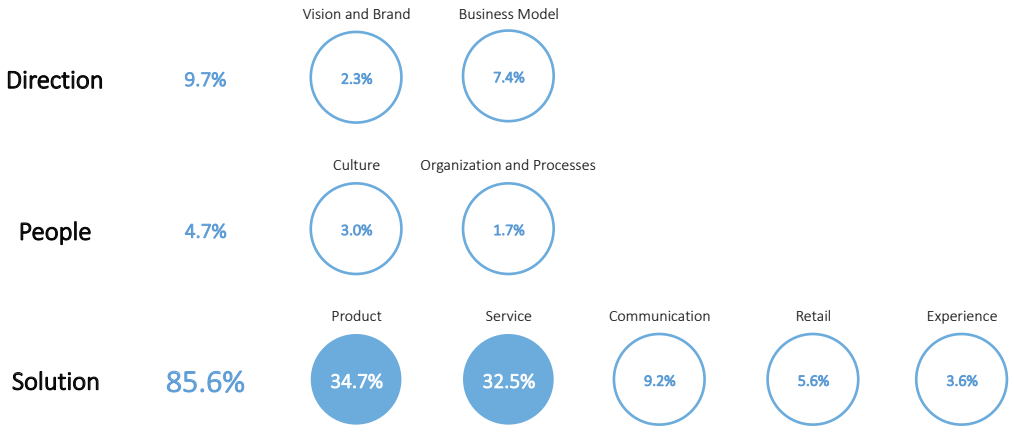


Figure 2.5: *Domains addressed adopting the Sprint Execution [% of Annual Revenues]*

2.5. Creative Confidence: Principles, Practices, and Diffusion

The Creative Confidence approach is one of most interesting evolutions of the Design Thinking paradigm and is characterized by profound differences with the Creative Problem Solving approach, both in terms of principles and practices (see Table 2.5). First of all, the main aim of the Creative Confidence approach is to **nurture mindsets** and shape the organizational culture, which are the fundamental premises for any kind of innovation: products, services, processes, business models, etc. It is a matter of creating the appropriate mentality to face business challenges and feel confident in going through changes. As the CEO of one of the Design Studios involved in the study underlined:

"We deal with the building blocks of any organization: people (and their mentality), technologies, processes, business models. We adopt a holistic approach to identify opportunities for innovation and spot hidden organizational problems. But if a company wants to grow, it has to always pass through people."

The Creative Confidence approach focuses especially on people because the most effective way to transform businesses is through several changes in the mindsets and attitudes of people. **Engaging** people and supporting them in feeling confident with new perspectives and new horizons stimulates proactive behaviors and creates the appropriate premises to deal with innovation challenges. As a Senior Strategic Consultant interviewed during the study noted:

"Before developing new business models, new products or new services, it's fundamental to work on people first. We help organizations in nurturing new attitudes and creating the right skills necessary to transform the organization itself."

PRINCIPLES	
Aim	**Nurture mindsets**
Thinking	**Engaging**
Direction	**Co-design and Co-develop**
PRACTICES	
Learning	**Involvement**
Participation	**Experts (internal stakeholders)**

Table 2.5: *Principles and Practices of the Creative Confidence*

Videos about the convention available on www.osservatori.net

Very often, the users that the design projects adopting the Creative Confidence approach address are employees. For this reason, the direction that connotes this kind of Design Thinking is **co-designing and co-developing**. As previously mentioned, the main aim of the Creative Confidence approach is to nurture mindsets that enable employees to feel confident in facing organizational changes and innovation challenges. For this reason, it is fundamental to engage employees allowing them to propose (design) and realize (develop) the change according to their beliefs and attitudes. As the CEO of one of the Strategic Consultants involved in the study noted:

"We co-design a series of workshops in collaboration with the client in order to understand, transform, and align employees' perspectives about the vision of the company, the values of the organization and, as a consequence, the processes to implement."

In terms of practices, the adoption of the Creative Confidence approach is based on the early and intense **involvement** of all those **experts** (usually internal stakeholders) who can support the change. Especially in digital transformation projects, it is fundamental to involve all those stakeholders that can contribute to the design phase and then support its realization.
In comparison to Sprint Execution and especially Creative Problem Solving, the Creative Confidence approach is **less diffused** (**34%**, see Table 2.6), probably because it is still in an embryonic phase. As partially introduced in the previous chapter, this kind of Design Thinking is rapidly spreading around leveraging specific features that have always connoted the Design Thinking paradigm: human-centeredness and deep empathy. These are even more relevant in projects that aim at changing the organizational culture and mentality. Furthermore, they are becoming fundamental in supporting intrapreneurship to the point that the Strategic Consultants category seems most interested in its adoption (54%).

Design Studios	Digital Agencies	Strategic Consultants	Technology Developers	All
6 (out of 17)	0 (out of 6)	7 (out of 13)	3 (out of 11)	16 (out of 47)
35%	**0%**	**54%**	**27%**	**34%**

Table 2.6: *Diffusion of the Creative Confidence*

2.6. Creative Confidence: Relevance and Domains

The Creative Confidence approach shows one of the lowest percentages in terms of diffusion (34%), even if more than half the Strategic Consultants analyzed in the study adopt it, Only 4 service providers concentrate more than 50% of their Annual Revenues on services based on the Creative Confidence approach (9%). Focusing on the 16 organizations that adopt this kind of Design Thinking, on average, they obtain **35.0% of annual revenues from providing advisory services based on the Creative Confidence approach**. Even if this kind of Design Thinking is not particularly diffused, it is quite relevant in the portfolio of approaches proposed by those service providers that adopt it (see Figure 2.6). The average distribution of annual revenues obtained by the 16 service providers that adopt the Creative Confidence approach across the domains shows a less polarized position compared to Creative Problem Solving and Sprint Execution, even the focus on People is clearly recognizable (see Figure 2.7):

- **Direction**: On average, **19.4%** annual revenues obtained through adopting the Creative Confidence approach concern the Direction domain;
- **People**: The largest portion (**54.3%**) of annual revenues obtained through adopting the Creative Confidence approach concern the People domain;
- **Solution**: On average, **26.3%** of annual revenues obtained through adopting the Creative Confidence approach concern the Solution domain

	Creative Confidence
# of Service Providers adopting Creative Confidence	16 [34%]
# Service Providers adopting Creative Confidence as **CORE (>50%)**	4 [9%]
Average % **of Annual Revenues** obtained by Creative Confidence	35.0%

Figure 2.6: *Relevance of the Creative Confidence*

Videos about the convention available on www.osservatori.net

Analyzing the detailed domains that the 16 organizations providing advisory services based on the Creative Confidence approach address, interesting to note is that on average more than half the annual revenues obtained from adopting this kind of Design Thinking concern two specific domains belonging to the People level:

- **Culture**: On average, **23.7%** of annual revenues obtained from adopting the Creative Confidence approach concern the Culture domain;
- **Organization and Processes**: On average, **30.6%** of annual revenues obtained from adopting the Creative Confidence approach concern the Organization and Processes domain.

Finally, over 10% of annual revenues obtained from adopting the Creative Confidence approach concern two detailed domains belonging to the Direction and Solution levels: **Business Model** domain (**12.7%**) and **Service** domain (**16.2%**). In other words, this kind of Design Thinking seems to be effective in different domains even if the People domain the most appropriate area to which the Creative Confidence approach can be applied.

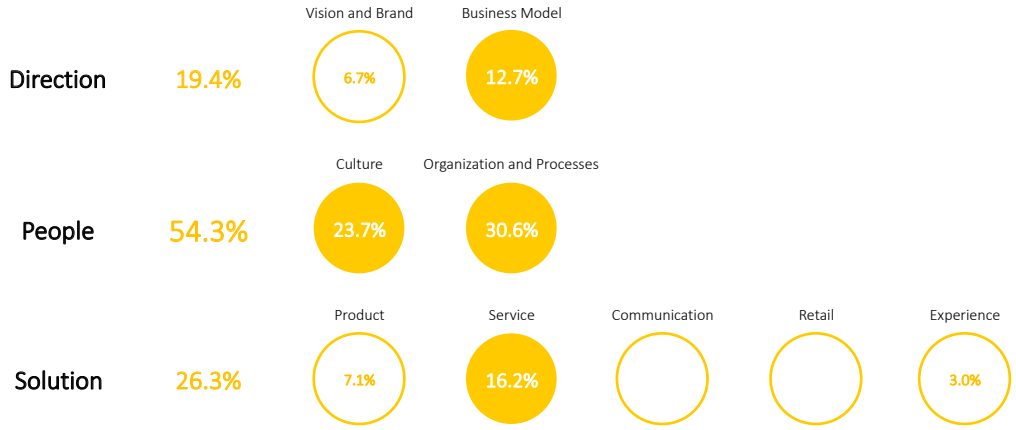


Figure 2.7: *Domains addressed adopting the Creative Confidence [% of Annual Revenues]*

2.7. Innovation of Meaning: Principles, Practices, and Diffusion

Similarly to the Creative Confidence approach, the Innovation of Meaning approach is one of the most interesting evolutions of the Design Thinking paradigm. At the same time, it significantly differs from the more established and diffused Creative Problem Solving both in terms of principles and practices (see Table 2.7). According to the Innovation of Meaning approach, organizations **envision scenarios** to support the search for new meaning and to make people fall in love. This concerns a novel vision that redefines the problems worth addressing, proposing a new reason why people use something, a new value proposition, a new vision. According to the CEO of one of the Design Studios involved in the study:

"Every product or service implies a relationship with people. For this reason, a clear and positive message is fundamental in order to support its interpretation and to create a strong bond. So messages are not decorative assets, but the catalysts to align brand values and human behaviors."

Differently from the Creative Problem Solving approach based on ideating, the Innovation of Meaning approach is based on **criticizing**. Criticism is the practice of going deeper into interpreting things. It strives to unveil what lies underneath the surface of things by contrasting different perspectives to develop a richer and more robust interpretation. The Innovation of Meaning approach needs criticism for two reasons: (i) it starts from our values and beliefs, and criticism is the practice that supports the evolution of the individual perspective; (ii) it enables people and organizations not only to move beyond the past, but also to create the new.

PRINCIPLES	
Aim	**Envision scenarios**
Thinking	**Criticizing**
Direction	**Inside-out (users at the end)**
PRACTICES	
Learning	**Metaphors**
Participation	**Experts (interpreters)**

Table 2.7: *Principles and Practices of the Innovation of Meaning*

Videos about the convention available on www.osservatori.net

The role of users also significantly differs in the Innovation of Meanings approach compared to the other kinds of Design Thinking. Meanings are new interpretations of what is good and what is bad; thus, there is no a scale of judgement. This is why the outside-in process is no longer effective, but rather requires taking the opposite direction: from the **inside-out**. Meanings are interpretations, and interpretations cannot be outsourced, they can only come from us: people will never love a product that is not loved by its designers and developers. If they do not love it, the market recognizes the weak relationship. The purpose of going through a process based on inside-out criticism is to create a vision that is powerful, robust, and meaningful: something for people to love. In a world awash with opportunities, focusing on quantity simply increases confusion, entropy. It instead requires going deeper. The way to obtain a novel meaningful interpretation is not by having another one, but by going deeper with a few good perspectives, contrasting them, fusing them.

The Innovation of Meanings approach significantly relies on **metaphors** because they are the most powerful way to express concepts and emotions, especially when these concepts are new and abstract, such as a new meaning. Interpreters are defined as **experts** from far-flung fields who address the same strategic context, but from different perspectives. They help reflect even deeper on the implications of the emerging vision.

Similarly to the Creative Confidence approach, the Innovation of Meaning approach is **diffused in a limited way** (**34%**, see Table 2.8), probably because it is still in an embryonic phase. At the same time, this kind of Design Thinking is rapidly spreading due to the digital transformation and the consequent abundance of ideas. Both Design Studios and Strategic Consultants show higher percentages of diffusion: respectively 41% and 46%.

Design Studios	Digital Agencies	Strategic Consultants	Technology Developers	All
7 (out of 17)	2 (out of 6)	6 (out of 13)	1 (out of 11)	16 (out of 47)
41%	**33%**	**46%**	**9%**	**34%**

Table 2.8: *Diffusion of the Innovation of Meaning*

2.8. Innovation of Meaning: Relevance and Domains

Similarly to the Creative Confidence approach, the Innovation of Meaning approach shows low parentages of diffusion (34%), even if almost half the Design Studios analyzed in the study adopt it. Only 4 service providers concentrate more than 50% of their annual revenues on services based on the Innovation of Meaning approach (9%). Focusing on the 16 organizations that adopt this kind of Design Thinking, on average, they obtain **34.7% of annual revenues providing advisory services based on the Innovation of Meaning approach**. Even if this kind of Design Thinking is not particularly widespread, it is quite relevant in the portfolio of approaches proposed by those service providers that adopt it (see Figure 2.8).
The average distribution of the annual revenues obtained by the 16 service providers that adopt the Innovation of Meaning approach across the domains shows a distributed position (see Figure 2.9):

- **Direction**: The greatest portion (**41.7%**) of annual revenues obtained through adopting the Innovation of Meaning approach concerns the Direction domain.
- **People**: On average, **21.6%** of the annual revenues obtained through adopting the Innovation of Meaning approach concern the People domain.
- **Solution**: On average, **36.7%** of the the annual revenues obtained through adopting the Innovation of Meaning approach concern the Solution domain.

	Innovation of Meaning
# of Service Providers adopting Innovation of Meaning	16 [34%]
# Service Providers adopting Innovation of Meaning as **CORE (>50%)**	4 [9%]
Average % **of Annual Revenues** obtained by Innovation of Meaning	34.7%

Figure 2.8: *Relevance of the Innovation of Meaning*

Videos about the convention available on www.osservatori.net

The 16 organizations providing advisory services based on the Innovation of Meaning approach address several detailed domains. If the detailed domains belonging to the Direction level show the highest percentages, the other two detailed domains respectively belonging to the Solution and the People levels exceed the threshold of 10%:

- **Business Model**: On average, **23.9%** of annual revenues obtained through adopting the Innovation of Meaning approach concern the Business Model domain.
- **Vision and Brand**: On average, **17.8%** of annual revenues obtained through adopting the Innovation of Meaning approach concern the Vision and Brand domain.
- **Service**: On average, **16.6%** of annual revenues obtained through adopting the Innovation of Meaning approach concern the Service domain.

Organization and Processes: On average, 11.9% of annual revenues obtained through adopting the Innovation of Meaning approach concerns the Organization and Processes domain;

Finally, the other two detailed domains belonging respectively to the People and Solution levels show percentages close to 10% of annual revenues obtained from adopting the Innovation of Meaning approach: **Culture** domain (**9.7%**) and **Product** domain (**9.5%**). In other words, this kind of Design Thinking seems to be effective in different domains even if the Direction domain is the most appropriate area to which the Innovation of Meaning approach can be applied.

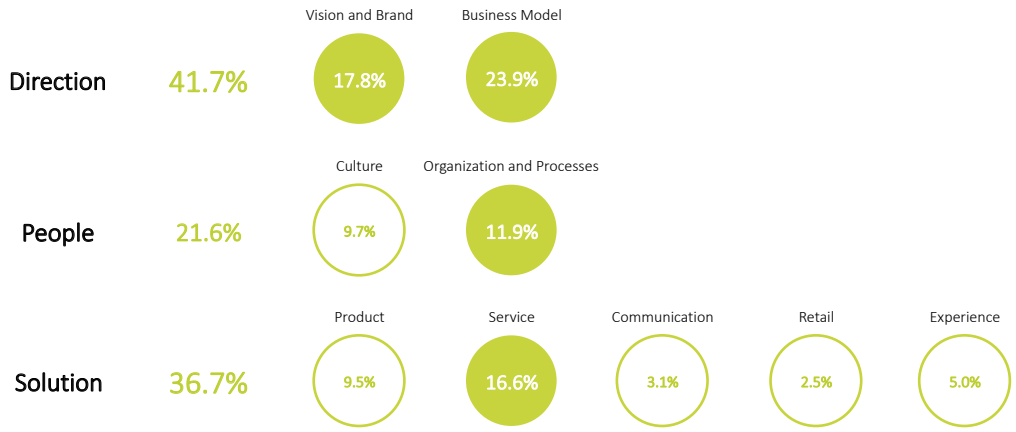


Figure 2.9: *Domains addressed adopting the Innovation of Meaning [% of Annual Revenues]*

2.9. Comparison of the 4 kinds of Design Thinking

The comparison of the 4 kinds of Design Thinking provides interesting evidence along the five dimensions introduced at the beginning of the chapter: principles, practices, diffusion, relevance, and domains. The 47 organizations providing advisory services based on the Design Thinking paradigm highlight different behaviors in adopting the four kinds of Design Thinking. On average, each service provider proposes services based on **1.96 of the 4 approaches**; only 3 service providers manage all 4 kinds of Design Thinking (**6.4%**), while 14 service providers concentrate their offering on a single approach (**29.8%**).

The Creative Problem Solving approach is the most diffused (see Figure 2.10): 38 out of 47 service providers adopt this kind of Design Thinking (**81%**), while the Creative Confidence and the Innovation of Meaning approaches are the least adopted: 16 out of 47 service providers adopt these kinds of Design Thinking (**34% each**). Similarly, the relevance of each kind of Design Thinking shows different evidence across the approaches. 22 service providers concentrate their offering on the Creative Problem Solving approach (**47%**). Focusing on the 38 organizations that adopt this kind of Design Thinking, on average, they obtain **65.5% of annual revenues providing advisory services based on the Creative Problem Solving approach**. The Sprint Execution approach is adopted by 6 service providers as a core approach (**13%**); the 23 service adopters that also base their offering on this kind of Design Thinking on average obtain **47.6% of annual revenues through applying the Sprint Execution approach**. The Creative Confidence and Innovation of Meaning approaches show similar evidence in terms of relevance. Only 4 service providers apply these as core approaches (**9%**). Focusing on the 16 organizations that adopt these kinds of Design Thinking, on average, they obtain respectively **35.0% and 34.7% of annual revenues providing advisory services based on the Creative Confidence and Innovation of Meaning approaches**.

	Creative Problem Solving	Sprint Execution	Creative Confidence	Innovation of Meaning
# of Service Providers adopting …	38 [81%]	23 [49%]	16 [34%]	16 [34%]
# Service Providers adopting … as **CORE (>50%)**	22 [47%]	6 [13%]	4 [9%]	4 [9%]
Average **% of Annual Revenues** obtained by …	65.5%	47.6%	35.0%	34.7%

Figure 2.10: *Diffusion and Relevance of the 4 kinds of Design Thinking*

Videos about the convention available on www.osservatori.net

The domains addressed adopting the 4 kinds of Design thinking provide interesting evidence (see Figure 2.11): while the Creative Problem Solving and Sprint Execution approaches show a polarized position, the Creative Confidence and Innovation of Meaning approaches are adopted to face different challenges. More specifically, the first two approaches clearly address the Solution (product, service, communication, retail, experience) domain. The largest portion of annual revenues obtained through adopting the Creative Problem Solving and the Sprint Execution approaches concerns the Solution domain: respectively **72.7%** and **85.6%**. Vice versa, the Direction and People domains have a marginal role.

The average distribution of annual revenues obtained by the 16 service providers that adopt the Creative Confidence approach across the domains shows a relatively distributed position, even if the focus on People (**54.3%**) is clearly recognizable. The average distribution of annual revenues obtained by the other 16 service providers that adopt the Innovation of Meaning approach across the domains shows a similar distribution: in this case, the largest portion of annual revenues obtained through adopting the Innovation of Meaning approach concerns the Direction domain (**41.7%**). The last two kinds of Design Thinking seem to be effective in different domains showing higher flexibility.

	Creative Problem Solving	Sprint Execution	Creative Confidence	Innovation of Meaning
Direction (Vision and Business Model)	18.6%	9.7%	19.4%	41.7%
People (Culture, Organization and Processes)	8.7%	4.7%	54.3%	21.6%
Solution (Product, Service, Communication, Retail, Experience)	72.7%	85.6%	26.3%	36.7%

Figure 2.11: *Domains addressed adopting the 4 kinds of Design Thinking [% of Annual Revenues]*

POLITECNICO
MILANO 1863
SCHOOL OF MANAGEMENT

OSSERVATORI.NET
digital innovation

Observatory
DESIGN THINKING FOR BUSINESS

3. RESEARCH RESULTS

Emerging Startups in the Design Thinking Ecosystem

Cabirio Cautela
Research Direction

Luca Gastaldi
Research Direction

Emerging startups in the Design Thinking Ecosystem

Cabirio Cautela and Luca Gastaldi

If the analysis of companies active in a sector provides a litmus test of their competitive dynamics, the analysis of startups often helps in understanding how these dynamics will likely evolve over time. In other words, the evolution of startups in a sector is often able to anticipate how the sector will develop in the future. For this reason, the Observatory not only delved into the different Design Thinking solutions of Italian service providers, but also analyzed the **ecosystem of international startups** that could support or complement these providers. Given the flexible, creative, and lean approach of these startups, they may constitute a significant driver for the field's development, with clear influences on incumbents' behaviors.

The ecosystem of startups active in the field of Design Thinking is still immature. An extensive analysis conducted on **Cruchbase**[1] – the leading source for startup-related content – revealed only 150 startups offering tools and solutions that partially cover all the phases of the various Design Thinking approaches described in Chapter 1. As Figure 3.1 shows, almost all these startups were created in the USA (86) and Europe (41). These numbers are not at all surprising when considering that:

[1] www.cruchbase.com

- The concept of Design Thinking was initially developed in Stanford (Palo Alto, California);
- The USA has the highest number of startups worldwide;
- Europe is where the latest ideas on Design Thinking have been sharpened.

Figure 3.1: *Geographic distribution of the Design Thinking startups*

Videos about the convention available on www.osservatori.net

Only three startups in the field are Italian, testifying to the fact that Design Thinking service providers in Italy have to search internationally for potential partners through which to enhance their value propositions. Overall, the 150 Design Thinking startups have received **908 million dollars in funding**. To put this number in perspective, interesting to consider is:

- The order of magnitude is one lower than all startups in the fintech industry[2];
- Startups active in the Internet of Things domain received almost half the funding[3];
- Italian hi-tech startups received five times more than the overall amount of investments[4].

[2] 26 billion dollars for 730 startups, according to the latest results of the digital finance Observatory

[3] 2 billion dollars for 166 startups, according to the latest results of the IoT Observatory

[4] 170 million dollars according to the Startup Hi-tech Observatory

On average, each startup in the Design Thinking domain received 7 million dollars of funding. This amount is half that received by a startup offering smart home solutions (13 million dollars), and one third of funding received by a startup operating as a technological enabler of big data analysis (23 million dollars). As Figure 3.2 shows, the average funding received by Design Thinking startups is highly biased toward two startups that received more than 50 million dollars in investments:

- **Onshape** (169 million dollars): a full-cloud, simple-to-use, 3D CAD system that allows collaboratively designing products;
- **Desktop Metal** (96 million dollars): a 3D printing system that allows quickly passing from prototyping to mass production.

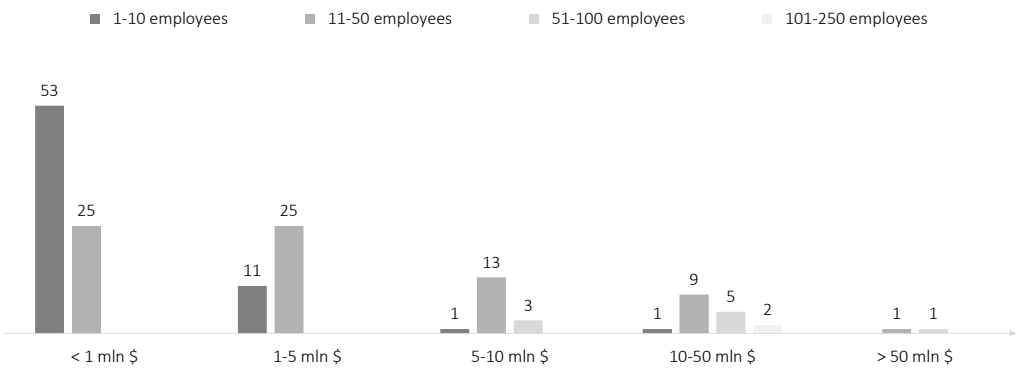


Figure 3.2: *Fundings and employees of the Design Thinking startups*

If these startups are mostly oriented to physical product development, almost all the remaining startups support digitally-enabled service design. Among these:

- 72 startups utilize digital technologies to enhance coordination among dispersed teams of innovation managers - simplifying their interaction at a distance and boosting their engagement, productivity, creativity, and innovativeness;
- 31 startups enable evidence-based decision making, relying on business intelligence suites and/or data visualization platforms that exploit big data and that can easily be integrated into the digital workflows through which Design Thinking approaches are accomplished;
- 11 startups exploit artificial intelligence to automate and/or augment some specific phases of a Design Thinking process, freeing time and energy for creative reasoning.

The great majority of startups in the field support analytical thinking, enhancing both deductive and inductive thought based on quantitative methodologies. Very few startups support intuitive thinking. Some interesting examples, however, have started to emerge. For instance, Workbench, a fully-customizable digital platform that enables collaboratively sketching, organizing, improving, and discussing ideas at a distance. 84 startups have more than 10 employees (Figure 3.2). Among these startups, two have more than 100 employees. Only 66 startups out of the 150 have fewer than 10 employees. Thus, if the overall ecosystem is still immature in its structure, the related startups seem to rely on consolidated organized structures.
Only 6 startups purposefully use Design Thinking terminology in conveying their value proposition. Besides these, all others are potentially useful for specific Design Thinking phases, but envisaged for other applications or domains. This gap has to be filled. It is important to connect startup solutions to the needs of Design Thinking providers. To start working in this direction, the 150 startups characterizing the Design Thinking ecosystem have been divided according to the four main approaches presented in Chapter 1. As Figure 3.3 shows, out of the total 150 startups analyzed:

- 34 offer solutions related to the Creative Problem Solving approach;
- 32 offer solutions related to the Sprint Execution approach;
- 66 offer solutions related to the Creative Confidence approach;
- 18 offer solutions related to the Innovation of Meaning approach.

The dispersion of data around the different approaches highlights a ferment phase where there is no evidence of one paradigmatic way to apply and deliver Design Thinking.
Moreover, even if related to the origin and the first cultural roots of Design Thinking, the Creative Problem Solving approach model does not constitute the biggest cluster of startups. This is symptomatic of the fact that Design Thinking - as a managerial phenomenon - in less than 20 years, has rapidly evolved according to different streams.
Design Thinking, as the figures show, assumes a first form of contextualization when operating in a digital environment: here the weight of fast digital services execution and interfaces reflects the old original Design Thinking approach – stressing the activities of building, learning, and iterating in the Sprint Execution approach.
On the other hand, the consistent number (almost half the sample) of solutions applied to the organizational context (Creative Confidence) shows that Design Thinking has made a sort of leap in scale: born as an innovation approach dealing with a product domain (then evolving towards services and digital apps), it seems to have scaled up to an organizational level. This means that many new ventures see in Design Thinking the potential to change the innovation culture in organizations more than simply addressing single product innovation issues.
Lastly, a small but emerging trend shows that Design Thinking is applied to the strategic vision (Innovation of Meaning). Here, solutions relate to challenging the "reason to buy" or the “reason why” people love (or hate) specific "meanings" and cultural messages attached to products and services.
A short analysis of the most emphasized phases and activities that Design Thinking startups mainly support follows.

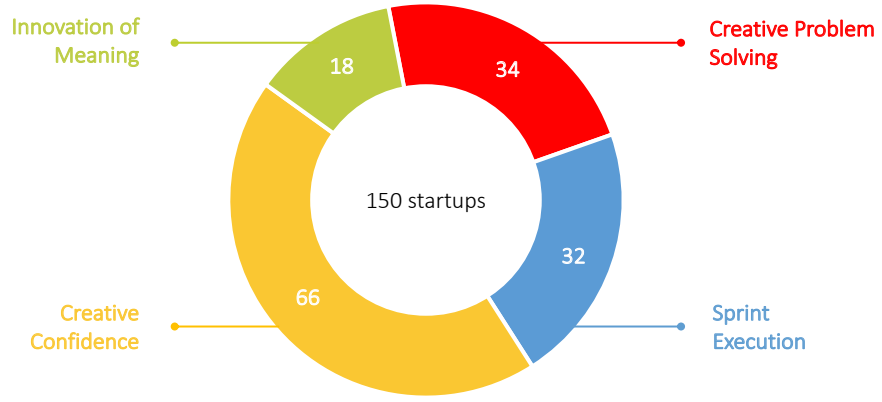


Figure 3.3: *Distribution of startups on the four Design Thinking approaches*

3.1. Startups supporting the Creative Problem Solving approach

Creative problem solving startups (34 of 150, as shown in Figure 3.3) offer solutions to support the four main phases of the established Design Thinking approach:

- **Discover**: activities related to problem setting, problem finding, searching for insights, reframing, and user analysis;
- **Define**: activities related to brainstorming, ideation and sketching, concept proposition, collaborative thinking;
- **Develop**: activities related to prototyping, mockup creation, detail setting.
- **Deliver**: activities related to testing, iteration, and validation.

Startups performing these activities seem to be almost equally distributed, without specific peaks and concentrations (see Figure 3.4). Within the first and second phase, collaborative working is privileged. Indeed, numerous solutions enable employees to share ideas, store research findings, discuss the problem perspective, and collaborate in defining the "first hand" solution. In line with the open-innovation paradigm, these applications also include the possibility of engaging other stakeholders and users in the innovation process. The later phases, related to developing and delivering, are populated by startups that serve collaborative detailing, jointly drawing some 3D physical prototypes and some testing platforms that cluster feedbacks, and scoring solutions.

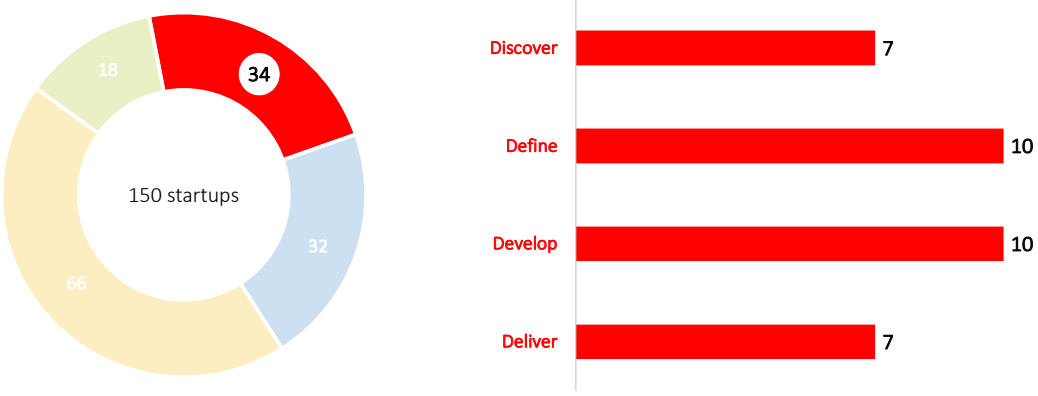


Figure 3.4: *Relevance of the Creative Problem Solving*

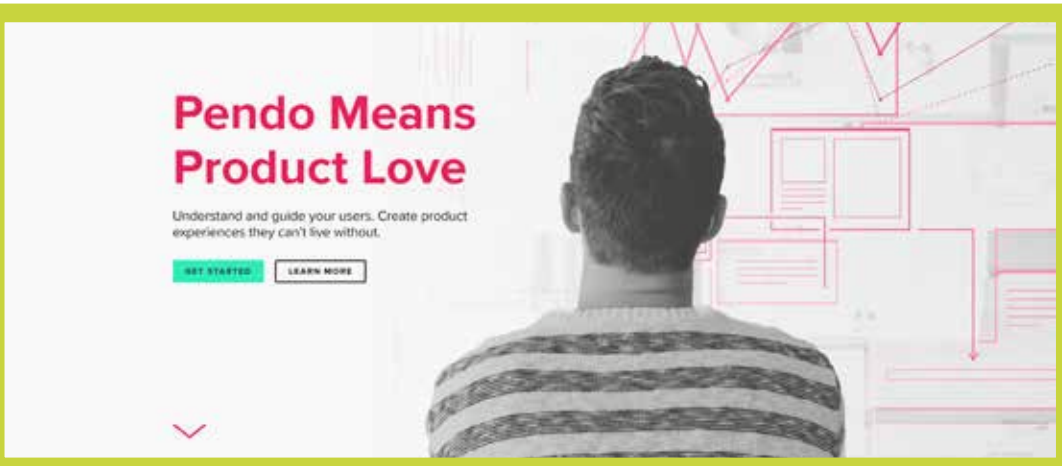
Videos about the convention available on www.osservatori.net

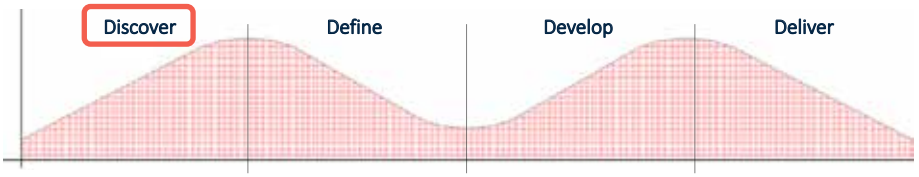
More in depth, **three main categories of startups are recognized** in the **discover phase**:

- **Startups that provide services related to team building**: these services encompass startups that provide people search based on their professional experience, their mindset, and the events they are interested in. An example of these startups is **Socialbo**, a sort of LinkedIn focused on finding the "right" people to accomplish innovative and creative activities;
- **Startups providing services related to cultural diving**: in this case, startups allow selecting, sourcing, and transforming data and information into knowledge. An example is **ConnecThink**, a digital platform enabling the collection and analysis of information streams from publications, research projects, organizations, experts, patents, investor news, blogs, websites, news outlets, and social media sources of data, turning these into visual content;
- **Startups providing user-need identification services**: this category of startups comprises solutions that collect, store, and turn user needs - physical, cognitive, behavioral - into distinctive product features. Some of these (such as **Invertex**, a fashion related app) also connect user data to 3D production systems where the functions of data capturing, translation into product requirements, and the development of real products are closely integrated. In a certain sense, some startups compress the Design Thinking value-chain, shrinking the entire process into two or three main activities. An interesting application of this concept is **Pendo**, described in Box 3.1.

The startups supporting the **define phase** are mainly related to ideation and sketching. Here, the startups provide software assisted drawing (such as Infurnia) or support the ideation and inclusion of different roles where contributors co-work (such as **Prodact**). Within the **develop phase**, startups offer services related to detail drawing and prototyping. An interesting example is **Avocode** that integrates different sketching protocols and software to manage the complexity of design and engineering on a unique cloud-based platform. In the **deliver phase**, startups offering 3D prototyping infrastructures dominate; from the more classic to the latest on-the-edge release - such as those based on heliolithography (for instance, **Orange Maker**) - where delivery is synonymous with prototyping and testing.

Box 3.1: Pendo





Funded: 30-09-2013
Location (Headquarters): Raleigh, North Carolina, United States
Website: www.pendo.io
Rank (Crunchbase): 1008
Articles: 12
Founders: 4
Employees: 51-100

Funding rounds: 5
Last Funding (date): 11-12-2016
Last Funding ($): 20.000.000
Last Funding (type): Series B
Total Funding ($): 33.250.000
Investors: 10
Lead Investors: 4

Categories (Crunchbase): SaaS, Apps, Enterprise Software, Messaging, Analytics, Collaboration

Description: Pendo is a product experience platform that helps product teams deliver software users love. Pendo provides insights from product usage patterns and user sentiment for making better product decisions. From these same insights, you can easily set up in-app messages, guides, and walkthroughs to help users get the most value from your products.

Offering: SaaS. Features: Quantitative Product Analytics, Qualitative feedback collection

Business Model: B2B

Pricing Strategy: By Modules

Industry: Multiple sectors
Software, Management Software, Customer Experience Management, Infrastructure, Transportation

3.2. Startups supporting the Sprint Execution approach

In the Sprint Execution approach - where the Design Thinking principles and rules are applied to digital artefacts - startups (32 of 150) are distributed along the following phases:

- **Map**: intended as the activity where users are identified together with their service journey and storyboard;
- **Build**: conceived as the creation through storytelling and coding of a "fake" prototype (or minimum viable product) real enough to be tested;
- **Measure**: oriented to involve users and stakeholders in attributing scores to the functionalities and the entire interaction journey;
- **Learn**: aimed at small sample-based testing and providing cues for improvements.

As Figure 3.5 shows, Sprint Execution startups are mostly concentrated around the building phase. This is mainly due to the centrality and relevance of this phase in the entire Sprint Execution approach.
Here, different startups provide apps that support the creation of a digital environment even without specific coding knowledge, some digital objects, and the definition of the main functions.

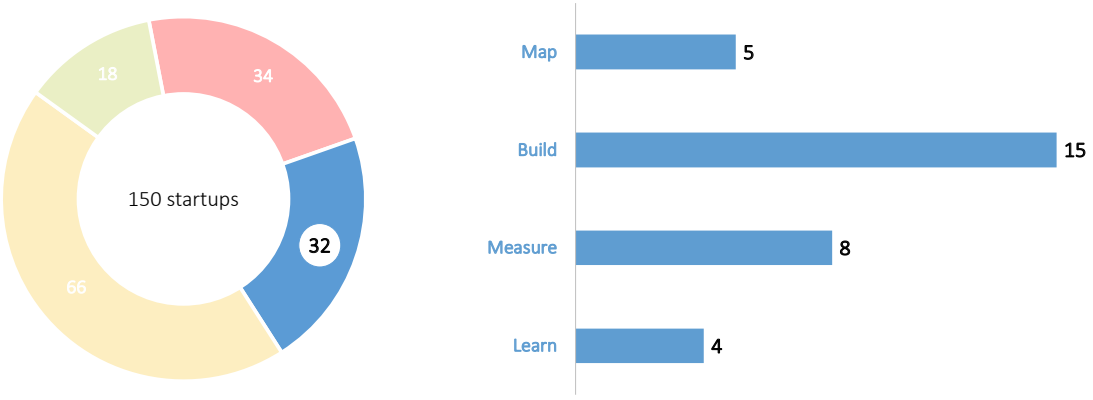


Figure 3.5: *Distribution of startups supporting the Sprint Execution approach*

A second stream of startups can be linked to the "measurement" activity. Here, solutions tend to support feedback management systems aimed at gathering and clustering comments and insights. Different startups actually offer both functions: measurement and learning, such as tools that highlight and share comments among users to focus on some key learning points.

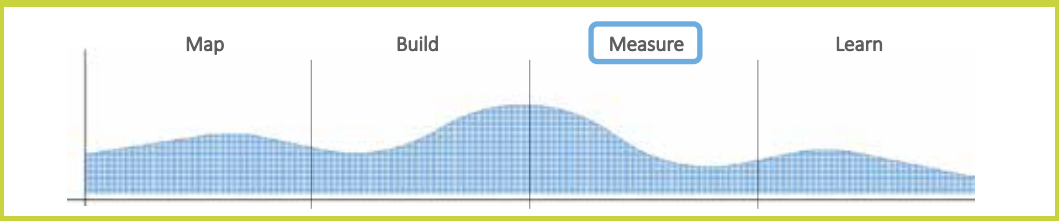
More in detail, a few cases relate to the map phase. Here, startups providing apps and services to support collaborative working, planning activities, aligning teamwork, and tracking the project milestones are the most representative of this phase (such as Zapty or Cubegg).

In the build phase, startups pay specific attention to easily designing a digital artifact, such as a website or an app. Some startups (e.g., Weps) offer an AI based platform through which a website is automatically developed by simply answering a few questions. What clearly emerges is that different startups provide support for the creation of digital environments even without specific coding knowledge. Maneuvering some digital objects, answering some specific questions from a chat-bot, enable users to create ready-to-made digital artifacts.

The startups related to the measure phase mostly focus on assessing user interaction or scoring an app. Specifically, some startups measure feelings and emotions of specific user categories during the browsing session (for instance, Brainginners) through real emotion tracking and algorithms to detect emotions; some others (for instance, Smartlook) identify how users perceive functionalities and the interaction flow by tracking mouse movements and grasping insights through the use of "heatmaps" (graphs that show the attention point of users and how much time they took to navigate or develop a specific task). Another interesting startup offering this service is UX Testing as explained in Box 3.2.

In the learn phase, startups provide services for prototype testing or alternative services to manage business modeling, budgeting, and profitability assessment. The startups in this category seem to be very heterogeneous, providing tools for cost estimation and project portfolio risk evaluation (for instance, Forecast), platforms that support entrepreneurs in engaging the community of users to test the application and websites (for instance, Wittycircle) or, lastly, startups offering back-office support for accounting, HR, fund administration, and people operations (such as Scalus).

Box 3.2: UX Testing



Funded: 31-12-2014
Location (Headquarter): Menlow Park, California, United States
Website: www.uxtesting.io
Rank (Crunchbase): 30.157
Articles: 16
Founders: 3
Employees: 1-10

Funding rounds: 1
Last Funding (date): 09-11-2015
Last Funding ($): 100.000
Last Funding (type): Convertible note
Total Funding ($): 100.000
Investors: 1
Lead Investors: 0

Categories (Crunchbase): UX Design, Enterprise Software, Usability Testing, SaaS, Test and Measurement, Mobile

Description: UXTesting is the leading user experience(UX) pioneer company in the world. The aim is to offer enterprises, UX teams, and product managers a remote testing platform and user behaviour analysis that helps to dig deeper into user insights for a better user experience. Founded in 2015, UXTesting addresses the need for obtaining direct user feedback on UX problems. The UXtesting team believes that actionable feedback is only obtained when user behaviours are understood in a more in-depth way by researching users in a natural setting.

Offering: Remote testing Platform. Features: User videos, UX metric report, Heat maps, User flows, Collaborate platform, Task, Survey, Emotion detection

Business Model: B2B

Pricing Strategy: By Modules, by Projects

Industry: Multiple sectors

3.3. Startups supporting the Creative Confidence approach

The largest cluster of Design Thinking startups (66 of 150, as Figure 3.3 shows) supports a Creative Confidence approach to Design Thinking. These startups offer solutions to engage people to make them more confident with creative processes, and align the organizational culture and practices to implement innovation trajectories. The startups are distributed along the following phases:

- **Engage**: where team building activities are addressed and key stakeholders are involved as change agents;
- **Co-design**: where employees and departments jointly co-define the organizational innovation trajectory;
- **Involve**: where consensus is created around a common innovative direction;
- **Co-develop**: where processes and cultural assets are redesigned to achieve organizational change.

As Figure 3.6 shows, **most startups supporting the Creative Confidence approach concentrate on enhancing the co-develop phase**. Less supported are the other phases (engage, co-design, and involve), showing gaps likely to be filled in the near future.

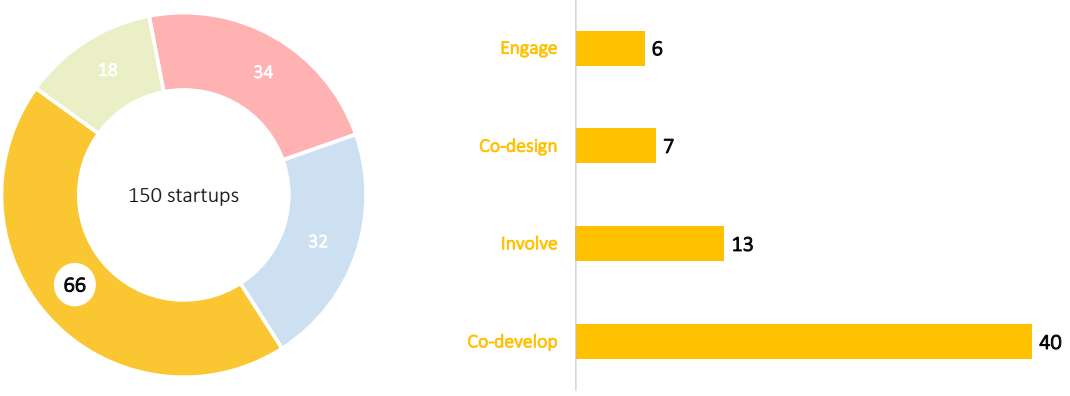


Figure 3.6: *Distributions of startups supporting the Creative Confidence approach*

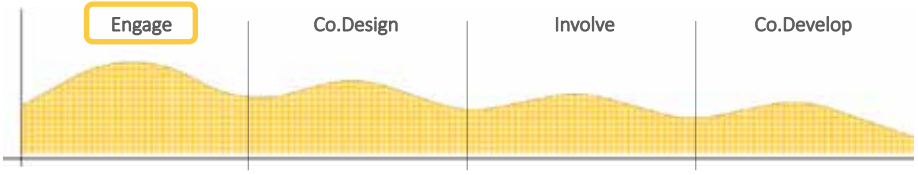
More in detail, startups supporting the **engage phase** provide tools for setting the stage to effectively start a creative endeavor within a team of internal experts (consider **Simpplr**, a modern intranet software for distributed organizations aiming to increase the level of engagement of their employees) and encourage creative thinking among this group of experts (as accomplished through **Cnverg**, a real time, easily interoperable whiteboard for visual planning and strategic thinking at both the individual and team levels). An interesting example of a startup supporting the engage phase is **Verb**, which provides companies with practical tools to stimulate talent and change agents through a multitude of tailored activities, such as articles, courses, and impact projects. Box 3.3 provides information on this startup.

Startups supporting the **co-design phase** offer potential brainstorming solutions, to collectively envisage potential developmental scenarios, focus and assess their value creation potential, and progressively sharpen all the underlying concepts in a collaborative way. The solutions offered by this cluster of startups span from ideation platforms (such as those offered by **Wrkbench** or **Innovation360**) to immersive environments for data visualization and analysis (e.g., Virtualitics, a virtual-reality platform for collaborative data exploration and decision making).

In the **involve phase**, startups tend to focus on: (1) sharpening the skills and personalities required to render an organizational reconfiguration salient; (2) providing team members with appropriate information to "keep the momentum" and continue in the right direction along the innovation endeavor. An interesting example in the first case is **Teamscope**, an AI-driven platform for executive and talent search. To accomplish the second goal, many startups exploit gamification techniques, such as **KnowYouCrew** (focused on team dynamics) and **GetBadges** (focused on software development teams). An interesting alternative to these solutions is TeamMachine, a predictive platform for data-driven team management. Almost no startup fully supports the creation of consensus around a particular innovation trajectory.

The majority of startups in the **co-develop phase** support organizational reshaping associated with any creative confidence initiative through project management suites purposefully designed to align experts during their co-creation efforts (e.g., **Zaptly**) with a particular emphasis on increasing their performance (as accomplished by **Zube**). Some startups focus on better mapping the processes through which organizational change is accomplished, assessing the related impacts, and easily sharing the contextual knowledge needed to advance the reconfiguration endeavor. An interesting example from this viewpoint is **Dreamler**, a tool that helps teams draw, revise, and reuse a shared picture of how they work together based on a simple but powerful visual process language.

Box 3.3: Verb



Funded: 31-12-2012
Location (Headquarter): Austin, Texas, United States
Website: www.verb.net
Rank (Crunchbase): 14575
Articles: N.A.
Founders: 1
Employees: 1-10

Funding rounds: 1
Last Funding (date): 15-06-2015
Last Funding ($): 2.300.000
Last Funding (type): Seed
Total Funding ($): 2.300.000
Investors: 15
Lead Investors: 1

Categories (Crunchbase): Social Innovation, Internet, Collaboration

Description: Create Leaders with Purpose. Verb is a talent development platform that combines skill development with social impact opportunities. Verb helps companies develop talent through a purpose-driven, online employee engagement platform. The aim is to build leadership skills by providing employees with personalized learning connected to impact. Employees work both independently and with teammates. Verb provides your employees with an array of self-directed development options customized for each employee's learning style and impact area.

Offering: Platform. Verb lets companies manage leadership development for their employees in offices around the world. Verb's models complement any existing programs and makes it simple to introduce and run a talent development system across your company. Features: Personal development tools, Learning activities, Articles, Activities, Courses and Impact Projects.

Business Model: B2B

Pricing Strategy: Freemium

Industry: Multiple sectors
Computer Technology, Chain Retailer, Foundations, Non-Profit Organisation, Alternative Finance

Videos about the convention available on www.osservatori.net

3.4. Startups supporting the Innovation of Meaning approach

The startups supporting the Innovation of Meaning approach to Design Thinking (18 of 150, as Figure 3.7 shows) help challenge and question a strategic vision. These startups contribute to the following phases:

- **Envision**: where individuals and pairs share a strategic vision that changes the actual "meaning" and "reason to buy" a specific offering;
- **Criticize**: where small organizational teams "clash and fuse" their new visions, opening them up to review and criticism from both colleagues and external experts (interpreters);
- **Probe**: where new meaningful visions are turned into Minimum Viable Product (MVP) and prototypes to be tested;
- **Talk**: where a new meaning-based offering is positioned and progressively diffused.

As Figure 3.7 shows, **most startups supporting the Innovation of Meaning approach seem to be distributed along all the phases without any particular concentration**. This is probably related to the still limited dissemination of the Innovation of Meaning approach.

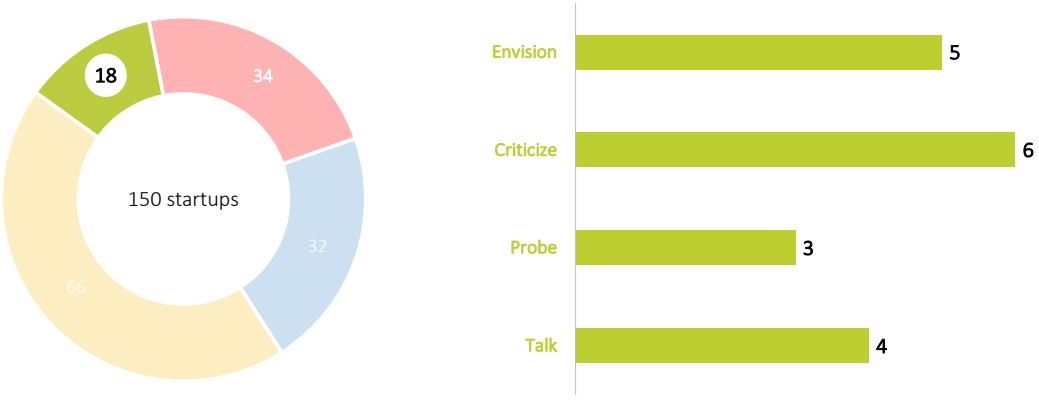


Figure 3.7: *Distribution of startups supporting the Innovation of Meaning approach*

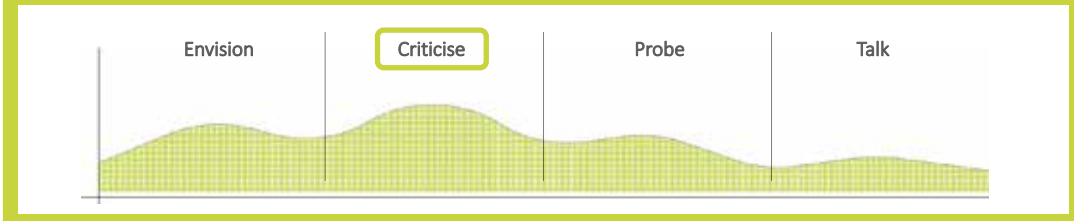
More in detail, the startups supporting the envision phase enhance and foster the choice, management, coordination and engagement of employees involved in reflecting on a new meaning for a specific solution. Two remarkable examples are RankTab, a solution that maps the various insights of the envisioning team into a unified decision graph that allows progressively creating consensus around the most promising ideas, and Baloonr, which provides digital tools to remove biases from group decision-making. No startup, at least thus far, simplifies the creation and exploration of innovative scenarios for using a product and/or service - allowing to better expand from current solutions to their inner meanings, and from these meanings to new ones.

The startups supporting the criticize phase - probably the most relevant in the Innovation of Meaning approach - are those with a slightly higher level of diffusion. As an example, consider Attentiv, a digital platform providing real-time anonymous feedback, intuitive polling, and effective team chat to enhance developmental criticism. See Box 3.4 for a detailed description of the startup. More generally, the startups in this cluster allow: (1) discussing, challenging, and jointly assessing the effectiveness of the alternative strategic visions (e.g., Retrium, making agile retrospectives easy and effective); (2) progressively reasoning over the various findings produced, also engaging external interpreters in this process (as accomplished for instance by Collaborizm, an online collaborative workspace for aspiring entrepreneurs, engineers, and creatives through which it is possible receiving feedback and support for an idea or project).

The probe phase is supported by some startups mostly focused on allowing to easily pitch and invite users to test and provide feedback on early prototypes of a solution conveying a new meaning. An interesting application is Filestage, a startup enabling collaboratively reviewing videos, audio, design projects and any documents requiring multiple rounds of feedback and approval from multiple actors.

Finally, in the talk phase, startups mainly develop or strengthen storytelling through which a solution fulfilling a new meaning is positioned and diffused in the market. Most startups in this field support the retrieval and management of communication and design talents, as accomplished by ClearVoice, a marketing platform where brands and agencies can connect with freelancers to create media content, or Konsus, through which it is possible to completely outsource entire graphic design, writing, research and web design projects. However, some startups such as Canva, offer self-service, layout-based graphical solutions for social media.

Box 3.4: Attentiv



Funded: 18-02-2015
Location (Headquarter): Washington, District of Columbia, United States
Website: www.attentiv.com
Rank (Crunchbase): N.A.
Articles: 15
Founders: 1
Employees: 1-10

Funding rounds: 1
Last Funding (date): 10-05-2015
Last Funding ($): N.A.
Last Funding (type): Seed
Total Funding ($): N.A.
Investors: N.A.
Lead Investors: N.A.

Categories (Crunchbase): SaaS, Apps, Enterprise Software, Messaging, Analytics, Collaboration

Description: "Attentiv is real-time anonymous feedback, intuitive polling, & effective team chat. No more holding back your ideas speak up with Attentiv." Attentiv is the ultimate decision-making software. Attentiv is all about having fewer, more effective meetings and arriving at better, more informed decisions. From teams of 3 to multi-national corporations, Attentiv helps people get stuff done in a cheaper, faster, and more efficient way.

Offering: Platform. Features: Real time feedbacks, Discover best ideas, Work asynchronously, Comment anonymously, Vote on decisions

Business Model: B2B

Pricing Strategy: Freemium

Industry: Multiple sectors

POLITECNICO
MILANO 1863
SCHOOL OF MANAGEMENT

OSSERVATORI.NET
digital innovation

Observatory
DESIGN THINKING FOR BUSINESS

4. RESEARCH APPROACH

Methodology and Forthcoming Reports

Methodology and Forthcoming Reports

The Observatory Design Thinking for Business, in its first edition, aims at positioning itself as a framework of reference for the Italian Design Thinkers community. As a matter of fact, by interacting with different players either for research purposes or for open and fruitful discussion more than 100 different companies have been contacted and involved in the research. Notwithstanding, the first year of research is mainly devoted to the offering of Design Thinking services. As a consequence, in the first year deep and detailed attention is placed on the Service Providers of Design Thinking advisory services. The reason is that in this the Italian market does not have a clear map and awareness of the different offerings of Design Thinking at present.
So, in accordance with the partners and sponsors of this first edition of the Observatory (see chapter 6 for more details), only a few research questions have been explored. In particular, different methodologies and approaches have been adopted in order to answer the different lines of study of the first year of research. In a nutshell, the three main research lines of the Observatory explored this year are:

- Understanding the different business models chosen by service providers that adopt the Design Thinking paradigm;
- Interpretation and adoption of Design Thinking approaches by innovative companies that operate in different industries;
- Contributions provided by emerging startups in supporting the delivery of Design Thinking services.

To some extents these three areas of investigation try to cover different aspects of the Design Thinking offerings. As a matter of fact, the inquiries look at different dimensions of it. The first dimension is the impact that the advent of Design Thinking has on the business model of service providers. The second is more related to the internal change that Design Thinking has fostered in innovative companies. Finally, the third dimension relates to the size of the company. As a result, one entire research line is devoted to understanding the role of startups in this ecosystem.
So, the first year of research tries to depict the different kinds of Design Thinking by studying various players that operate in this ecosystem. The next sections describe in more details the approaches adopted to explore and investigate these three lines of research.

4.1 Design Thinking Ecosystem Framework

Considering the complexity of the ecosystem an **interpretative framework** is introduced in order to guide the investigation of the different research lines. In particular, the main clusters that have been identified are two. Respectively **Service Providers** and **Innovators** (see Figure 4.1).
These players operate in the ecosystem with completely different aims and goals. This simplification of the ecosystem is helpful to better comprehend who the players populating the Design Thinking ecosystem in the Italian scenario are. In particular, it is clear that the clusters are built on a single dimension that is **the company mission**. Mainly, if the firm is oriented on providing Design Thinking services, it has been classified as service provider; if it supports the development of Design Thinking initiatives with digital or physical solutions, it has been considered a supplier and finally, if the company is looking for Design Thinking solutions in the market and is acquiring or adopting them in internal projects, it has been considered an innovator.
As regards the aim of the first year of research, particular attention has been dedicated to the organizations providing advisory services based on Design Thinking. As a result, considering the huge differences in the nature of Service Providers, different clusters have been identified. In particular, Service Providers have been divided into **Design Studios**, **Digital Agencies**, **Strategic Consultants** and **Technology Developers**. As Figure 4.1 shows, Service Providers cannot exist without Innovators, to the point that the link between these two sides of the ecosystem is crucial. In addition, the Service Provider Ecosystem is also enriched by the presence of several **Startups** delivering Design Thinking services that have been examined.

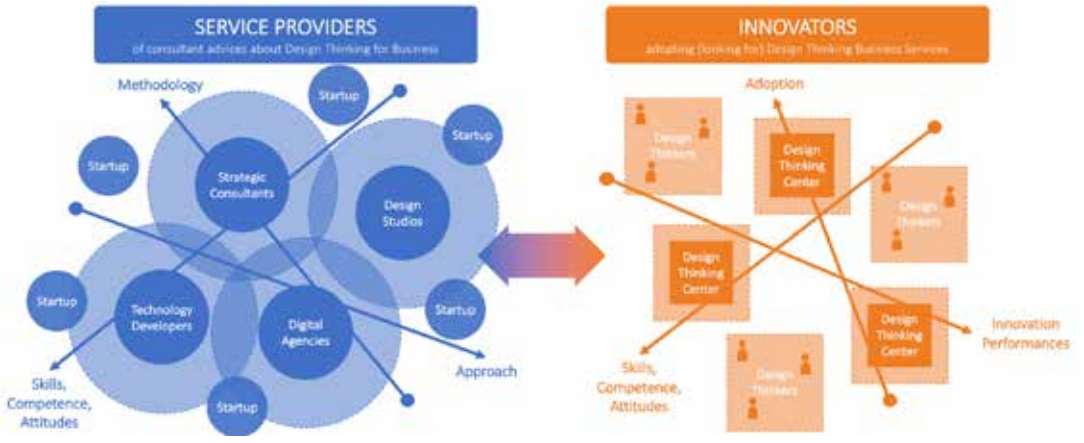


Figure 4.1: *Research Framework about the Design Thinking Ecosystem*

4.2 Service Providers Case Study Research

During the first year of research **47 case studies** on Service Providers have been developed by the researchers of the Observatory in Design Thinking for Business (see Figure 4.2). For each case at least one in-depth interview has been conducted. In some occasions also follow-up meetings have been arranged to integrate and adapt the evidence gathered in the first meeting. Each meeting lasted 3 hours on average. During this time the research team was able to grasp insights on both the history of the company and the packages of Design Thinking offered by the firm to other players of the ecosystem. A detailed Research Kit was adopted to investigate the cases and enable a cross case analysis. The main sections of the **Research Kit** are four:

1. **Company Profile**: aimed at investigating the number of employees, the revenues, the company vision and business as well as crucial moments in company history;
2. **Design Thinking Program**: aimed at examining the initiatives adopted by the companies in order to learn the Design Thinking approach;
3. **Offering**: this section is the longest one and aimed at mapping the different service packages offered by companies operating in the Design Thinking ecosystem. It contains the various packages in terms of name, revenue generated and description of the activities performed;
4. **Detailed description of one Offering**: aimed at analyzing the most sold and profitable offering from the previous list and detail it in terms of (i) typical brief and output (ii) process phases (iii) usual involvement of different players and a (iv) case history.

The information collected during the interviews was then transcribed and the resulting document sent back to the information sources for validation. After having received confirmation on the contents from all companies the case was entered in the database and led to the identification of the **evidence** of the adoption and marketing of Design Thinking in the Italian ecosystem. In particular, as anticipated, the first year of research covered the Italian landscape of Design Thinking Service Providers. This brought us to identify several companies that operate only in the Italian market as well as world famous consultancy companies. It is worth mentioning that for the companies that operate at world-wide level and that have different branches across the globe, research was conducted with the Italian subsidiary. This to gather insights on the same environment of the Italian one.

Figure 4.2: *Organizations providing advisory services based on the Design Thinking paradigm*

Videos about the convention available on www.osservatori.net

4.3 Suppliers and Innovators Case Study Research

The previous section reported the 47 cases conducted within the Service Providers cluster, but these are not the only cases examined in the first year of research. In fact, other **15 cases** have been conducted with Suppliers and Innovators (see Figure 4.3). This brought the total number of firms investigated through a primary source interview and the adoption of the Research Kit up to 62 companies.

Innovators and **Suppliers** have different roles in the Design Thinking Ecosystem. Suppliers in particular, were involved in the analysis as enablers of Design Thinking initiatives while the Innovators were involved because, even if they are companies that are not providing Design Thinking advisory services to external players, within the boundaries of the firm they adopt Design Thinking to foster innovation at different levels (e.g. New Product Development, Digital Transformation).

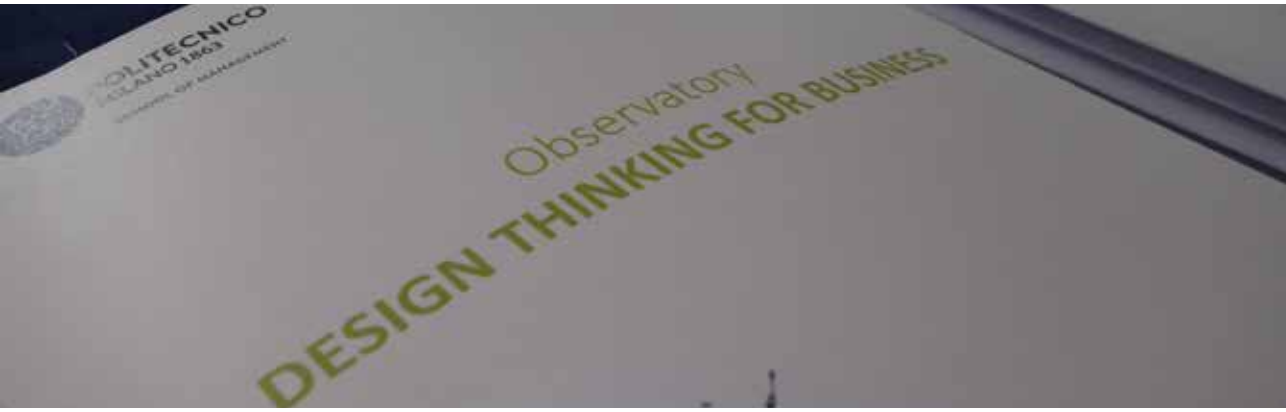
The reason of the inclusion of these two other types of organizations is to have a more complete understanding of the Design Thinking ecosystem. As a matter of fact the Ecosystem is not only populated by Service Providers, as previously reported in Figure 4.1, but it is also deeply characterized by the supplier and innovators that operate in it. Moreover, suppliers and

Figure 4.3: *Organizations buying and supporting advisory services based on the Design Thinking paradigm*

Videos about the convention available on www.osservatori.net

innovators are included in the research in order to allow the research team to better understand the differences in the approach used by Service Providers in delivering Design Thinking services and the one adopted by Innovators within their companies .
Furthermore, the value of adding these two different types of firms is that they give a **wider overview** of the phenomenon. This thanks to the fact that they add different elements to Service Providers by providing insights on how Design Thinking is implemented within big companies such as Innovators, internally by employees, or the support that players can give to the effective delivery of Design Thinking Service, and Suppliers.

The analysis of these two other organizations was conducted adopting in part the same Research Kit of the one detailed for the Service Providers described in the previous section. This due to the fact that both Suppliers and Innovators are still organizations that somehow deliver internal business unit Design Thinking services or support others in delivering it. The only difference in the Research Kit is the introduction of a **fifth section** called **Design Thinking Management**. The aim of this part is to understand the impact on management attitudes, skills and competences that companies that want to introduce a Design Thinking approach need to consider. In other words the fifth sections look at the key roles necessary to deliver a successful Design Thinking project, the commitment required, the benefits for the team, and the main challenges to be faced throughout the process.



Videos about the convention available on www.osservatori.net

4.4 Desk Analysis about Startups

A desk research has been conducted on the startups characterizing the Design Thinking ecosystem. The aim is to identify the emerging factors and trends shaping this ecosystem at an international level. The research has been performed by leveraging Crunchbase, a leading database consisting of investors, incubators and start-ups, which comprises around 500,000 data points, profiling companies, people and funds.
Exclusion and inclusion criteria have been adopted. First of all, only the startups that were founded after January 1st 2012 and that received their last funding after January 1st 2015 have been taken into account. Next, we engaged a pool of Design Thinking experts in order to select the database filtering tags and consider only the startups related to the Design Thinking domain. The following tags have been considered:

- Tags related to design topics: UX design, web design, human computer interaction, industrial design, graphic design, product design, mechanical design, social innovation, interior design, furniture;
- Tags related to organization and innovation topics: usability testing, CAD, 3D technology, augmented reality, video chat, 3D printing, creative agency, video editing, collaboration, innovation management, product management, project management, intellectual property, management consulting, advanced materials, document management, meeting software, artificial intelligence.

Overall, this process has **reduced to 788 the startups to be examined in depth**. To further reduce the sample of startups, we have analyzed their websites and, where necessary, articles from both professional and general press on them. This analysis allowed to exclude several startups that were not aligned, lowering to 150 the number of startups fully belonging to the Design Thinking ecosystem. Almost all these startups have been established in the USA (86 startups) and Europe (41). These numbers are not surprising at all if one considers that:

- The concept of Design Thinking was initially developed at Stanford (California);
- The USA have the highest number of startups worldwide;
- Europe is where the latest ideas on Design Thinking have been fine tuned.

All these startups have been studied in detail, highlighting:

- The different Design Thinking approaches supported;
- The phases of these approaches in which startups can be helpful with their products and services;
- The number, the typology and the amount of funding received by the startups;
- The number of founders and employees of the startups;
- The business models of the startups, the industries in which they operate and their pricing strategy;
- The countries where the startups have been founded.

4.5 Forthcoming Reports

In the following months three different reports will be published. The goal of these publications is to detail even more the evidence resulted from the first year of research.

The first report is about **4 Kinds of Design Thinking** (see Figure 4.4). In particular leveraging on the evidence emerged from the case studies conducted in this first year of research will offer more details on the evidence provided at the beginning of this booklet. Actually, leveraging the information collected with the research kit will enable to summarize in the report a lot of the evidence and insights about the different offerings of Design Thinking. The report will highlight the most important numbers in terms of **advisory services** of 4 Kinds of Design Thinking **delivered** by the **Service Providers** as well as by Innovators and Suppliers. In addition, leveraging the 62 cases enable sharing more insights about the spread and relevance of the 4 interpretations of Design Thinking (Creative Problem Solving, Sprint Executions, Creative Confidence and Innovation of Meanings).

Figure 4.4: *Fortcoming Report "4 Kinds of Design Thinking"*

Videos about the convention available on www.osservatori.net

The second report will be **Startups in the Design Thinking Ecosystem** (see Figure 4.5). This commentary will focus mainly on the analysis conducted on Crunchbase. By leveraging the in-depth investigation performed on the 150 startups included in the analysis, the report will provide a landscape of the startups that are relevant in the Design Thinking Ecosystem. It will provide numbers and evidence about the **offerings** that the different startups provide. Then for each of the 4 Kinds of Design Thinking the insights about where the majority of startups are operating are reported. This is interesting information considering that usually the startups are present where the market's interest is higher. Moreover, in the report several real examples of startups are portrayed, including a short description of the offering and some information about the funding history.

Figure 4.5: *Fortcoming Report "Startups in the Design Thinking Ecosystem"*

Finally, the third report will cover the **Design Thinking Capabilities** (see Figure 4.6). This report leverages on the evidence coming from the 62 case studies and responses to a survey. This survey investigates the competences that are required to effectively deliver the 4 different Kinds of Design Thinking. In fact, not all the **capabilities** required for the Creative Problem Solving are valuable or needed in a project that focuses on establishing Creative Confidence. In this direction a detailed description of the **skills and competences** that are needed to effectively manage different Design Thinking projects will be detailed in the report. Considering the combination of quantitative and qualitative information all evidence in terms of numbers and quotes will support the insights related to the distinctive capabilities that are required in order to deliver different Design Thinking projects.

Figure 4.6: *Fortcoming Report "Design Thinking Capabilities"*

Videos about the convention available on www.osservatori.net

4.6 Acknowledgment

The Research Team of the Observatory "Design thinking for Business" thank all interviewees for the insightful discussions about the approaches adopted by the following organizations:

3M
Adobe
Altran
Avanzi
BNL Gruppo BNP Paribas
BTS Design Innovation
Buddybank
Caffeina
Capgemini Consulting
Competence
Continuum
Coppa+Landini
DEGW
Deloitte Digital
Design Group Italia
DINN!
Doing
dpeople
Ducati
Electrolux
Ernst&Young
Experientia
Fjord
Frog
Futureberry
Gaia
Great Pixel
Hub Innovazione Trentino
iSeed
IBM
ING
Inspiring Software
Intesa Sanpaolo
Intesys
Lenovys
Leroy Merlin
Logotel
Make a Cube3
Marketing&Trade
Miscrosoft
Moviri
NTT Data
Partners4Innovation
Poste Italiane
PwC
Realtà Group
Rina Consulting
Rokivo
Roland Berger
Salesforce
SAP
Sketchin
Spark Reply
Steelcase
Studio Volpi
TAG
Tetra Pack
The Boston Consulting Group
TIM
Var Group
VRD research
Wind Tre

POLITECNICO
MILANO 1863
SCHOOL OF MANAGEMENT

OSSERVATORI.NET
digital innovation

Observatory
DESIGN THINKING FOR BUSINESS

5. CONVENTION

Program and Speakers

March 2018

Program and Speakers

5.1 Program

Friday 16th March 2018 –h 09:30-13:00
Campus Bovisa, Building BL.28, Aula Magna Carassa-Dadda
Via Lambruschini, 4 – 20156, Milano (MI)

The spread of Design Thinking in the managerial arena has been significantly accelerated in the last 20 years by the initiatives and the projects developed by leading design firms. The **increasing attention** of practitioners of Design Thinking is evident by looking at the recent moves of large innovation consultancies. Several strategic consultancy companies are acquiring design studios in order to renew their offering and their innovation services. Design Thinking is booming in those industries where digital transformation requires new competences and capabilities for **developing effective customer experiences**. Also software developers and integrators extensively adopt Design Thinking practices. In this evolving landscape, the Design Thinking for Business Observatory aspires to be the point of reference for the community of innovators that adopt pioneering approaches such as Design Thinking in creating value for their businesses, seeking new practices, and want to be in the right networks.

Videos about the convention available on www.osservatori.net

Friday 16th March 2018 –h 09:30-13:00
Campus Bovisa, Building BL.28, Aula Magna Carassa-Dadda
Via Lambruschini, 4 – 20156, Milano (MI)

The research conducted in 2017-2018 focuses on two main research lines:

- **Business Models** in the Design Thinking Ecosystem: map of the approaches, mindsets, methods, processes and tools adopted by different Design Thinking players with the aim of providing guidelines and suggestions;
- **Startups** in the Design Thinking Ecosystem: map of the solutions provided by innovative startups able to support Design Thinking approaches and processes.

09.00 Registration and Welcome Coffee

09.30 Introduction

Alessandro Perego
Director of the Department of Economics, Management and Industrial Engineering, Politecnico di Milano

Silvia Piardi
Director of the Department of Design
Politecnico di Milano

09.45 The Role of Design Thinking in Leadership and Innovation

Roberto Verganti
Scientific Committee, Design Thinking for Business Observatory
Politecnico di Milano

10.15 Research Results: 4 Kinds of Design Thinking

Claudio Dell'Era
Research Direction, Design Thinking for Business Observatory
Politecnico di Milano

10.45 Panel Discussion: the Strategic Role of Design Thinking

Monica Dalla Riva
Head of Design, Europe
3M

Gianluca Loparco
Partner, Digital Transformation Leader
Deloitte Digital Italy

Gabriele Molari
Manager Design and Concept Development
Tetra Pak

Peter Newbould
Partner
Design Group Italia

Luca Pronzati
Chief Business Innovation Officer
MSC Cruises

Moderated by

Francesco Zurlo
Scientific Committee, Design Thinking for Business Observatory
Politecnico di Milano

Videos about the convention available on www.osservatori.net

11.30 Research Results: Emerging Strartups in the Design Thinking Ecosystem

Luca Gastaldi
Research Direction, Design Thinking for Business Observatory
Politecnico di Milano

12.00 Panel Discussion: Capabilities required by Design Thinking

Luciano Attolico
Managing Director
Lenovys

Pietro Curtolillo
Customer Experience Design Manager
Generali

Gianpiero Di Gianvittorio
Experience Centre Lead
PwC

Antonio Iannitti
Strategy Manager
Sisal

Beatrice Maestri
Open Innovation Project Manager
Electrolux

Moderated by

Cabirio Cautela
Research Direction, Design Thinking for Business Observatory
Politecnico di Milano

12.45 Future Initiatives and Closing

Claudio Dell'Era
Research Direction, Observatory Design Thinking for Business
Politecnico di Milano

Videos and Booklet will be available on www.osservatori.net
Go to the website or send an email to premium@osservatori.net

5.2 Speakers

Luciano Attolico
CEO & Founder
Lenovys

LENOVYS

Co-founder and CEO of Lenovys, a researching, consulting and training company specialized in Lean Transformation, Innovation and Change Management. In 2017 Lenovys has been nominated by the Financial Times among the first 1000 most innovative and fast-growing companies. Luciano is the creator of Lean Lifestyle® and Impact Innovation Methodology and he is author of "Innovazione Lean. Strategie per valorizzare persone, prodotti e processi" (Hoepli, 2012) and co-author of "Toyota Way. I 14 principi per la rinascita del sistema industrial italiano" (Hoepli, 2014) and "Toyota Way per la Lean Leadership" (Hoepli 2015). A former executive at Magneti Marelli and Siemens VDO, he collaborated and led many international projects with Masaaki Yutani, Moriwaki, Jeffrey Liker and John Drogosz. With his team he achieved many excellent results in important international projects. His personal and professional philosophy is focused on human value and on the continuous research of ways to achieve more results with less effort and greater wellbeing.

Videos about the convention available on www.osservatori.net

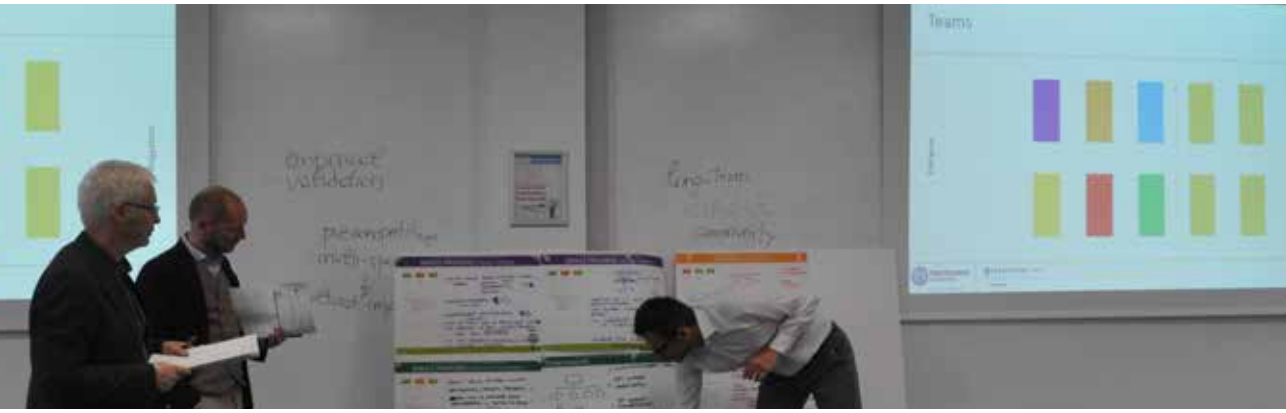
Pietro Curtolillo
Customer Experience Design Manager
Generali

More than 10 years of experience within fast paced organizations, a Master's Degree in Marketing & Communication, and broad expertise in Brand Strategy, Customer Experience, Design Thinking and Business Transformation. Pietro is currently managing the Customer Experience Design of the Generali Business Transformation program, with the aim of providing more accessible and innovative services redesigning the core business processes through Design Thinking. He is also advisory board member of the Master Degree in Product-Service System Design (PSSD) of Politecnico di Milano and promotes Design Culture and Methodology within the workplace. Former musician, he is a car and motorcycle enthusiast, passionate about films, food and “Gentleman’s lifestyle”.

Videos about the convention available on www.osservatori.net

Monica Dalla Riva
Head of Design, Europe
3M

Design has the power to transform obstacles into new business opportunities because it's the essence of innovation. I have dedicated the past 20 years to innovation, first studying at the Politecnico di Milano and then working for major technology companies that have chosen to change the market with innovative and beautiful products: Samsung Electronics, Whirlpool Corporation and now 3M, the temple of innovation, where we design not just products but solutions. From Milan, one of the world capitals of design, I'm leading the Design Europe Center, where a team of industrial designers, packaging designers, and strategic designers each day translates weak signals into business opportunities for our customers and for the corporation, creating sustainable business and innovation both B2B and B2C business. I have previously held various roles of increasing responsibility, Design Manager at Samsung Electronics, Whirlpool Europe Design Centre where several projects have been awarded by ADI, Red Dot, ADA and IDSA. In 2014 I was awarded with the "Merit and Talent" Award by the Executive Management Association in Italy. Lecturer in Design Management and speaker at international conferences. Since 2012 Board member of the Alumni Association of Politecnico di Milano University.



Videos about the convention available on www.osservatori.net

Gianpiero Di Gianvittorio
Experience Centre Lead
PwC Italy

Gianpiero currently leads the Experience Center project in Rome. Our new Center opened in October 2016, hosts 20 international Experience professionals and has been designed and built to be the co-creation Center of excellence for our clients and partners in Central Europe. He previously co-led Innovation Design and Strategy in PwC's Experience Team in London and has an extensive background as Creative Lead in some of the world's foremost Brand Design and Communication agencies. Immediately prior to joining PwC, he was the Creative UX Lead on the Digital Transformation Team at British Airways.

Antonio Iannitti
Strategy Manager
Sisal

Antonio Iannitti is Strategy Manager at Sisal. Antonio, born in 1987, graduated from University of Naples Federico II in Business Economics and Luigi Bocconi University in Management. In 2013, after an experience in Belgium as marketing specialist for a Coffee Company, Antonio started his career in Sisal in the Product & Business Innovation team, managing relevant innovation and digital projects. During this period, he was also involved in an international project in South Africa. In 2016 Antonio became Strategy Manager of Sisal Group working mainly with the Payment & Services Business Unit to develop the digital and mobile strategy and the open innovation project.

Videos about the convention available on www.osservatori.net

Gianluca Loparco
Partner, Digital Transformation Leader
Deloitte Digital Italy

Deloitte. Digital

Gianluca Loparco, partner at Deloitte Digital, has over 15 years of experience in the field of business transformation, leading the Digital Transformation Team in Italy. His skillset and expertise range from Digital, Strategic Design and UX as well as Marketing, CRM transformation and Mobile across several industries. He has a broad knowledge of Customer Management processes as well as technical knowledge of the market-leading software, having been engaged in projects spanning the entire life-cycle of systems development.

Beatrice Maestri
Open Innovation Project Manager
Electrolux

Beatrice Maestri is a Project Manager within the Electrolux Open Innovation unit. Within the team, she is responsible for the scouting and promotion of new business opportunities for the entire Group. As Open Innovation Project Manager, she supports the internal stakeholders along the entire Company value chain and identifies innovative solutions from external, non-conventional ecosystems, spanning from startups to established companies. Beatrice has more than 11 years of professional experience matured primarily in management consulting having worked for Ernst&Young and Arthur D. Little for technology-intensive Corporations with strong international exposure. She has also worked in the start-up business and academia that gives her a deeper understanding of the diverse, open innovation ecosystems she is interacting with. She holds a Management degree from Bocconi University (BSc and MSc) and an Executive Master in Technology and Innovation Management from Bologna Business School.

Gabriele Molari
Manager Design and Concept Development
Tetra Pak

Gabriele is responsible for designing and experimenting new solutions for and with Tetra Pak's customers (i.e. food and beverage producers), within the Marketing Services team, since January 2017. His main responsibilities include leading the Global Design team, customer engagement in digital experiments, networking with companies, start-ups and all the players interested in the future of the food and beverage, and the internal connection with R&D functions. Prior to joining Marketing, Gabriele worked for 8 years in the Front-End Innovation team in Tetra Pak's R&D, first as User Experience Lead and then as Value Chain Discovery Driver. He has 15 years of experience in UX Research and Design, across research and design practice, consultancy, industry and academia. Gabriele holds a PhD in Telematics and Information society, from the University of Florence, and an International Master in Communication Design from the University of Siena. He graduated in Communication Science at the University of Siena.

Peter Newbould
Partner
Design Group Italia

DESIGN GROUP ITALIA

Peter Newbould is a partner at DGI. Peter joined DGI as a senior designer and became partner at the beginning of 2009. His professional experience is based on the balanced integration of insight, creativity and technology, in developing innovative customer experiences. He helps clients apply the tools of design during digital transformation from the bottom-up, when innovation shifts the business from Products to Services. Peter has degrees in Mechanical Engineering and Management from the University of Birmingham and Industrial Design Engineering from the Royal College of Art in London. He has worked with Global 500 companies such as PepsiCo, ABB, Unilever, 3M and Visa. Peter was born in the United Kingdom, and now lives with his family in Milan, Italy.

Luca Pronzati
Chief Business Innovation Officer
MSC Cruises

With nearly 20 years of experience in the international cruise and technology industry, Luca Pronzati has a wealth of experience in boosting productivity and business development through innovation. Mr Pronzati joined MSC Cruises in 2012 and has since focused on developing and delivering holistic solutions across all areas of operations. With a vision anchored in innovation and technology, he is in charge of coordinating MSC Cruises' investment and optimization efforts to bring the latest consumer-centric technologies to the Company's fleet. To this end, Mr Pronzati has implemented various projects resulting in the deployment of an innovative B2B & B2C E-commerce platform in more than 44 countries, a newly virtualized Contact Centre located in 13 countries worldwide and the launch of a new mobile App in more than 15 countries. More recently, with MSC Meraviglia and MSC Seaside's entry into service in Q2 2017, Mr Pronzati and his team have successfully implemented MSC for Me, an industry-first digital innovation program designed to elevate on-board customer experience. Among other important features, this innovative application includes a dynamic wave finding system that allows guests to access a range of on-board geolocation services, including locating kids at all times. Mr Pronzati is based at the Company's Headquarters in Geneva, Switzerland and leads a team of dedicated professionals around the world.
Mr Pronzati holds a Masters' degree in Engineering and a degree in Corporate Valuation from SDA Bocconi in Milan, Italy.

POLITECNICO
MILANO 1863
SCHOOL OF MANAGEMENT

OSSERVATORI.NET
digital innovation

Observatory
DESIGN THINKING FOR BUSINESS

6. TEAM

Research Team, Partners and Sponsors

6. TEAM

Research Team, Partners and Sponsors

The first year of the Observatory Design Thinking for Business sees the joint collaboration between the School of Management, the Department of Design and PoliHub. The combination of these three entities is crucial for the success of the initiative. Indeed, the strong knowledge brought by each of them to research shows the commitment of the observatory in bridging management aspects with design ones in addition to looking at growing startups within the ecosystem.

The School of Management – SoM – was established formally in 2003 and groups together MIP (the Graduate School of Business founded in 1979) and DIG (the Department of Management Engineering – Dipartimento di Ingegneria Gestionale), established in 1990, combining all research and education operations in the field of management, an area of major importance at PoliMI, with our MSc in Management Engineering being taught since 1982.
The School of Management delivers an end-to-end portfolio of services in research, education and high-level consultancy within the fields of management, economics, and industrial engineering. Being part of the Politecnico di Milano influences our work on three levels.

- First, we focus strongly on innovation, change and the strategic advantage of technologies used in business;
- Second, we transfer the attention on scientific rationality and quantitative methods typical of the engineering mindset to the area of management;
- Third, we constantly pursue interdisciplinarity in both research and education, by making use of the wide array of technical expertise within the sixteen different departments of the Politecnico di Milano.

Videos about the convention available on www.osservatori.net

In 2007, the School of Management first achieved the **prestigious EQUIS accreditation** (European Quality Improvement System) and joined the circle of the approximately 140 leading business schools accredited by EFMD (European Foundation for Management Development).
In 2009, the School was included for the first time in the **Financial Times rankings** of top European Business Schools.
In the newly released Financial Times rankings for 2015, the School is in the list for:

- Executive MBA;
- Full-Time MBA;
- Master of Science in Management Engineering;
- Customized Executive Programs for business;
- Open Executive Programs for managers and professionals.

In 2015, for the fourth year running, the Financial Times Executive Education Custom Rankings 2015, included the School in its top 80 customized executive education programs worldwide ranking.

The **Department of Design** was created in 2013 from the InDACo (Industrial Design, Arts, Communication and Fashion) department as part of the reorganization of the Politecnico di Milano departments. This unity stems from having internalized the lessons of masters who have come before us: teaching, which comes from looking at the world with an always informed, critical view that does not content itself with what is there, but is continuously driven by the search for new balance in relations between people, objects and environments.
In 2017 QS World University Rankings place Politecnico di Milano seventh in the world, third in Europe and first in Italy in the area of Art & Design.
In recent years the Department of Design – which operates in unison with the School of Design and POLI.design and complement it naturally – has come to represent the largest design department in Italy.

Part of an extensive network of relationships, in a local context that is conducive to design and steeped in history, the department conducts research and provides training and consulting services in fields ranging from intangible design to the concrete artefacts that populate our world. What sets the department apart is a combination of the following elements:

- The Significance of Design and its Practices, as a key element of research and education, design has the peculiarity of giving shape to ideas and making them solid, in harmony with contemporary design languages;
- The Capacity to Act Within the Various Processes of Production of Tangible and Intangible Goods, focusing on the central role of the individual, the group, the community, and society as a whole: in its research and practice, the department works in the sectors of interior design, product design, communication, fashion, services and sustainability;
- The Sharing of Methods and Tools, which are continuously evolving, as a key design supporting element: the various cores of the different areas of research cross-pollinate each other with regard to methods of analysis, narration, representation, communication, planning and production;
- History and Culture, as Founding Elements of Design, in an ongoing discourse between the contemporary and historical roots;
- A Polytechnical Approach, that is, virtual and concrete coexistence with an extremely broad, diverse range of polytechnical subjects, in which design not only plays a mediating role but is also a critical element which steers activities towards design ends and methods.

PoliHub is the Innovation District & Startup Accelerator of Politecnico di Milano, managed by Fondazione Politecnico di Milano. PoliHub sprang from the Business Accelerator's years of experience, founded in 2000, thanks to contributions from important public and private entities, including the City of Milan, which has always been an active supporter of youth and technological development. The Politecnico di Milano, one of the best in Italy, felt the urge to create an entity which could host and foster young high-tech businesses able to transform scientific research into industrial applications. FluidMesh, Laserbiomed, Neptuny, ResTech have been particularly successful. Our most recent successes have been Empatica and FABtotum, companies that have grown remarkably over the years, earning significant national and international market recognition. PoliHub's mission is to support highly innovative startups with scalable business models to foster cross-fertilization between the academy, the various startups and consolidated companies focused on innovation. PoliHub facilitates the exchange of experiences, knowledge, reciprocal contamination and entrepreneurial networking, making available Politecnico di Milano's enormous store of information and centers of excellence: MIP, PoliDesign and Cefriel; aimed at collaborating with businesses. What PoliHub does:

- Scouting, Entrepreneurial idea and innovative project selection;
- Tutorship, Team consolidation and prototyping;
- Mentorship, Business model design and market analysis;
- Advisory, Support in search for financing and scale-up;
- Open Innovation, we help companies find the best new ideas out there and to collaborate with the startups.

Research Team

Eliana Bentivegna
Senior Research Team

Cabirio Cautela
Research Direction

Claudio Dell'Era
Research Direction

Luca Gastaldi
Research Direction

Stefano Magistretti
Senior Research Team

Silvia Magnanini
Senior Research Team

Alessandro Perego
Scientific Committee

Roberto Verganti
Scientific Committee

Francesco Zurlo
Scientific Committee

Support Team

Francesco Alba
Junior Research Team

Giorgia Crepaldi
Junior Research Team

Elena Gervasi
Junior Research Team

Leandro Sgrò
Junior Research Team

Francesco Stumpo
Junior Research Team

Giuseppe Varcasia
Junior Research Team

Deloitte Digital
Partner

We imagine, deliver and run the future. Deloitte Digital is a new way to think and work! We combined our advanced creative and technological skills with our Industry expertise to help our customers accomplish their new business vision.

Our innovative model merges Deloitte service excellence (Strategy, Operations, Technology) with the creative components and User Experience skills typical of digital agencies.

Our new Milan Studio is located in the heart of the design district, one of the most popular and dynamic areas of the city. It offers cutting edge technological and digital tools in an open and creative environment. You'll always find passionate, talented people meeting up in agile, fully collaborative spaces designed to bring a strong sense of community and to promote out of the box thinking.

Social areas are completely equipped with showcase rooms and yellow walls waiting to be covered with numbers of colorful opinions, breakthrough and innovative ideas. Team members regularly meet for sharing and learning through brainstorming and co-creation moments, working in wide open common spaces.

People involved in the Observatory

Carmelinda Covino
Service Design Lead

Gianluca Loparco
Partner, Digital Transformation Leader

Alessandro Piana Bianco
Experience Design Director

Design Group Italia
Partner

Design Group Italia is a design innovation consultancy based in Milan and New York.

The company was founded 50 years ago as a product and industrial design studio. Be it an electrical fuse, the iconic Tratto pen, or a biking helmet, the odds are that there's a DGI object in every home. From the very beginning, the studio showed its vocation for the mass market and the design of everyday objects. This was in contrast to most design firms of the sixties and seventies, which tended to focus on furniture and hi-end market segments. Yet it did not stop Design Group Italia from being an active participant in the lively design debates of the period.

Over the years, our work has extended to cover a wide variety of projects ranging from products, interiors, brands and food to UX, service and strategic design.

Today, we work in several industries ranging from healthcare, consumer goods, tourism and technology, with a diverse group of clients including Italian classics, Silicon Valley start-ups, non-profits and global Fortune 500 companies. Our clients include Pepsico, ABB, Unilever, 3M, Panasonic, Bialetti, Barilla, Chicco, Lay's, Moleskine, Unicef and Sella & Mosca, to name a few. Over the years, our work has received numerous awards, including ADI Compasso D'Oro, Red Dot, International Design Excellence Award and Good Design Award.

Design Group Italia today consists of 60 designers with a wide variety of skills and talent in fields ranging from industrial design to psychology, service design to engineering, product design, graphics, branding, interior design, lighting, food design and CMF. We work together in cross-disciplinary teams, combining varied design skillsets to suit each client and challenge at hand.

Our home is Milan, Italy, but our multicultural team includes staff from all over the world, be it France, India, Russia, Colombia, or Indonesia, to ensure a truly global perspective to all the solutions that we deliver.

Be it an experiential, immersive space for Pepsico during Milan Design Week; a portable ECG device for a medical start-up, or a luxury spa in Iceland, at the center of everything we do is design thinking.

We believe that design has a unique ability to understand people, problems and situations, leading us to create innovative solutions to complicated challenges.

Design Group Italia is an independent design studio lead owned by Edgardo Angelini (Italy), Peter Newbould (UK) and Sigurdur Thorsteinsson (Iceland).

People involved in the Observatory

Gianandrea Giacoma
Design Research Director

Peter Newbould
Partner

Massimo Pettiti
Advisor

Videos about the convention available on www.osservatori.net

Lenovys
Partner

Lenovys is a research, consulting and training company specialized in Lean Transformations and Innovation, known to have created Lean Lifestyle® and Impact Innovation™ methodologies.
We help companies to:

- Make Innovative products and services to generate a sustainable and long-lasting competitive advantage, more value for customers in less time and at lower cost;
- Reduce waste within the entire value chain generating an increment of performances and increasing service levels;
- Develop the full potential of people, increasing individual and organizational well-being and creating a culture of continuous improvement within the company.

We are the only company in Europe that seeks to improve business performance by jointly developing both technical excellence (processes, tools, business systems) and social excellence (habits, behaviors, culture, energy, personal systems). We truly believe that the key to personal and business success is based on reaching a perfect balance between "technical" and "social" excellence and, at the same time, knowing how to build a widespread Leadership system that supports and guides people's behaviors by allowing processes to function. In our projects we give the same importance both to aspects connected to "business systems" and those tied to "personal systems", in order to have a real impact on the actual habits at the core of the everyday behavior of individuals and groups within a company. Our key business activities:

- We create projects aimed at increasing the energy level in companies, in order to combine improved professional performance with developing potential and organizational well-being;
- We build high-impact innovation systems by integrating people, products and processes to give businesses a sustainable and lasting competitive edge over time;
- We carry out organizational analyses to help make companies more autonomous by ensuring the sustainability of the results achieved over time;
- We define and lead business projects to reduce both waste and costs throughout the entire value chain and achieve tangible improvements in performance and results within a short time frame;
- We set up and lead tailor-made strategic projects based on each individual customer's needs in order to obtain the maximum results with the least effort over time.

People involved in the Observatory

Luciano Attolico
CEO & Founder

Gabriele Colombo
Innovation Master

Francesco Dragoni
Business Development Manager

PwC
Partner

PwC's accounting practice originated in London well over a century ago. As times changed and PwC expanded worldwide, our commitment to clients—like you—never wavered.

With us, you're always supported by a global network of more than 236,000 people in 158 countries with one goal: to help your business thrive. At PwC, our purpose is to build trust in society and solve important problems. It is this focus which informs the services we provide and the decisions we make. Demonstrating genuine leadership is more important to us than size or short term revenue growth. To achieve our aim to be recognized as the 'the leading professional services firm' we must be innovative, responsible and attract outstanding people.

PwC's professional services include audit and assurance, tax and consulting that cover such areas as Cybersecurity and Privacy, Human Resources, Deals, Forensics and Customer Experience Design. We rely on our people and on our Global Excellence Centers, such as the PwC's Experience Centre. The Experience Centre is a physical space that combines the Imagination of an Innovation Design Agency, the Technology Expertise of an Emerging Tech Lab and the Business Strategy Capability of a Global Consulting Firm. It's home to a team of "Explorers" – The Experience Team. We co-create with clients, rapidly prototype digital and physical products, and continuously test and improve them with end-users to ensure that both business objectives and user needs are met (before writing one line of code).

From October 2016, PwC Italy – in partnership with Google – is able to offer its clients co-working opportunities to help them understand, accept and solve their most challenging problems in a new Experience Center based in Rome. Let's combine your aspirations with our world-class capabilities to achieve your goals.

People involved in the Observatory

Gianpiero Di Gianvittorio
Experience Center Lead

Massimo Ferriani
Customer Leader

Massimo Pellegrino
Partner at Strategy

Andrea Pivetta
Manager, Design Thinker

Dpeople
Sponsor

dpeople is a digital consulting Company whose mission is to drive its Clients in the technological arena helping them in the definition of their path towards innovation, combining different needs: human, technology and business. Research, consulting, digital opportunities analysis, project design and digital PMO: these are the 5 approaches that – linking together business and technology consulting – dpeople offers to face the new challenges coming from different fields, for example mobility, wearable devices, internet of things. The target industry is fashion and retail, focusing in go-to-market processes and channel collaboration.
For project execution, dpeople is supported by its business partner Vidiemme Consulting. Vidiemme Consulting has brought technology and process innovation to its Customers since 2004, developing web, mobile, wearable and conversational interface projects.
Its consulting approach comes from a deep knowledge of the most relevant Industries: the company focuses on understanding its Customers' goals and needs to provide them with the best tech solutions.
Vidiemme designs custom innovative solutions with seamless integration to the company systems to lead its Customers in a continuous digital transformation process.
Since 2015, it has opened its subsidiary, VDM Labs, in San Francisco, in order to do business development, networking with overseas companies and technological scouting actions. The presence of an outpost in the US led the company to be accredited as an Early Developer of many important technologies, from Google Glass to HoloLens, through Tango, and to grasp innovation and the most advanced technologies and put them at the service of Brainy, the research and development laboratory of Vidiemme.

People involved in the Observatory

Diego D'Ambrosi
Founder & CEO

Fabio Salvalaggio
Sales Account Manager at Vidiemme

Barbara Palombi
Senior Digital Consultant

Luca Valsecchi
CEO at Vidiemme

Videos about the convention available on www.osservatori.net

Gaia
Sponsor

DESIGN·PEOPLE·EXPERIENCE

We are an Experience Factory. We offer a tailor-made approach to projects of innovation, covering all phases from envisioning to materialization.

OUR PHILOSOPHY

We believe that only people will change the world and that experience is the key to the success of every strategic and executive choice. That is why we put people at the core of our design process and we adopt a Human Centered Design vision.

HOW WE WORK

We apply the Design Thinking model involving Clients and Customers to define solutions that can effectively address the organizations' challenges. Our innovation path enables our clients to become long lasting innovation players while experiencing the envisioning of a solution from all angles.

OUR OFFER

We offer innovation acceleration programs through experiential Design Coaching and Open Design; we implement Envisioning projects and scenarios and investigate customer needs through Discovery activities; we conduct Testing and Monitoring activities, offer end to end Experience Design services and make things come alive with our Tech Garage.

People involved in the Observatory

Marco Giglio
CEO

Franco Guidubaldi
Managing Director & Partner

Politecnico di Milano – School of Management
Stampa: Tipografia Litografia A. Scotti | www.ascotti.it

www.osservatori.net

Follow us

PARTNERS

SPONSORS