

# OPPORTUNITY DESIGN: UNDERSTANDING ENTREPRENEURIAL OPPORTUNITIES THROUGH DESIGN THINKING – sent to

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Abstract: While the entrepreneurship literature explains much about how to exploit and organize new opportunities in a market setting, it pays less attention to how entrepreneurs proactively and deliberately develop new opportunities. Drawing on methods and processes from the creative design literature and an authentic case on opportunity emergence, the focus of the paper is on how opportunities can be designed through creative design thinking. The case, constructed from participant observation research, unfolds within the area of sustainable energy and electric cars. The concept of 'opportunity design' steams from the paper as a way to talk about opportunity emergence as the result of deliberate design action. A framework of opportunity design is extracted from the study. It illustrates how opportunities intentionally and pro-actively can be designed through simultaneous cycles between design methods and processes of 'moving-in' (discovering and evaluating opportunities) and 'moving-out' (creating and exploring new alternative opportunities).

## INTRODUCTION

One of the most central discussions in entrepreneurship research is on entrepreneurial opportunities (e.g. Eckhardt and Shane 2003; Vaghely and Julien 2010). It is widely accepted that the entrepreneurial process is constituted by acts of opportunity discovery/creation, evaluation and exploitation (Shane and Venkataraman 2000). However, although literature argues that entrepreneurship is a process, which begins with the new opportunity (Shane and Venkataraman 2000), such literature discusses mainly the emergence of entrepreneurial opportunities in terms of the opposing views on the nature of opportunities. This amounts into comprehensive conceptual discussions on opportunities seen as Kirznerian activities of discovery based on alertness, as opposed to the Schumpeterian view of opportunities as being created and willed into existence by the entrepreneur (Shane, 2003).

In this paper we do not attempt to settle this discussion. Instead we focus on the fact that in common for both perspectives on opportunities is the lack of focus on *how* the opportunity is actually created/discovered. E.g. the concept of alertness (Kirzner 1979) is often relied on to explain opportunity emergence as the result of more or less unconscious cognitive processes. Empirical insights into the methods and processes of new opportunity emergence are elusive (Dimov 2011). In particular, deliberate and proactive method and processes of opportunity emergence are very rarely discussed. Consequently, we find a severe scarcity of concrete creative methods and processes on new opportunity emergence. We argue that the establishment of such methods and processes is an essential part of advancing the practical as well as conceptual understanding of the foundations of entrepreneurship. In order to engage in this discussion, we turn focus to other fields of research also addressing the aspect of opportunities. Amongst such fields of research is the body of literature on creative design. This literature differs substantially from entrepreneurship literature, as much effort in the creative design literature is given to the description of the methods and the progress of the creative design process (Crilly 2010; Dorta 2008). Overall, design concerns the creation and execution of a chain of actions and decisions that generate a movement from a problem (the understanding of which may co-develop in the process) to a

solution (Galle, 1996). The focus of the creative design literature is creative problem-solving methods and processes, primarily deliberate and intentional (Matthews, 2010), which unfold within the design process (Crilly, 2010). It involves innovation in the sense that the ideas unfolding from the design process have to be novel whilst also appropriate, legitimate, timely, etc. This makes creative design something different from routine design (Howard et al., 2008).

Yet, although Crilly (2010) outlines that creative design deals with the emergence, development and implementation of new ideas and opportunities, the focus of the creative design literature is indeed on the design activities related to the fuzzy front-end of new opportunities emergence (Jones 2001; Rhea 2003; Dorst 2006; Kolko 2010). Less attention is given to how these opportunities are implemented in a market setting.

It seems that creative design and entrepreneurship has much to learn from each other due to the distinct focus on respectively the front-end and the back-end of the process of opportunity discovery/creation, evaluation and exploitation. We in this paper suggest that the application of the knowledge derived from literature on creative design will be able to enrich entrepreneurship's understanding of creative methods and processes behind opportunity emergence. It can support entrepreneurs in utilizing concrete methods and processes that may lead to new opportunities. The focus of the paper is, in other words, on how opportunities can be actively designed through creative design thinking, and we therefore suggest the term "opportunity design" as a way to talk about opportunity emergence as the result of a deliberate design act. This new term provides a supplement to the present reliance of entrepreneurship on the deficient concept of entrepreneurial alertness to explain new opportunity emergence (Kirzner, 1979).

We begin with review of entrepreneurship opportunity research, substantiating how there is a lack of knowledge of concrete creative methods and processes to design opportunities. Secondly, we present relevant methods and processes from the creative design literature. To further extend our understanding of the dynamics of these methods and processes in real-life settings we, in a third part, present a concrete case of opportunity design within the area of sustainable energy and electric cars. We finally introduce a framework of opportunity design. The framework illustrates a process model of opportunity design that emphasizes the interactive processes between two movements; design from moving-in and moving-out. Indirectly, the framework also suggests that opportunity discovery and opportunity creation, so often discussed in entrepreneurship research as two separate entities, are mutually dependent manifestations of the same underlying dynamics of opportunity design. A conclusion on what entrepreneurship research can learn from creative design closes the paper.

#### OPPORTUNITIES: CREATION VS. DISCOVERY

The nature of opportunities is a comprehensive theoretical debate in entrepreneurship. As introduced above, discussions are largely speaking divided into two perspectives; a perception of opportunities as Kirznerian (1979) activities of discovery and alertness as opposed to a Schumpeterian (1934) view of opportunities as involving creation (Shane 2003). In this section we further elaborate on the implications of the two perspectives respectively. The current dominant perspective, based on ideas of Austrian economic theory (e.g. Hayek 1945; Kirzner 1979), states that opportunities are objective entities to be discovered (Kirzner 1979; Shane 2000; Shane and Venkataraman 2000). As noted by Gartner et al. (2003), opportunities are in this perspective "... *concrete realities waiting to be noticed, discovered, or observed by entrepreneurs*" (pp. 104). An objective entrepreneurial opportunity is discovered as the result of special knowledge an entrepreneur might acquire about goods or services (the market), which he/she can utilize and convert into a commercial profit. Thus, the entrepreneur discovers opportunities by acting as an arbitrageur in the existing marketplace, capitalizing on known knowledge or on information asymmetries.

It is assumed that the likelihood of discovering an opportunity differs from individual to individual due to differences in mental models, information and beliefs (Caglio and Katz 2001), as well as traits and social networks (Ardichvili 2003). These characteristics make individuals alert to signals of the objective entrepreneurial opportunities (Fiet 2007). The concept of alertness implies "*the ability to notice, without search, opportunities that have hitherto been overlooked*" (Kirzner 1979: 48), which is supported by empirical studies (e.g.

Shane 2000). As such, the discovery-perspective often talks about the emergence of opportunities as a more or less accidental, single event, involving recognizing new meansends in information the individual entrepreneur happen come to pass, and it leaves little room to the notion of opportunity emergence as a process that can be initiated and pushed forward deliberately and from creative methods and processes as it is the case in creative design. A more recent view on entrepreneurship is more open to the process view on opportunities, and looks at opportunities as being created, rather than discovered. A central difference between the discovery-perspective and creation-perspective is whether opportunities exist a priori, waiting for the alert entrepreneur to recognize them, or if opportunities are created and willed into existence by the entrepreneur. From a creation point of view, opportunities are emerging from subjective and inter-subjective processes (e.g. Fletcher 2006; Downing 2005). However, even though this literature presents elements relevant to grasp opportunity emergence as a creative process, it seldom elaborates on the concrete creative methods and processes applicable to pro-actively create opportunities. In fact, although a close link between creativity and opportunity emergence is assumed, remarkable little research attention has been given to creativity in entrepreneurship research. The creative methods and processes of developing new opportunities remains in many ways an unsolved mystery (Gielnik et al. 2011). Which methods can be applied, and what characterizes the creative processes that entrepreneurs have to engage in? DeTienne and Chandler (2004) do, however, show that it is possible to learn creative methods and processes of entrepreneurial opportunity emergence.

With the recent introduction of effectuation theory of entrepreneurship, Sarasvathy (2008) has, however, taken important steps towards opening up the mysterious processes of opportunity design. Sarasvathy introduces the idea of entrepreneurship as the design of novel artifacts; the entrepreneur is faced with the challenge of envisioning the future and designing novel artifacts from effectuation, and the emergence of a new opportunities is essentially "... a problem of designing without a final goal" (Sarasvathy 2001: 523). Methods and processes of opportunity design is by Sarasvathy (2008) explained this way: "*The pragmatist effectuator will look carefully at the actual world and figure out courses of action, however local and contingent, that are both doable and worth doing. Then, through interactions with others, effectuators will redefine the designs of their solutions*" (Sarasvathy 2008: 186). Yet, apart from overall, though very interesting and useful, guidelines of pragmatism and effectuation she noticeable does not come up with concrete creative methods and processes leading to the emergence of new opportunities.

#### CREATIVE METHODS AND PROCESSES OF OPPORTUNITY DESIGN

Alike the concept of entrepreneurship (Gartner et al. 2006), a multitude of understandings of creative design exist, reflecting that design and creativity are in themselves indeed complex concepts. Design is inspired from the 14<sup>th</sup> Century Medieval Latin, which associates the term design with the notion of "designare" meaning to mark out or sign from creation, fashioning, execution or construction according to a deliberate plan (Britannica Webster's 2007), which implies a rational and logical view on design. Yet, from 1950s to 1980s, at least three generations of design theory can be identified. First generation reflects the rational and logical design process, whereas the second and third generations emphasize design as a problem solving process of bounded rationality. From the 1980s and forward the concept of design has experienced a reflective turn; design is a reflective practice within a more comprehensive, process-oriented and interactive space (Bousbaci 2008).

Regardless of the specific approach taken to design, creative acts are seen as the very heart of the design profession across various design disciplines (Wang and Ilhan 2009). Recognizing this, literature on creative design studies a great variety of methods and processes on how to work with creative processes (Crilly, 2010; Cross, 1997<sup>a+b</sup>; Dorst and Cross, 2001) to transform the present into a preferred and more desirable future situation (Orlikowski 2004). As such, creative design processes have often been assumed reliant on so-called "creativity leaps" that represent sudden, and almost mysterious insights or interruptions within the design process that lead to a completely new way of doing things (Cross, 1997<sup>b</sup>). However, recent research in creative design attempts to demystify the role played by creativity in the design process, and has generated new insights into the methods and processes of creative problemsolving and design (Crilly, 2010; Dorst and Cross, 2001).

In order to create an overview of such methods and processes, we divide these into two overall approaches: “Design from moving-in” and “Design from moving-out”. This terminology is inspired by De Bono (1978), and will enable an identification of how such methods and processes can enrich our understanding opportunity emergence in entrepreneurship.

#### DESIGN FROM MOVING-IN

The rationale behind the moving-in approach reflects first generation design methods and processes, which basically view design as an instrumental and linear problem-solving process. From the perspective of moving-in, design typically “...begins with the acknowledgement of needs, dissatisfaction with current state of affairs, and realization that some action must take place in order to correct **the problem**” (Braha and Maimon 1997: 147). The concrete problem (market gap, user need, etc.) that the designer wants to solve is in this way clearly defined in the beginning of the design process. Only when the problem has been identified the designer will initiate a puzzle-like process in which he searches for the best way to solve the problem. In this way, the design process is a linear problem-solving process of two phases “problem definition” and “problem solution” (Buchanan 1992).

This perspective on the design process is, for instance, found in the popular design brief method (Sas and Dix, 2008; Wylant, 1995) as well as in the work of Cooper and Press (1995) and Borja de Mozato (2006) who link design to corporate goals and profit. These contributions reflect processes of design with a strong user or market orientation, and they take for granted that the problem already exists, it just needs to be discovered. The moving-in perspective is supported by a myriad of methods, which assist the designer in discovering the problem. These methods include for instance ethnographic studies, usability testing, focus groups, cultural probes and co-design with lead-users. They are often applied in such a way that the aim is to identify gaps in the present user-experience or markets and thereby pointing to unexploited problems and thus opportunity gaps to be solved.

As such, the main assumption of the moving-in perspective parallels a Kirznerian view on entrepreneurial opportunity recognition. The problem identified can take the form of a closed problem, which is characterized by the solution being more or less given. It may also be a more open problem for which the solution is not immediately known. Yet, the problem still determines the design process in the sense that the designer engages in a systematic and structured search for solutions to the problem. This often results in broad analysis of the situation and user-experience to generate full information and exact knowledge of the situation, demarcate the situation, and to identify requirements to solve the problem (Roosenburg and Eekels 1991). Like a puzzle, the designer through analysis identifies the pieces that, when put together correctly, form the image of the whole puzzle – the image of the solution to the problem.

Opportunity design from acts of moving-in is in this way constrained process bounded by the identified problem. In fact, it can be argued that little room is left to creativity within the moving-in design process.

#### DESIGN FROM MOVING-OUT

The moving-in and moving-out approach to design differ in their view of how to define and bring forward the problem, and how to link the problem with the solution. In moving-out, a more loose and non-linear approach is applied to unfold both problem and solution and the interaction between them. The logic of moving-out reveals that in most design processes it is not possible to fix and identify the problem up-front and then find a solution to fit it (Sebastian 2005; Dorst and Cross, 2001). The problem is simply too complex, ill-defined and fuzzy to be completely understood from the beginning of the design process. The “true face” of the problem will only come into sight through actual explorative activities of designing solutions, concepts, etc. Even then, the problem will constantly change its faces (Buchanan, 1992). Design from moving-out is a continuous process of exploring new alternatives from simultaneously working with problem and solutions (Matthew, 2010).

This approach to design parallels a creation view on entrepreneurial opportunity emergence. The importance of understanding this as a fundamentally different approach to design than moving-in design processes has been underlined by empirical studies (e.g. Dorst and Cross, 2001). Dorst (2006) explains how looking for a good movie in town” reflects a problem-solving case of moving-in, whereas “having a party” represents a project in which

there is no dominant design problem to relate to, and instead imagination, invention and exploration has to be applied. Rittel (1972) and later on Buchanan (1992) refer to the latter situation as design processes aimed at solving an unframed or “wicked” problem, which according to de Bono (1978) involve that we move: “... *from idea to idea until something begins to look promising*” (pp. 139). Thus, the design process becomes a deliberate explorative process of moving out from a specific interest area, being curious and constantly considering novel ideas using divergent techniques such as combination, mutation, analogy and first principle (Cross, 1997).

The process of moving-out design often leads to further idea generation, that may generate solutions to problems the designer had not thought of from the beginning, and also new ideas may arise that requires further exploration of new kind of solutions (Crilly 2010). Rather than taking departure in a well-defined problem, it is a process of linking the different paradoxes and conflicting discourses of actions, symbols, people, requirements, meanings, knowledge, etc. that make up the design situation to a tangible design that can be communicated as valuable to others (Dorst, 2006). Buchanan (1992) talks about the role of the designer as the communicator, who explores, organizes and invents new meaning, and thereby creates the frame for human experience, through new blends and repositioning of images, signs, things, actions and thoughts. The designer initiates the design process from a general angle forming overall ideas, interpretations and hypothesis of the design situation, and for this purpose he can apply “placement” as a tool, which involves: “... *identifying the views of all participants, the issues which concerns them, and the invention that will serve as a working hypothesis for exploration and development*” (Buchanan 1992: 17). Based on this placement the designer can, in interaction with others, begin to move from one idea to the next to come closer to a particular opportunity.

Hence, the methods and processes of opportunity design can roughly be divided in linear processes of moving-in and more loose interactive processes of moving-out. The moving-in processes can be expected to result in less creative and incrementally innovative opportunities, whereas the moving-out process have the potential to result in very new and innovative opportunities. This result could potentially be interpreted as yet another manifestation of the divide between opportunity discovery or opportunity creation. However, in the following section we present an empirical case, in which we over time follow the design processes related to opportunities. The results show that in fact new opportunities emerge from a complex interplay between moving-in and moving-out methods and processes. These are often so iteratively related that they are difficult to split up. Such results demonstrate that in practice opportunity discovery and opportunity creation are not opposing approaches, but are in fact mutually supportive when seen as part of a process of opportunity design.

#### METHODOLOGY: THE ETRANS CASE

We conduct participant observation (Jorgensen 1989) to investigate the moving-in and moving-out methods and processes of opportunity design. The setting we investigate is the etrans project being a major three-year design project initiated by four Danish partners (Kolding School of Design, DONG Energy, TRIN (an innovation office), and local authorities in 2008. The project provides a rich and delimited setting for studying the processes of how entrepreneurial opportunities are proactively designed. The overall aim of the project is to make the existing technology of electric cars commercially attractive. It involves designing an eco-structure that makes it attractive to use battery-driven cars in preference to petrol-driven cars, and thereby reap the benefits of renewable energy sources that have to be perceived in the context of fossil fuel shortage and demands of CO2 reduction. In this sense, the project participants are challenged to design new opportunities to change Danish consumers buying behavior and develop the transport of the future (involving roadside services, car interiors, town planning, etc.).

Participant observation is a qualitative method, inspired by anthropology, from which we get a close familiarity with how designers’ work and think in terms of opportunity design (Jorgensen 1989). It allows us to develop a holistic understanding of the opportunity design process that unfolds within the etrans project, and to understand the complex relations between problems and solutions within the process. To construct data, we actively participate in the opportunity design process of etrans and analyze the various documents, illustrations, etc. produced by the project participants. Moreover, we conduct informal and unstructured

interviews with the designers. We note anything about the opportunity design process down in a log book, which content we continually analyze using Grounded Theory techniques (Goulding, 2005; Titscher et al., 2000). Inspired by Arbnor and Bjerke (1997), the validity of the research is safeguarded from acts of practical validation in terms of constant dialogue with involved parties on whether they find the results and interpretations meaningful in practice. Our choice of method relates to the action research foundation of the etrans project in general which is outlined below. Action research is in this connection used as an umbrella term under which a number of reflective activities are placed. All activities aim at achieving practical objectives (changes in a specific context through participation, action learning, etc.) along with generating scientific knowledge (Lewin, 1946; Dickens and Watkins 1999). In action research, researchers and project participants work closely together in defining the research problem, creating the data and analyzing the data (Whyte 1989), to such an extent that the participants become “... *full partners or co-researchers in running the research process itself*” (Elden and Chisholm 1993: 125). The constant interactions between researchers and participants make the research an ongoing process in which the actors “build the bridge while walking on it” (Todhunter 2001).

#### THE OPPORTUNITY DESIGN PROCESS OF ETRANS

To start up the etrans project the four aforementioned partners of etrans team up with a group of researchers specialized in consumer behavior and ethnographic methods to plan, implement and facilitate the project. In line with the logic of action research, they constantly push the project forward along with gathering scientific data on what is going on in the project. Moreover, a large group of diverse actors (private companies, public stakeholders, technicians, designers, students, additional researchers, NGOs, etc.) are also empowered to participate in the two-folded purpose of practical opportunity design within the domain of electric cars and generating academic knowledge about the area. The process is extensively documented from generating various types of data (interviews, participant observation, videos, images, designs, etc.). Please view Ulk et al., 2009 for an overview.

Confronted with the difficult task of designing opportunities within the context of an unknown future of transportation, the research team decides that the first task of the etrans project is the broad formulation of the problems related to the opportunity domain: how to make electric cars a commercial success. For this purpose, the research team initially conducts an anthropological field study among 50 automobile users in Denmark. Using participant observation the team blends in with the normal everyday activities of the automobile users; including time spent with them at work, at home, and during transportation. “*We looked, filmed, took photographs, listened, asked, perceived, guided and surveyed*” (Ulk et al. 2009: 36).

To move further into the opportunity design arena, the participant observation is combined with mapping exercises and design games, e.g. prioritization games in which the automobile user is asked to rank a number of hard and soft concepts according to his/her relation to respectively electric cars and petrol cars.

Hereafter, the research team opens up the opportunity design process and invite more than 15 interested parties with each their own expectation in regard to the design of e-cars to participate in the project. They are invited to work closely together on a 6-days workshop facilitated by instructors trained in design methods of moving-in and moving-out.

By forming groups of mixed competences the opportunity design process takes the shape of an interactive exchange process between participants with completely different professional competences, premises and cultural approaches. The process constantly generates ideas to new opportunities within the future „etras reality“, and at the same time it makes the participants create meaning of how to make future e-car users identify themselves with and buy the e-car.

Looking into the creative design literature, this set-up is in line with dominating ideas on design being fostered from social interactive processes unfolding in collaborative spaces (e.g. Gish et al. 2009; Sanders and Stappers 2008; Clausen and Yoshinaka 2007; Verganti 2008). In such project set-ups, the design process is an open space delimited by a loosely defined topic. The approach to explore the problems, solutions and opportunities of the space is to invite a lot of different participants with different points of views, knowledge, and practices into the space. Opportunity design in this way becomes a meeting place of co-design in which ideas are generated, translated, evaluated and transformed into opportunities through social

processes of negotiation along with that they travel through different individuals with dissimilar way of thinking and creating.

The workshop of etrans divides into two phases, each lasting three days. During the first phase, the purpose is first and foremost to introduce the participants to the insights (videos, dairies, quotations, photographs, etc.) of the anthropological study. Using a pre-designed template as management tool, the participants are navigated across different key points in the material, such as user type, driving patterns, etc. Based on discussions of the template participants are asked to organize the knowledge into three perspectives: The individual perspective; the local-environmental perspective; and the infrastructure-society perspective. From analogical transferring the meanings of one context to a new setting, problems and solutions of the etrans project are creatively reframed and many new ideas unfold. Then, the workshop participants are presented to a user-journey-exercise, which is a method to articulate the sequences of events in a given car user story. Ideas are generated from shifting the frame of reference by looking at the etrans problem from a user point of view. Working in groups, the task is to identify the phases of specific action in a user's everyday life, identifying the involved actors, as well as the artifacts and actions that the users meet during the chosen action. With the user journeys in hand, the workshop participants innovate and generate ideas and potential opportunity spaces related to what could happen during the journeys if the petrol-driven case is switched with an e-car.

In the second phase of the workshop, each group choses the most interesting opportunity space they have identified on day one, and through a comprehensive process (including brainstorming, provocations, combination exercises, etc.) ideas are generated to potential new designs, products, processes, etc. of the future that hold the potential to overcome the barriers of and motivate the users in terms of choosing the e-car over the petrol-driven car. Each new idea is seen as the platform of alternative new ideas, and in this way a wealth of novel and unexpected potential opportunities is constructed.

Finally, to move from a large quantitative numbers of ideas to few interesting ideas, the groups are asked to move further into the ideas they regarded as having most potential in a present or future market context, and give these ideas a more tangible and particular shape through developing prototypes of physical objects, role play, visualization of scenarios, etc. Thereby, the initial steps are taken towards systemizing the idea and its principle and form an actual opportunity valuable to the market place.

Many new commercial opportunities (products and services) are the results of the etrans project. Following the initial phases students, public stakeholders and private companies continue developing and exploiting the opportunities designed through the project.

#### DISCUSSION: A FRAMEWORK OF OPPORTUNITY DESIGN

Overall, the opportunity design of the etrans project can be divided into three iterative phases: 1) Opening up the opportunity design; 2) ideation and conceptualization of opportunities; 3) Opportunity selection and exploitation.

Phase 1: In the beginning of the etrans project, the anthropological study represents a step of moving-in. The study can be interpreted as an empirical operationalization of the problem arena of future transportation by attempting to define the problems of the arena. In this way, the anthropological study creates a new starting point based on which new opportunities can be designed and linked to the realities in the life of car users. The wealth of meanings, discourses, stories, information emerging from the anthropological study is a new, joint and closer-to-reality platform of meaning for understanding the context of opportunity design based on which the two perspectives of moving-in and moving-out unfold.

Phase 2: The workshop, following the anthropological study, makes the many different participants, individually and collaboratively, circle between moving-in and moving-out methods and processes. Move-out to explore and imagine the potential opportunities of future transportation, and move-in to activate existing knowledge, evaluate the opportunities, and make them valuable to a market context. From these processes the participants generate a lot of new ideas, and they combine, expand and redefined these ideas into concepts of opportunities. Creativity is unleashed and opportunities to improve the future are designed.

Phase 3: Finally, processes of opportunity selection and exploitation follow.

What find in this case is that opportunity design in practice is a complex collaborative process with constant shifts between moving-in and moving-out methods and processes. Thus, it involves acts of exploring and inventing new alternative opportunities integrated with acts of evaluating and narrowing down opportunities to fit the market context. The close link between the two „moves“ relates to the fact that moving-out, as a process of exploring the future problems and solutions of the design situation, is only of interest for the designer if he can move the many ideas into opportunities, which are meaningful and valuable to exploit in present or future markets. In fact, opportunities that do not fulfill existing market needs or create new market needs cannot be regarded as actual opportunity.

Therefore, the moving-out process also becomes a process of iteratively co-creating and exploring new knowledge of future problems and solutions along with discovering their potentials and evaluating these in accordance with the present or future market, where the latter involves processes of moving-in and the use of existent market knowledge. Thus, opportunity design is an iterative process of simultaneously moving-out, reframing, stretching, and expanding alternative understandings of problems/solutions and moving-in this space by narrowing down the alternatives to make the design comprehensible for potential opportunity users.

Figure 1 depicts a framework of opportunity design developed based on the conceptual discussions and the empirical insights. It illustrates the constant iterations between moving-in and moving-out unfolding throughout the act of opportunity design.

Please insert figure 1

In line with the logics of figure 1, the project manager of etrans concludes based on her experiences with the etrans process: *“In opportunity design moving-in and moving-out are each others’ mutual inspiration. We had to move in to identify a platform of understanding in order to move out and construct the opportunities the platform articulates, which we once again attached to the world from moving-in”*.

Linking back to the entrepreneurship literature, figure 1 can be seen as a process model that pinpoints a close and interactive relationship between opportunity creation and opportunity discovery. This is in clear contrast to many conceptual discussions of discovery and creation as two separate perspectives (Shane 2003). The rationale behind this way of thinking is that moving-in perspective in some ways resembles the Kirznerian (1979) world of opportunity discovery; first we discover a gap in the market, then we evaluate and utilize it. The moving-out perspective, on the other hand, is similar to the Schumpeterian ideas of opportunity creation. Another indication of the close link between moving-in/moving-out and opportunity discovery/creation is what differentiates the Kirznerian and Schumpeterian perspective view on knowledge. Kirzner underlines that opportunities are discovered when the entrepreneur activates his/her existing knowledge of the market and recognizes markets gaps, which can be exploited more efficiently (as in moving-in). Schumpeter states that new knowledge has to be explored in order for new opportunities to emerge (as in moving-out). Accepting figure 1 as a process model of opportunity discovery/creation, it stems from the figure that opportunity design might take the shape in the constant interplay between moving in and moving-out. Creation and discovery are integrative acts. Entrepreneurs have to move out and develop new opportunities in order to create growth, progress and creative destruct existent competitive structures. Yet, to move-out only makes sense if the many alternative ideas unfolding from this process are linked to the market. It takes acts of discovering and evaluating the potential of the idea in a market, which again can give root to further creative moving-out processes and open for new alternative ideas and opportunities.

## CONCLUSIONS

Despite of resemblance between the fields of creative design and entrepreneurship, we find that the entrepreneurship literature can learn much from the methods and processes of opportunity design presented in the paper. First of all, entrepreneurs can, as a supplement to the concept of alertness, be inspired by the concrete and intentional methods applied in opportunity design. As the theory and case show, creative designers do not have to rely on their alert capabilities. They have concrete methods and processes of moving-out and moving in to rely on to search and shape opportunities with reference to a specific area. They can at

any time initiate, frame and execute an opportunity design process. Some individuals hold entrepreneurial intentions but they do not have a business idea to materialize the intent in practice (Nielsen et al. 2012). In this perspective, the methods and processes of opportunity design may give more individuals with entrepreneurial intentions the occasion to initiate entrepreneurial activities. Also, one may expect that opportunity design processes result in more creative and innovative opportunities, essential to the economy, compared to those opportunities arisen from alert discovery that leans towards incremental innovation based on existing knowledge.

Looking at entrepreneurship as a phenomenon unfolding within existing organizations – intrapreneurship (Antoncic and Hisrich 2003) - the term „opportunity design“ opens for managerial implications. Conventional management literature is based on the premise that in order to survive organizations have to optimize existing competitive positions, resources, production systems, etc. This view has been popular as it depicts from the lean literature (Liker 1996). The intrapreneurship literature, in contrast, has pointed to the importance of a more extensive focus on creativity, radical innovation and divergent ideas (Lassen et al. 2006), and it has discussed the problems and paradoxes of combining the conventional focus and creative opportunity emergence (Lassen and Nielsen 2009; Clark et al. 2012). It stems from the results in this paper that opportunity design within organizations requires acknowledgement of the need for opposing actions and organizational forces. Managers have to keep this in mind in terms of hiring employees, designing organizations, initiating innovation, and in general doing business.

Interestingly, this paper also suggests that opportunity design can unfold from a complex collaborative process pushed forward by the interactions between different individuals with diverse competences, interests, etc. Thus, opportunity design can advantageously be a matter of open-sourced co-design or co-creation (Sanders and Stappers 2008), and it may, in this regard, be interesting to put the emerging and very interesting literature on open innovation (Lichtenthaler 2011) into action. This literature can inspire a further understand how to design new opportunities from interactions between internal, external and in general very different individuals, as it was done in the etrans case. Engaging very different individuals in various moving-in and moving-out processes, they are likely to fertilize and develop on each other's ideas. A likely result is interesting or even breakthrough opportunities that represent a desirable future situation that the entrepreneur, company, or market can grow from.

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