

# THE VALUE OF DESIGN RESEARCH

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## DESIGN – INNOVATION - ENTREPRENEURSHIP: THE IMPACT OF DESIGN ON PROJECT PROCESSES AND BUSINESS MODEL GENERATION WITHIN “STARTUP” INITIATIVES

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### ABSTRACT

*The developed world is rapidly transitioning from an industrialized economy to one powered by startups. This trend, referred to as the “startup movement”, harbors a sub-trend that’s important to the field of design. Increasingly the strategy entrepreneurs use to manage their startups has embraced the process designers use to develop products and services. Since the convergence is happening naturally, the two processes should have synergies. The main objective of this research is to explore those synergies.*

*Observation and analysis of these processes were conducted from the angle of project disciplines and theory under two modes and knowledge domains: (1) the project and its « conception » - « design mode »; (2) the project and its development - « management mode ». These two modes invariably cohabit, but are based on fundamentally different paradigms, generating inconsistencies within their synergy.*

*We explore the consistencies and inconsistencies within their synergies by observing behaviour within two living laboratories: (1) Startup Weekend, a three day event that primarily embraces startup management-strategies; (2) Startup Fuze, a one-month, intensive program developed by the authors. This event interweaves both design and startup management strategies in a fashion that aims to maximize their synergies.*

*Preliminary results show that within the development processes of « startups », design plays an important role for product development but its function as a strategic tool and methods are not well understood by the team. Interestingly, entrepreneurs follow an intense iteration process, especially in early stages of the startup, but there is little synchronization of tasks and strategies between the product-development and business-model processes. The « synchronicity » between the two processes is not optimal, nor does it seem to offer sufficient « anchor » points, both in practice and theory.*

*Keywords: Entrepreneurship, Startup, Product and Service Design, Design and Project Development Processes, Business Model Generation, Innovation*

### 1. CONTEXT

The planning, management and control of activities within an organization require a set of expertise that management sciences master skillfully. On the other hand they are not as comfortable in dealing with « fuzzy » and iterative processes that unfold within the design and development phases, user experience inquiry and qualitative approaches. (Cooper et al., 2009; Martin, 2009b) The same may apply to designers who may struggle with management approaches, tools and methods, but otherwise are comfortable with wicked

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problems (Buchanan, 1992), master the comprehension of stakes, the definition of the problem space , identifying design opportunities as well as « devising satisfying solutions ». (Simon, 1969; Dorst, 2011; Dorst and Cross, 2001)

Thus, knowing that management and design science and disciplines originate from fundamentally different paradigms, but unavoidably cohabit in practice within projects, it is worth exploring their apparent convergence as well as the operationalization of their respective methods and approaches, prescriptive for one (Koskela and Howell, 2008) and self-organising for the other. (de Blois, 2012) So, are these combined approaches and methods adapted to complex and dynamic environment within which projects arise and unfold ?

In project contexts, innovation and entrepreneurship initiatives have been hailed to contribute significantly to the success of businesses and they both have been associated with creativity and more recently to design. (Drucker, 2007; Kelley, 2007; Nyström, 1993)

### 1.1.ASSUMPTION

Nonetheless, few studies have emerged on this specific convergence of these two disciplines under the angle of entrepreneurship-innovation / designer-creator. (Brem, 2008, 2011) Therefore, the following question guides the present research: how can design/creation processes, through innovation, inform entrepreneurial processes, and vice versa? Based on previous research results (de Blois, 2012) obtained from case studies of design and construction project behaviour, it is proposed that: a synergy between these two domains generate a series of processes that allows projects to organize and self-organize according to the project's own specific and unique characteristics, occurring at both the processual and structural levels.

We aim to validate this previous finding within a new context: the entrepreneurial project process. Likewise, design activities and processes constitute key elements of innovation. (Borja de Mozota, 2003; Gardien and Gilsing, 2013) In fact, designers create and innovate in many domains reaching far beyond the traditional sphere of the object/service, namely at every level of the organization — logistic, operational, strategic. (Bruce and Bessant, 2002; Martin, 2009a; Owen, 2005; Shamiyeh, 2010) Nonetheless, even though designers are by definition creators/innovators, they have not, until recently, been highly involved in entrepreneurial endeavours (Desrosiers, 2010). This situation is evolving and, in the light of the economic, environmental and economic contexts, entrepreneurship amongst designers is rapidly accelerating. (Gardien and Gilsing, 2013; Nussbaum, 2013)

### 1.2.TRIAD: - DESIGN - INNOVATION - ENTREPRENEURSHIP

Recent popular literature pays tribute to this new breed of innovators/creators (FastCompany, 2013; Hoover and Heltzel, 2013), and academics do the same represented by the « design thinking » literature (Dorst, 2011; Kimbell, 2011, 2012; Shamiyeh, 2010). We have also noticed the strong adoption of design methodologies by the management disciplines, (Brown, 2009; Martin, 2009a; Nadler et al., 1992) even though the integrity of fundamental design principles is sometimes violated. This appropriation, as it turns out, is sometimes partial, rendering these design approaches dubious in terms of efficiency in the eyes of these disciplines. (Collopy, 2009; Nussbaum, 2013) Despite this suggestion, the

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« design thinking » trend and application of design methodologies to business suggests that they are more than well adapted for the innovation processes required in order to deal with complex issues that business and society face. (Osterwalder and Pigneur, 2010; Thackara, 2005) From that perspective, the study of entrepreneurship raises two important challenges: (1) to better define the specific knowledge domain of design/entrepreneurship; and (2) to clarify the theoretical/conceptual frame needed to study specific empirical phenomenon generated by peripheral disciplines, (Busenitz et al., 2003) namely design and innovation. (Drucker, 2007; Gardien and Gilsing, 2013)

To that matter, there is a profusion of research and publications on entrepreneurship and innovation, as they constitute disciplines in their own right (Urban, 2010; Brem, 2011). Nevertheless, these mainly originate from within the fields of management, marketing and small business (Landstrom, 2007; Sexton et al., 2000). According to the Academy of Management (in Ireland et al., 2005) more than one-hundred journals have published articles related to entrepreneurship. Despite that, Busenitz (2003), Wiklund et al. (2011) highlight that fundamental research in the field remains limited, further suggesting that research in this field would be enhanced by the inclusion of complementary knowledge fields. In their in-depth literature review, Grégoire et al. (2006) shed light and retrace the conceptual convergences during the past 25 years of entrepreneurial research as well as the related knowledge domains. They conclude that the main research threads evolve around a set of issues pertaining to: (1) the identification and development of « opportunities »; (2) the recognition of the value of « social capital » and networks; and (3) the study of emerging phenomena. Consequently, this research focusses on these issues, as well as adopting a novel approach by opting a design and innovation perspective on entrepreneurship.

There is considerable overlap between entrepreneurship and innovation (Drucker, 2007; Schumpeter, 1934). As briefly stated before, design (beyond the conception of artefacts and services), through its strong focus on innovation is at the heart of entrepreneurial activity. (Zhao, 2005; Bruce and Bessant, 2002; Verganti, 2009) Design is mainly concerned by: (1) the search and valuation of new opportunities (Shamiyeh, 2010); (2) the enhancement of the quality of life and wellbeing of communities (Brown, 2009); (3) establishing various types of networks (social, logistic and business) (Juriado and Gustafsson, 2007); (4) the implementation of creative processes characterised by iterativity (Boutinet, 2010; Dorst and Cross, 2001), which in turn initiate the emergence of self-organising processes and structures. (Le Moigne, 1999; Morin, 1977; Weick, 2001)

In contrast, an important body of research (management, organisation, design) (Packendorff, 1995; Williams, 2005; Winter and Szczepanek, 2007; Winter et al., 2006) states that prescriptive approaches are at the root of numerous problem referred to as being « systemic » (Koskela and Howell, 2008) within businesses that operate on a « project mode » (product development, architecture, construction, urban design, etc.) (Best, 2012). These statements and conclusions lead us to consider the development and use of alternative methodologies, based on systemic principles and concepts, for the study of design/entrepreneurship initiatives. These elements constitute the base of our argument that wish to better understand this emerging field within which the actors, through innovation, are at the centre of a self-organizing process, continuously (iteratively) reinventing project processes and structures. In doing so, this research looks deeper into the synergy of disciplines (mutual influence) that drives the triad « innovation - design - entrepreneurship » in the context

of product/service and business model development within startups.

## 2. THEORETICAL FRAMEWORK

In order to start this reflection, it is necessary to briefly situate these disciplines. Entrepreneurship is an essential element of economic activity. (Drucker, 1999; Urban, 2010) According to Cuervo et al. (2007) entrepreneurship manifests itself: a) by the identification, evaluation and exploitation of business opportunities; b) by the creation of new businesses or the renewal of existing ones by rendering them more dynamic; c) by being an economic stimulant through innovation, job creation, and, generally, by the improvement of society's well being. Entrepreneurship constitute a domain of study in itself, as can be shown by the strong interest it draws from researchers, academic institutions as well as by the emergence of numerous research chairs. One effect of this interest now overflows into a new and almost viral trend in the form of various Startup initiatives, programs, events and contests around the world.

The proposed theoretical elements composing the framework are classified in 2 segments. The first (1) includes the 4 knowledge domains of the project disciplines represented by an ontological frame (de Blois, 2012), based on four categories of analysis including: (a) organizational dynamics and structures (Bengtsson et al., 2007; Mintzberg, 1979; Short et al., 2008); (b) project and entrepreneurial development processes (Van de Ven, 1986; Brem, 2011); (c) theories of design and innovation (Cross, 2006; Findeli and Bousbaci, 2005; Zhao, 2005), and; (d) network actors' dynamic. (Crozier and Friedberg, 1977; Giddens, 1979) The second segment (2) supports this frame and make it operational in confronting the two dominant paradigms: analytic and systemic. The « system » notion, the systemic approach and systems modelling principles (Le Moigne, 1999), within the paradigmatic frame of complexity (Morin, 1977; Le Moigne and Morin, 2007; Morin and Le Moigne, 1999) articulate the interrelations between knowledge domains. It permits to model and better understand these entrepreneurial projects and the synergy of processes that involve innovation and product and service development.

These theoretical elements composing the framework are classified in 3 segments. The first (1) includes the 4 knowledge domains of the project disciplines represented by an ontological frame (de Blois, 2012), based on four categories of analysis including: (a) organizational dynamics and structures (Bengtsson et al., 2007; Mintzberg, 1979; Short et al., 2008); (b) project and entrepreneurial development processes (Van de Ven, 1986; Brem, 2011); (c) theories of design and innovation (Cross, 2006; Findeli and Bousbaci, 2005; Zhao, 2005), and; (d) network actors' dynamic. (Crozier and Friedberg, 1977; Giddens, 1979) The second segment (2) supports this frame and makes it operational in confronting the two dominant paradigms: analytic and systemic. The « system » notion, the systemic approach and systems modelling principles (Le Moigne, 1999), within the paradigmatic frame of complexity (Morin, 1977; Le Moigne and Morin, 2007; Morin and Le Moigne, 1999) articulate the interrelations between knowledge domains. It permits to model and better understand these entrepreneurial projects and the synergy of processes that involve innovation and product and service development.

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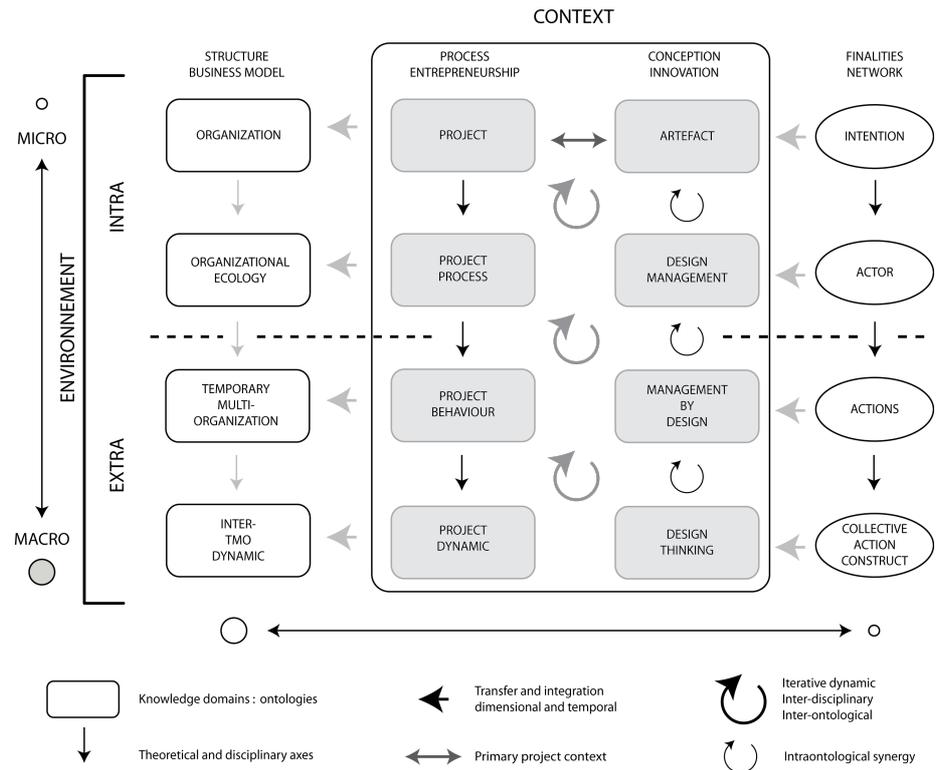


Figure 1 – Theoretical Framework: Ontologies of the Project Environment

At the center of this theoretical frame and research, we identify the project contexts. They are traditionally animated by two domains of practice and knowledge: (i) the project and its conception, embodied by « design », it characterizes the unfolding project's dynamic and constitutes the bridge between the actor's formulation of intentions and the formalization of these intentions in the object-project; (ii) the project and its execution, represented by the management, establishes the « operational » context, through a dynamic of multi-level processes. Furthermore, at the core of this synergy, a third domain comes into play: (iii) the « action » project, derived from Boutinet's (2010) « project theory », establishing the bases for a theoretical reflection on the nature of our actions motivated by our intentions. Project domains (i) and (ii), even though they both have to cohabit within projects, stand on very different paradigms. Project management rests on a positivist view and is deployed in a linear and structured fashion (Pollack, 2007; Cicmil et al., 2006); design is characterized by a constructivist approach, iterative and self-organizing (Le Moigne, 1999; Le Moigne and Morin, 2007; Nelson and Stölterman, 2003; Visser, 2006)

Also, from an epistemological and praxeological point of view, these two disciplines are confronted and conditioned by constraint as well as united by necessity, revealing the complexity of interactions between these two project modes, both of which are activated by a third mode, the prospective actions of actors (de Blois, 2009; 2012). We therefore have to consider three distinctive and complementary modes of projects (design-action-management) in order to position the dynamic design-innovation-entrepreneurship, which is defined here by the theoretical framework of project behaviour (Boutinet, 2010; Crozier and Friedberg, 1977). The links between these knowledge domains are nevertheless

fragmented. This is where the underlying systems approach (Le Moigne, 1999) comes in to support the theoretical framework, permitting us to highlight the functional and structural mechanisms of these dynamics, through systemic modelling, rendering the phenomenon intelligible through modelling.

### 3. METHODS

The study unfolds in three phases: (1) the theoretical exploration of the problematic and literature review, adding innovation and entrepreneurship knowledge domains into the ontological matrix (see Figure 1 above for the overview of the theoretical framework); (2) the selection and analysis of case studies, which serve as (i) the foundation for the protocol and format of insitu case studies (Yin, 2004) that were then conducted through workshops for the study of the synergy between design and entrepreneurship. as well as; (ii) the creation of a database of design/entrepreneurship cases focussing on our approach (Perren and Ram, 2004), and;(3) the analysis of the case studies themselves, derived from workshops developed to implement and test a « design thinking » approach for entrepreneurial endeavour.

Longitudinal case studies (Yin, 2004) help examine in details the transformations that occur in a project (Boutinet, 2010), the processes (Pettigrew, 1997), networks (Halinen and Tornroos, 2005) and the structures (Mintzberg, 1979), starting from the early phase of problem framing (Dorst, 2006) and context exploration, through the development and prototyping as well as the business model generation.

#### 1.1.CASE SURVEY

The preliminary case survey was first conducted in order to identify key common characteristics as well as variables of project modes and processes for entrepreneurship initiatives. The cases were selected in the databases of the Centre d'entrepreneuriat Laval ([www.fsa.ulaval.ca/cepme](http://www.fsa.ulaval.ca/cepme)), from the Harvard Business Publishing (<http://hbsp.harvard.edu>), the Loughborough University ([www.lboro.ac.uk/microsites/lids/dprg-casestudies](http://www.lboro.ac.uk/microsites/lids/dprg-casestudies)), as well as internet sources such as: Design Council, Core77, Fast Company, Ideo, etc. Finding case studies suitable for the purpose of this research proved difficult as their format is mainly focused on: business performance, management, leadership, team profile and human resources parameters, or; on the other hand, the focus of design case studies residing mainly on the product/service outcome, it 's development, the branding, the marketing strategy, etc. The cases found do emphasize the multi-dimensional nature of design within the business, but only a handful of cases are treated on the format design/entrepreneurship. (see Hoover and Heltzel, 2013) Cross examination of cases was necessary in order to extract meaningful elements of study that combined design, innovation and entrepreneurship. (Davidsson and Wiklund, 2007)

Cases that focus on value proposition were especially needed, as they are centred on the product/service/strategy, hence, design. Since few studies actually focus on the observed processes of creating and structuring the business model « around » (self-organizing) the value proposition of the product /service, other sources were needed. Furthermore, since one of the big trend in entrepreneurship/startups is highly oriented towards new technology, not to say « applications », we wanted diversity and were looking for business projects that emphasize not only the product/service, but the organization as a whole, as well as the social innovation dimension. One can refer to these dimensions as expressed by design 3.0 and 4.0. (VanPatter and Pastor, 2013) or, from the IDEO social innovation perspective.

In the end, after extensive research, finding sound and reliable « research »

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cases that deploy a rigorous methodology serving as the starting point for our research proved tedious. Without a proper format we realized it was not possible to adequately analyze multiple cases in a longitudinal manner. Therefore, we came to the conclusion that the comparison between case studies originating from different disciplines/perspectives does not provide sufficient reliable material for analysis, at least in their original format. This conclusion constitute a result in itself and encouraged us to pursue this unique opportunity in developing this field of research by devising our own case study format.

### 1.2. WORKSHOP – CASE STUDY METHODOLOGY APPROACH

Therefore, one of the main challenge of the study and the next step consisted in developing the adequate methodological tools that would allow for the observation and the analysis of the synergy between different processes, initiating innovation, both from the design as well as business perspective. The processes were studied by analyzing the interactions, through time, between key variables of the project's design and business processes. These variables are briefly described below. The protocol had to establish the comparison between the organized – planned and linear – and the organizing project – informal and iterative.

The study of the business creation process, as stated before is mostly centred on sequential and prescriptive models/toolboxes, as in Aulet (Aulet, 2013) and Blank and Dorf (2012). The methodology tailored for our study was assembled by combining methods and toolboxes from four fields (Table: 1). For simplicity purpose in view of the upcoming workshops, we selected works from authors that represented each field. This choice allowed us not only to structure the research around four themes, but also provide a framework that participants would use in the workshops, as well as in real life in developing their projects. This format would also serve as the case study report format as well. The four fields are: (1) business/entrepreneurship (Aulet, 2013; Blank and Dorf, 2012); (2) organization (Osterwalder and Pigneur, 2010); (3) design (Kumar, 2012), and; (4) innovation (Van Wulfen, 2013; Keeley et al., 2013). These were also chosen in regards to the ease of tailoring and implementing the approaches into the workshops. The choice of works, although debatable, represents a very popular set of teaching material amongst academics. It provides in our view a strong perspective on actual academic orientation as well as practice from design and business. (Brem, 2011)

These works are not equal in terms of depth in regards of supporting theories and sturdiness for research purposes. They are more pedagogical and practice oriented material. They nevertheless offer a strong canvas on which to cast the main elements of the problematic stated above: the synergy within the triad design-entrepreneurship-innovation.

Also, since finding the proper case studies for our research proved difficult, we decided to « design » our own canvas. The four approaches/methods were therefore used to develop the protocols defining the methodology of « startup workshops » and case study formats. These workshops involved both the development of product/service as well as their business models, through an iterative exercise aimed at « designing » concurrently the processes and structure that support these projects/entrepreneurial initiatives. Previous experience with Startup Weekends (ex: <http://quebeccity.startupweekend.org>) provided valuable information in designing the workshops in terms of: size of team and disciplines involved (smaller and more diversified), mindset at the outset of projects (problem vs idea), focused on context and systemic thinking instead of product and business model, tools used for ideation and rapid

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prototyping (crafted for projects instead of prescribed); extensive use of minimum viable products method (Lean Startup MVP; (Ries, 2011), etc

Table 1 – Workshops format: perspective and content of cases studies

<b>Entrepreneurship</b>	Disciplined Entrepreneurship	Step by step approach	Aulet, 2013
	Startup Owner's Manual	Step by step approach	Blank & Dorf, 2012
<b>Organisation</b>	Business Model Generation	Business Model Canvas, Value Proposition	Osterwald & Pigneur, 2011
<b>Design</b>	101 design method	Sense Intent, Design Driven Innovation Process, Design Thinkin	Kumar, 2012
<b>Innovation</b>	The Innovation Expedition	Innovation FORTH Visual Toolkit	Van Wulfen, 2013
	10 Types of Innovation	Building Blocks of Breakthrough Innovations	Keeley, 2013

The workshops/case formats aim at analyzing the types of outcome in terms of: (1) the design, that is, the types of design opportunities (innovations) and projects/solutions developed through the « design thinking » approach, based on problem solving in context as opposed to idea development; (2) the business model devised « around » the project (product/service) instead of using a formal/traditional model based on industry segment; (3) the combined iterative processes and synergy between business model generation and product/service development — self-organizing process (Osterwalder and Pigneur, 2010); (4) the combined iterative processes and synergy between: (i) the startup step by step approach, (Aulet, 2013; Blank and Dorf, 2012) (ii) the business model generation and,(Osterwalder and Pigneur, 2010) (iii) the types of innovation (Keeley et al., 2013). Each of the steps of the methods described in the approaches above (see Table: 1) were monitored and the data collected individually. Each step was then linked to other corresponding steps of the other approaches in order to create a comprehensive map of the overall iterative innovation process and synergies between business and design model generation.

The meeting point of the four approaches is better illustrated through the « business model generation » approach, which provides the business canvas model as a synthesis tool, centred around the value proposition. (Osterwalder and Pigneur, 2010) It is where all the information from all the processes comes together in a coherent whole. What our approach brings in addition consists in emphasizing the design approach, adding to the process and highlighting this value proposition.

### 1.3. WORKSHOPS FORMAT

The case studies unfold within an academic setting developed in order to test and implement a design/entrepreneurship methodology as well as an academic program. The Startup Fuze - Design Entrepreneurship Seminar is offered at Université Laval in Quebec City. It is run jointly by the Business Administration Faculty (FSA) and the School of Design, as well as with the participation of selected businesses, crowd funding organizations, entrepreneurial institutions and selected high profile speakers from the local and international startup

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community. Forty (40) participants were recruited from an international and local pool of students (Mexico, England, France, US, Canada). Nine (9) teams were formed. Two types of workshops were studied in action. The aim was to observe and analyse the differences in processes and outcome between two modes of startup initiatives, both of which are condensed formats of the entrepreneurial process.

### 1.4. STARTUPS

Two sets of workshops were studied. The first, in October 2013, was a fast track Startup Weekend event ([quebeccity.startupweekend.org](http://quebeccity.startupweekend.org)) : focused on launching a product and a business model

Startup Weekends are weekend-long, hands-on experiences where entrepreneurs and aspiring entrepreneurs (developers, designers, marketers, product managers) come together to share ideas, form teams, build products and launch startups (find out if startup ideas are viable). On average, half of attendees have technical or design backgrounds, the other half have business backgrounds. Beginning with open mic pitches on Friday, attendees bring their best ideas and inspire others to join their team. Over Saturday and Sunday teams focus on customer development, validating their ideas, practicing LEAN Startup Methodologies and building a minimal viable product. On Sunday evening teams demo their prototypes and receive valuable feedback from a panel of experts.

The second workshop, Startup Fuze, is an intensive academic /professional program that spans over four weeks that took place in May-June 2014: focussed on addressing a problem and devising a scalable value proposition:

Startup Fuze builds change-makers by empowering people with design and entrepreneurship mindsets, and integrating them into a vibrant community of likeminded people. Participants follow a process of identifying and developing innovations that's used by the most impactful people and organizations in the world. Simultaneously, highly successful innovators from across the world share critical knowledge related to things like ideation, design, storytelling, venture capital markets, pitching, effective presentations, growth hacking, product design and testing, business model generation, and more.

This intensive program reviews the four approaches in depth and guides the participant with high quality mentoring as well as up to date speakers, all through the processes. Each team develops a project around a « problem space », generating systems of problems that in turn open up on systems of design opportunities. The four weeks program is divided in: two weeks of intensive workshops (lectures and hands on development; one week of speakers, crowd-funding, conferences, events and field work, and; one week of preparation for their final formal pitch in front of a selected jury. Prizes are also distributed.

## **4. RESULTS AND DISCUSSION**

Our preliminary observations, case study analysis and our evolving literature review reveals that: (1) the links between theories of entrepreneurship and innovation are well established; (2) the links between design and entrepreneurship, in terms of scientific research output, remain superficial and in need of further inquiry; (3) the trend in startups initiatives suggest a real need in pursuing further inquiry into the synergy of design - innovation - entrepreneurship as a promising field of research.

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Workshops results have been partly collected and analyzed but need further validation before they can be fully published. Nevertheless, this intensive workshop format reveals some interesting facts. It differs from Startup Weekends in many ways and addresses many problems that were discovered in that first workshop. Indeed, the two workshops represent the two main paradigms that animate the business/design landscape. One process is mainly linear, starts with a single idea, proposes a single product/service, is based on an established or prescribed business model adapted to the segment and industry, is focused on marketing (market segment), cost structure, revenue stream, etc. The other is fundamentally iterative, starts with a problem, generates multiple design opportunities, proposes integrated products/services/experiences, conceives (self-organizes) the business model (structure and processes) around the project, is focused on the user and experience, addresses sustainable development, unfolds into the social innovation sphere, is by nature of the systemic process part of a wider ecosystem.

The main challenge for participants consists in making choices in regards to the sequence of steps. The design process and the entrepreneurial step-by-step approach differ greatly, both in terminology and in sequence. Parallels can be made between these approaches, but their mindsets are very different. As an example, designers traditionally start exploring with problems and are user centered; managers start with a market segment and are performance driven (revenue stream). Comparing the necessary steps and processes needed to fulfil the journey, one can appreciate these different confronting mindsets. The resulting iterative back and forth activity provides the data for the analysis of the anticipated synergy of the whole process through the mapping of decisions.

In the light of this general observation, two elements stand out. First, a two sided set of observations regarding disciplinary stance. On the business profile side, trained professionals have more difficulty in adopting a design attitude, that is putting the focus on first defining the problem space. Most are more instinctively inclined at generating a flow of « ideas » and then trying to validate the most profitable one. Few will take the risk of devising/designing a novel business model (dynamic network) around their proposition and will adopt a traditional structure approach. Their process is more in line with the linear positivist and sequential approach, making them more organized and structured in their objectives and output. In that context, their analytical perspective is valuable, even though they will hesitate to move forward if that step is not fully completed. The drawback is that they strongly refrain from engaging in confronting scenarios and iterations within and between process.

In the same line of thought, on the second side of this first set of observations, designer profiles do not readily understand the intricacies and strategic importance of keeping an eye on the business model development, as it will strongly condition the product image, experience and delivery to their audience/user. They have more difficulty getting involved in that process, tend to let decision-making on that matter slip away until it is well advanced and more difficult to turn around. In both instances, designer and business profiles go through a steep learning curve in terms of tools needed to communicate with each other. Rhetoric, modes of thought and proper understanding of disciplinary terms are hindering the cooperation between disciplines, creating unnecessary frustrations. Both participants have difficulty switching and balancing between design and business processes. This is more obvious from the designer profile side.

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In general, participants will identify themselves more with one disciplinary stance and stick with this posture, thus creating balanced and challenging teams. The best leaders appear to have more ease dealing with uncertainty and will test more scenarios (satisfying solutions), this being unrelated to discipline. Knowledge and experience in respective domains/disciplines appear to be a determinant factor in this dual synergy. The more entrenched and experienced a practitioner is, the more likely the disciplinary boundary will be a negative factor for fluid cooperation. It is nevertheless worthy to note that at the end of the process, participants are much more aware and knowledgeable of the importance and role of respective disciplines and processes than at the beginning of the workshops, indicating that a well crafted protocol encourages the synergy between disciplines and knowledge domains.

The second element that stands out from our observations that deserves a mention relates to the type of project/design outcomes. Indeed, the project outcomes that were documented strongly indicate that a sound design intent approach, based on systemic concepts and thorough analysis of problem space, does generate a pool of rich design propositions, leveraging entrepreneurial endeavour into truly scalable business model. Resulting entrepreneurial projects, instead of resting on a single idea/solution proposition, come out of the process sitting on a system of interrelated design opportunities, project potential and a progressive scalable business model. To support this claim, we note that of nine projects that were developed, six proposed a wider system of proposition, all resulting in social innovation projects.

### **5. FURTHER RESEARCH**

Two more rounds of StartupFuze workshops are planned for 2015. The formats will be updated according to our observations. A professional program version will be established, allowing more depth in expertise and project variety. The workshops will also be paired to another research program that focus on a broader pedagogical research, bringing together the two participating faculty in a joint «business-design incubator » project. Plans are underway to dispense our program in partnership with international partners. The case study database will be established following the second round of workshops. The data collected will then allow for an in-depth analysis permitting to establish the proposed links within the triad design-innovation-entrepreneurship. Finally, the results will be analyzed as to test the assumption in the light of previous results in regards to the self-organizing project. These results will be published in an upcoming paper.

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