

## How to enhance the design awareness of start-up managers? The case of a design support workshop

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*Design is a value-creating approach that provides a competitive advantage and fosters innovation within organisations. Indeed, many companies still struggle to integrate design into their practices and few design support programmes are available in Switzerland. Given this context, we address the following question: How can a design support workshop impact the design awareness of Swiss start-up managers? We have created a design support workshop to enabling five start-ups from Western Switzerland to benefit from designers' skills during four consecutive evenings. The perceptions of the five start-up managers about design awareness were assessed before and after the workshop. Therefore, the results of this publication concern the impact of the design support workshop on the design awareness of start-up managers. In this paper design awareness concept was considered according to (1) areas of design impact (2) the value of design and (3) the roles expected from designers. The workshop programme appears to be effective in enhancing (a) the perception of design impact in the field of customer orientation; (b) the perceived value that design can bring to assist in decision-making and developing strategic directions and (c) the different roles expected of designers by start-up managers.*

**Keywords:** Design support programme; design awareness; nurturing design awareness; workshop, start-up

## Introduction

Design is increasingly seen as a key strategic factor in innovation and business-development (Storvang, Jensen, & Christensen, 2014). Research shows that design-driven companies are more innovative than other similar companies (Commission of the European Communities, 2011). Furthermore, a number of authors have noted or demonstrated that the effective deployment of design resources by managers can contribute towards achieving organisational objectives (Gorb, 1990) and foster value creation by the company (Best, 2006; Chiva & Alegre, 2009; de Mozota, 2006; Heskett, 2009). Design can thus play a major role in innovation, competitiveness and performance of businesses. Consequently, there is a growing interest in design among practitioners and scholars (Erichsen & Christensen, 2013) who perceive design as fundamental to a holistic and multidisciplinary problem-solving approach (Commission of the European Communities, 2011). Firms are starting to invest in design in their innovation processes and academic journals have published increasing numbers of articles on the contribution of design to business performance (Acklin, Cruickshank, Evans, & Cooper, 2013; de Mozota, 2006; Gorb, 1990; Kootstra, 2009).

However, Acklin has noted (2011) that many SMEs and start-ups (Acklin & Wanner 2017) do not view design as a strategic resource and reject or frequently abandon the idea of integrating design into their innovation and new product development projects at an early stage. Some of the obstacles to the development and integration of a design-management function in business organisation include limited resources, less formal or non-existent product development and innovation processes (Fueglistaller, 2004), lack of access to design resources (Cox, 2005), poor design understanding (Moultrie, Clarkson, & Probert, 2007) or a deep chasm between engineering and design or management and design values and their ways of “handling things” (Acklin, 2011).

In such a context, raising design awareness is the first step of introducing design to a firm (Brazier, 2004) and a critical factor for increasing design capability of a business organisation (Dickson, Schneier, Lawrence, & Hytry, 1995; Jevnaker, 2000; Best, Kootstra, & Murphy, 2010; Heskett & Xihui, 2012; Storvang et al., 2014). Design awareness involves embedding design into an organisation’s mindset in such a way that it becomes (1) a way of thinking and not just a business resource (2) an investment and not an expense and (3) a set of problem-solving methods and processes, and not

simply a means of implementation (Best, 2015). In this paper, we follow Hesselmann and Walters (2013) in defining design awareness as the extent to which businesses are aware of the benefits and potential value that design and design management can offer.

Design support programmes (DSPs) designate publicly funded projects and time-limited programmes that aim to assist businesses in achieving their objectives by working closely with designers and by using design methods, skills and knowledge (Raulik-Murphy & Cawood, 2009). Design workshops can also be viewed as design assistance programmes that raise design awareness (Liu, 2016) but only few literature (Gulari, 2014; Regions supporting Entrepreneurs & and Designers to Innovate, 2014) have demonstrated their impact.

The objective of this article is to evaluate how design awareness could be developed among young companies through the development of business projects. Our research question is: **How can a design support programme workshop impact the design awareness of Swiss start-up managers?** This question implies that both designers and companies should be aware of the link between design activity and business challenges. This paper will first highlight the state of the art of the addressed topic, namely managers' design awareness and design support programmes. Then we will detail how the workshops have been designed and presents the profile of the start-ups who took part in the event. Afterwards we will focus on the main results of the questionnaire, including the results of the qualitative analysis. Finally, we will conclude and sets out the main limits of the research. It also mentions avenues for future research.

## **State-of-the art**

**Design support programmes and design awareness :** Since the contribution of design to innovation and competitiveness has been established (Commission of the European Communities, 2009), design-led business support programmes have emerged as a response to government investment in promoting design as a strategic resource for innovation and business growth (Gulari, 2014). Their core objective is to help businesses to integrate design throughout their activities (Regions supporting

Entrepreneurs & and Designers to Innovate, 2014). DSPs are often driven by a national design council or design centre such as the UK Design Council, the Norwegian Design Council, the German Design Council, the Danish Design Centre for implementing design policy (Commission of the European Communities, 2009). Historically, these organisations have been invaluable in introducing design to businesses, increasing design awareness and presenting the value of design to stakeholders (Raulik-Murphy, 2010).

**Design awareness in design policies :** Design support programmes contribute to all three levels of design policy (a) design promotion (b) design support programmes and (c) national design policies (Commission of the European Communities, 2009).

The first level, design promotion schemes and awareness-raising, is the most basic and generally the first initiative taken by a government or region to support design (Commission of the European Communities, 2009). In fact, raising design awareness is a key step in introducing design to a firm (Brazier, 2004) and a major factor in enhancing design capabilities (Dickson, Schneier, Lawrence, & Hytry, 1995; Jevnaker, 2000; Best, Kootstra, & Murphy, 2010; Heskett & Xihui, 2012; Storvang et al., 2014). Two interpretations of the term “design awareness” can currently be identified. In one, managers are seen to be capable of judging design as aesthetics or as a process. The other relates to the nature of innovation and design activity and its role in contributing to organisation effectiveness (Best, 2015). Both forms of awareness are required if managers aim to make effective use of innovation and design (Best, 2015).

**General design awareness initiatives in SMEs and start-ups :** Design-awareness initiatives can be considered as design promotion or design support programmes. To our knowledge, the literature makes no distinction between the different types of company (SMEs, start-ups, etc.) concerned by these initiatives. Regardless of category, design awareness in companies can be mainly raised through (1) an assessment of their design capabilities (Liu, 2016) and/or, (2), by their participation in design-support workshops (Gulari, 2014; Liu, 2016).

Both design councils and academics have created tools to assess design capability. These different tools can be used to measure/evaluate an organisation’s ability to deploy design management and/or evaluate

design maturity within its own organisation (1) by means of a questionnaire; or (2) in a conceptual way. Some of the best-known tools include (a) the Design Management Staircase (Kootstra, 2009); (b) the Design Process Maturity Model/Design Audit Tool (Moultrie et al., 2007); (c) the Design Value Scorecard (Westcott et al., 2013); (d) the Design Management Travel Guide (Acklin & Hugentobler, 2008); (e) the Design Capacity Model (Storvang et al., 2014); (f) the Design Atlas (2000); (g) the Design Management Skills Measure (Chiva & Alegre, 2009); (h) the Design Management Absorption Model (Acklin, 2011) or even (i) “The Balanced Score Card for a Design Manager” (de Mozota, 2006). The Danish Design Ladder (j) (Danish Design Center, 2001) is perhaps one of the best-known tools. The ladder’s four levels and five factors can be combined into a maturity grid and used to evaluate design awareness in a given company (Best, 2015). However, while some of these tools claim to be capable of measuring SME design awareness, they do not share an accurate measurement indicator.

Regarding workshops, well-prepared DSP workshops can increase design awareness and provide companies with an opportunity to think about their own practices by removing them from their day-to-day routines and by using several techniques to encourage reflection (Gulari, 2014). However, these DSP workshops also suffer from weaknesses as well as strengths as can be seen below. To our knowledge, no indicator currently exists to measure the impact of workshops such as these on company design awareness.

**Table 1 : Design support programmes strengths/weaknesses and expectation differences**

DSP Workshop Strengths	DSP Workshop Weaknesses
<ul style="list-style-type: none"> <li>• <b>Increasing awareness of design-led innovation</b></li> <li>• Design by « doing », with a hands-on approach to foster design knowledge</li> <li>• Peer learning and networking</li> <li>• Inspiring</li> <li>• Enabling empowering</li> <li>• Engaging and motivating</li> </ul>	<ul style="list-style-type: none"> <li>• Time and energy for delivery</li> <li>• Energy intensive for participants</li> <li>• Common method (another workshop)</li> <li>• Difficulties for businesses in applying lessons to their own problems</li> <li>• Initiate but do not complete the process</li> <li>• SMEs may be unfamiliar with the idea of serious plays and hands on learning</li> </ul>
DSP Workshops Delivery Expectations	DSP Workshop SMEs Expectations
<ul style="list-style-type: none"> <li>• <b>Promote design and raise of design awareness</b></li> <li>• A process oriented approach</li> <li>• Integration of design in business strategy</li> <li>• A human-centred perspective</li> <li>• Cultural change in the company</li> </ul>	<ul style="list-style-type: none"> <li>• An outcome-oriented approach</li> <li>• Tangible and practical solution</li> <li>• Financial benefits</li> <li>• Immediate solutions to specific problems</li> <li>• An approach enabling a risk averse approach, with smaller steps, incremental innovation</li> </ul>

Source: Gulari (2014)

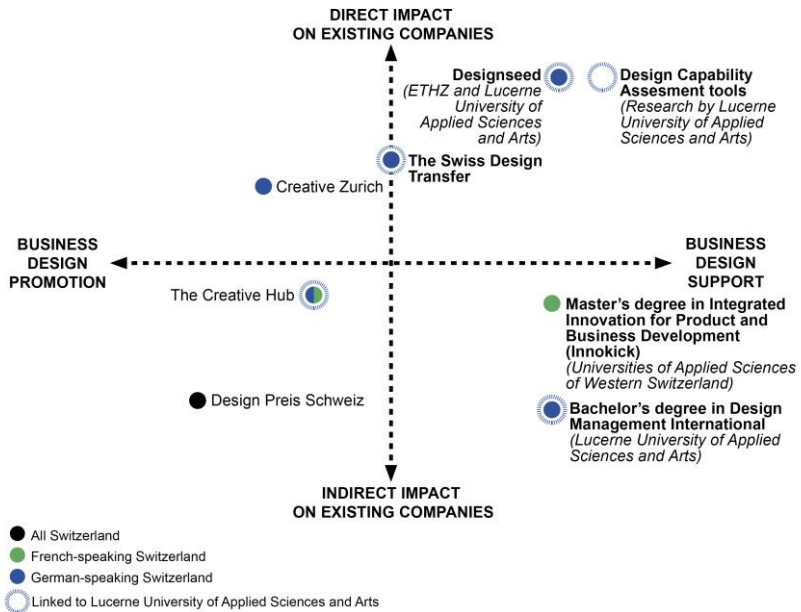
**Design-awareness initiatives directed towards companies in**

**Switzerland** : In Switzerland, few design support initiatives have been developed as they may exist in other European countries (Regions supporting Entrepreneurs & and Designers to Innovate, 2014). This is despite the fact that design and innovation are closely linked and Switzerland is considered as one of the most innovative countries in the world (Cornell University, INSEAD, & WIPO, 2017). To our knowledge, no specific design policies exist. Indeed, (1) design promotion and (2) design support programmes that target SMEs and start-ups offering design capability assessment and workshops are poorly developed.

However, while no design support programmes as defined by Raulik-Murphy & Cawood (2009) exist, many initiatives can be considered to support design awareness. Figure 1 maps the current Swiss ecosystem of

design support initiatives, leaving aside private and/or purely for-profit actors. Table 2 offers an overview of these initiatives and justifies their position in the matrix. Education programmes aimed at developing design awareness are also included.

**Figure 1 : Public or non-profit initiatives supporting design awareness in Swiss SMEs**



Source: (The authors)

**Table 2 : Public or non-profit initiatives supporting design awareness in Swiss companies (further details in the appendix 1)**

Design Support	Directly to companies (SME or start-up)	Name	Description
x	x	Design Preis Schweiz	The Design Preis Schweiz is showcases the importance of Swiss design.
x	x	The Creative Hub	The Creative Hub is a non-profit association supported by Engagement Migros. Its aim is to support Swiss designers in the implementation and commercialisation of their product and business ideas.
✓	x	Bachelor's in Design Management International (DMI)  (Students projects and internships)	The DMI Bachelor's degree from the Lucerne University of Applied Sciences and Arts. Students benefit from an interdisciplinary learning environment and a partnership in establishing direct links between the applied field and the classrooms.
✓	x	HES-SO Master of Science in Integrated Innovation – Innokick  (Students projects)	The Innokick Master's degree brings together students from interdisciplinary backgrounds. It is mainly based on learning by doing approach, and student work on company's cases during a year. This programme does not solely cover design.
✓	✓	Swiss Design Transfer (SDT)	The SDT is an association and is part of a network of public and private partners. Its mission is to communicate the potential of design as a success and value-adding factor.
✓	✓	Design capability Ass. tools	Acklin has carried out several academic researches with Swiss SMEs with a view to developing new design awareness tools and evaluating company design management practice (Acklin & Hugentobler, 2008; Acklin,



			2011; Acklin et al., 2013; Acklin & Wanner, 2017).
x	✓	Creative Zürich	The Creative Zurich Initiative is an open and independent association of actors in the creative industries along with other interested parties committed to strengthening the creative industries in the Zurich area.
x	✓	Designseed	This programme, supported by the Gebert Rűf Foundation, brought together designers and engineers to work on six high-tech start-ups selected by the ETHZ Innovation and Entrepreneurship Laboratory. (Acklin & Wanner, 2017).

**Specificities of design-awareness initiatives directed towards start-ups :**

Most countries support programmes designed to encourage the creation of start-ups. Structures of this nature depend primarily on user engagement. In these circumstances, design becomes a key differentiator between start-ups in seeking sources of financing, media coverage and user loyalty (Acklin & Wanner, 2017). The term "start-up" can be defined as the result of the act of undertaking (Chew, 2015) or, as Eric Ries (2011) observes, "a human institution designed to deliver a new product or service under conditions of extreme uncertainty". According to Markovic & Salamzadeh (2012), start-ups have three development phases: (1) the bootstrapping stage; (2) the seed stage; and (3) the creation stage. The bootstrapping phase serves to turn an entrepreneur's idea into a profitable business. Companies increasingly recognize the importance of design during this phase, also called the Fuzzy Front End, and use the skills of designers not only to create new products/services, but also to co-create concepts (Calabretta & Gemser, 2015). The second phase, the transition phase, is characterized by teamwork in the development of prototypes, marketing and company development. During this phase, start-ups seek support to accelerate their growth and enable them to make medium-term investments. Here design becomes a highly sought-after expertise, especially in the development of prototypes, because it makes it possible to create simple and meaningful

experiences for customers (Chew, 2015). Finally, during the third phase, design becomes a strategic resource in supporting company development.

## **Methodology**

In order to raise design awareness in start-ups, we devised a programme that brought together designers and entrepreneurs over four evenings to foster collaboration between them. This programme was designed and implemented by the School of Management and Engineering Vaud (HEIG-VD) and Lausanne University of Art and Design (ECAL). It was sponsored by a Swiss municipality and an organisation supporting entrepreneurship in the state of Vaud. The « Innovation by Design Challenge » took place from 6th to 9th November 2017 and the result was presented the 16th November.

**Start-ups and designer recruitment:** A call for start-ups and designers was launched between 27th September 2017 and 10th October 2017. During the call for projects, it was specified that two prizes would be awarded. A total of twenty-three start-ups and twelve designers applied. Ultimately, five start-ups and ten designers were selected. The selection criteria for start-ups were (1) to be located in the state of Vaud; (2) to have been founded in the last five years or to be in the creation phase; and (3) to propose an innovative project. The selection criteria for designers were (1) to be a final-year Bachelor's or Master's student or a professional under 40 years of age; and (2) to practise design either as a product designer, a service designer, a graphic designer or a media and interaction designer.

**Workshop design:** Each start-up benefited from the exclusive support of two external designers from different disciplines and the support of three external facilitators (available to all groups). Which designer was chosen to support the start-up manager depended on their backgrounds and the start-up's chosen issue. Specifically, the workshop consisted of four evenings each lasting three hours.

**Table 3 : Start-up workshop participants and designers' profile attribution**

<b>Start-up</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>
<b>Creation</b>	May, 2016	Dec, 2016	In progress	April, 2017	November, 2017
<b>Sector of activity</b>	Food	Music & ICT	Corporate wellness	Urban Agriculture	e-health
<b>Main offer</b>	100% natural and gourmet popcorn production	Innovative way to quickly learn how to play and read sheet music	Individual energisation cabins for companies	Design of autonomous micro-farms for domestic use	Control of moles by remote dermoscopy
<b>Full-time employee (FT)</b>	5	3	1 + (2 external consultants)	2	3.5
<b>Needs</b>	Review the design and packaging	Would like to launch a web application	Defining the offer*	Prototyping	Commercialisation
<b>Designer 1</b>	Graphic designer	Graphic and service designer	Graphic and product designer	Product designer	Service designer
<b>Designer 2</b>	Product designer	Product designer	Product designer	Product designer	Product designer

The work sessions were designed along the lines of an advisory support session provided for a single company. We took into consideration the recommendations of Gulari (2014) (Figure 2) about workshop content and delivery (1) to avoid jargon and academic language (2) to design specific content relevant to company needs (3) to inform companies about the rationale and value of activities (4) to experiment design content (5) to manage time during workshops (6) to work within company time schedules and (7) to spread delivery over time to encourage reflection and networking.

**Figure 2 : The seven-step evaluation framework of the outcomes of Design Support Programme**



Source: Gulari (2014)

The event started with a presentation on design definition and the ways in which it impacts innovation. Then, the workshop proceeded as follows:

**Day one:** presentation of SME issues to the designers and familiarisation of the designers with the start-up businesses. **Day two:** diagnosis of actual product offer and customer targets. Improvement or redefinition of actual offer from a customer-oriented point of view. **Day three:** beginning to transform ideas into tangible, practical elements. **Day four:** project materialisation through rapid prototyping and preparation of the final presentation.

One week after the end of the challenge, the teams presented their work to a private group of six experts in entrepreneurship who awarded the first prize on the following criteria: (1) the development of the project from T01; and (2) their perception of the team's collaboration. During a public event, following the private session, each group pitched its project to a crowd of around 100 people (politicians, academics, entrepreneurs, students, etc.) and the audience selected its favourite team awarding second prize.

**Data collection :** Two distinct data sets were collected during two time periods: T01 = before the workshop, T02 = after the workshop. These two

data sets are composed of two questionnaires and two semi-structured interviews with the five start-up managers. The questionnaire responses therefore constitute qualitative data that have been quantified for analysis. Our intention was to use these data to measure design awareness, a construct that should be measured in any assessment of a design support workshop. The seven-step evaluation framework proposed by Gulari (2014) used for planning and evaluating design support outcomes doesn't explain how precisely to assess design awareness. Consequently, we designed a questionnaire (available in the appendix) based on existing literature (de Mozota, 2006; Kootstra, 2009; Moultrie et al., 2007) and our own research. The questionnaire was composed of three key themes: (1) areas of design impact; (2) the value of design; and (3) the roles expected of designers and their contribution to innovation tasks. We analysed the perception of start-up managers of these three themes before and after the design support workshop via an online Google Form questionnaire.

A 30-minute discussion with each start-up manager was conducted before and after the event and used to complete the questionnaires. The objective was to measure managers' relationships with the field of design and their perception of this activity. Furthermore, at the end of the workshop, questions were asked to evaluate their satisfaction with the event (level 2 in Gulari's framework).

## **Results**

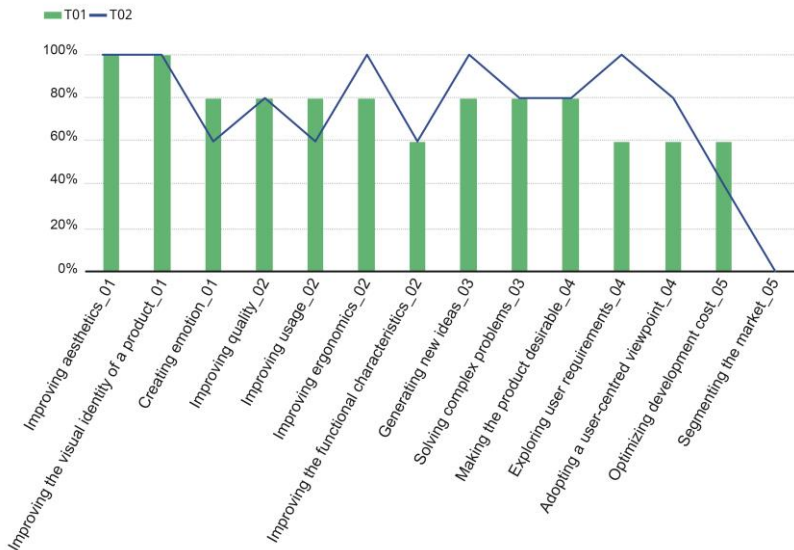
The results from the questionnaires at T01 and T02 had revealed that the workshop had an impact on the five start-up managers in the three evaluation categories.

### ***1. Areas of design impact***

The evaluation of the impact of design activities (Figure 3) shows that the managers had indeed changed their perspectives on design impact after the workshop. Indeed, aesthetics and visual communication (01) were the still-shared impacts most frequently mentioned by the start-up managers, even though they were less convinced of the emotional contribution made by the designers. In the case of the impact of design on usage (02), there was a slight decrease in the "usage" impact of design and an increase in the

impact on ergonomics. However, generally speaking, there was no change in the perception of the impact of design on this variable. As regards the impact of design on reflection activities (O3), an improvement was noted. However, the most significant change in design impact was on customer orientation (O4). Effectively, start-up managers showed an increased perception of the impact of design on the criteria of “exploring user requirements” and “adoption of a user-centred view”, which is essential for start-ups during the Fuzzy Front End phase.

**Figure 3 : Q1 - Design activities impact on: (several answers possible)**



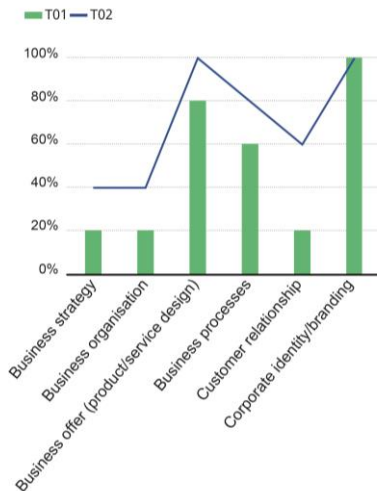
This improvement in the customer orientation field was explained as follows by the entrepreneur who won the first prize: *“The workshop gave me a broader overview than expected. I had seen design as a more restricted field, it came as a surprise, and brought me more than I expected. On the other hand, my expectations were somewhat misguided. I had naively expected, like many other people, that we would concentrate mainly on the shape of the product/service and we ended up working on its definition*

(authors' note: in the sense of value proposition) instead. I thought we'd only be working on the product and UX".

Finally, there was a slight decrease in impact on the business model (5), cost optimisation and market segmentation. This result may be explained in part by the short duration of the work session. No team had sufficient time to address these specific issues and the youth of the start-ups meant that they were not yet in a position to articulate these concerns.

In conclusion, we can say that there has been an improvement in the perception of design activities by managers between T01 and T02. Indeed, Figure 4 shows more generally the company activities in which start-up managers consider that design plays a key role.

**Figure 4 : Relevant design activities**



After the workshop, the respondents had a better and more positive perception of the role of design for all variables. Even though the perception of the effects of design remains low in key sectors such as business strategy and business organisation, the other variables show a positive development (up from 1/5 to 2/5 start-up managers). Most start-up managers mentioned

the impact of design on strategy during the interviews conducted after the workshop. This can be seen in the comments below:

*“In my new perception of it, design is a global approach to business, from corporate strategy to user service”.*

*“Design encompasses more things than I had originally thought. For example, service design is new to me. Also, the strategic aspect is, I think, the one of the newest elements for me. A designer can bring more strategic vision and inputs than I imagined”.*

*“Before the workshop, I associated design with graphics. Now I understand that design is complementary to the innovation process and that if you want to innovate, you must use design”.*

However, the most significant increase concerned the role of design activity in the customer relationship (up from 1/5 to 3/5 managers). This is in line with the previous graph (Figure 3) and shows that the designers had succeeded in demonstrating their customer-oriented value. Finally, as in T01, design activity is still seen to be fundamental to the commercial offers (usage) and corporate identity design (aesthetics).

## *2. Value of design*

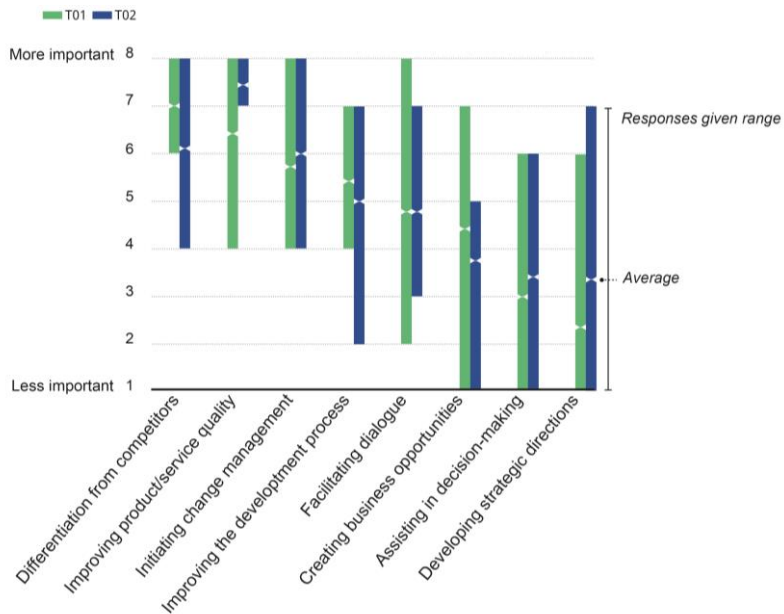
The second theme that we identified relates to changes in the perceived value of the contribution of design for the managers participating in the workshop programme. At T01, design was initially seen as a tool used to create a competitive edge through the development of innovation-led products. However, at T02 the “improving product/service quality” variable was the element to which design could add the most value with all start-up managers agreeing with this position. Competitive edge then fell to second position with a higher perception gap compared with T01. We can also observe that, at T01 and T02, the classification of the value of design for the other six variables did not change overall, although differences between start-up managers’ perceptions of design value occasionally increased or decreased.

Above all, it is interesting to note that the perceptions of two elements seemed to be less valuable at T01, i.e. (1) design to assist in decision-making and (2) design to develop strategic directions, had improved considerably at



T02. This is in line with the above-mentioned observations and shows that the workshop was successful in leading to reflection and a change in the perception of start-up managers both on (1) the impact of design on the sector and (2) its potential value for these sectors, despite any ongoing lack of consensus.

**Figure 5 : Q2 - Classify the value of design by order of importance**



### *3. Roles expected from designers*

The graph Figure 6 shows the role that start-up managers expect from designers and its evolution between T01 and T02. The entrepreneurs were asked to categorize the role of the designers. The graph shows the relevance of designers for different roles as perceived by the managers. In general, it can be said that the workshop had a very positive impact. Effectively, for 14 of the 18 areas in which the designers could have a role, managers had higher expectations at T02 than at T01. This shows that the designers had succeeded in demonstrating their added value during the workshop. The

greatest improvement was shown in the roles of (1) guide to help identify customers' needs; (2) an organiser able to rethink a process; and (3) a catalyst for product/service development.

These improvements are confirmed by the interviews. One manager explains how his vision of the role of the designer as an identifier of customer's needs has evolved. In answer to the question "What can design bring to start-ups?", he responded:

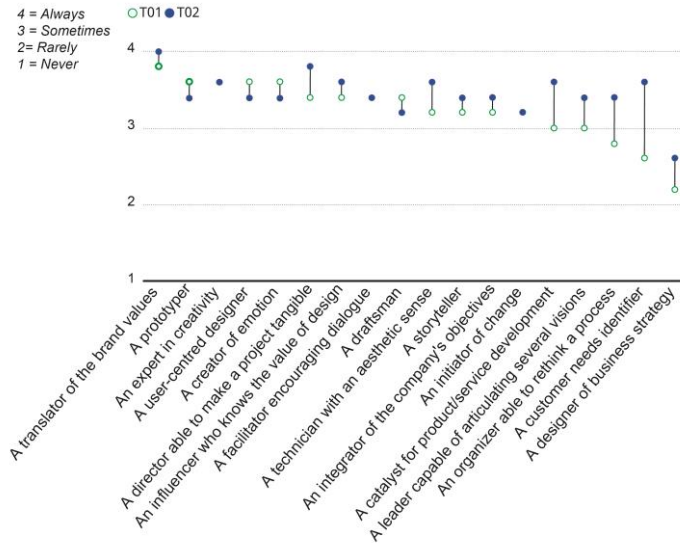
*"It can allow differentiation from competitors and powerful brands. Design allows us to energise a brand and convey emotions to end customers. Visuals can reach target customers appropriately, they become alive and not just flat and linear by playing with emotion".*

His perception had changed by T02 in answer to the same question: *"Differentiation from a competitor. Design can bring breakthroughs and incremental innovation and product ergonomics. But design is not only visual, designers take users and usage into account".*

We can also use the words of another manager at T02 to highlight the changing perception of the designer's role: *"With hindsight, we now realise that designers have broader skills, it's not just creating, but designing from A to Z. We thought they would be performers, but in fact they have taught us a new way of working and helped us understand problems".*

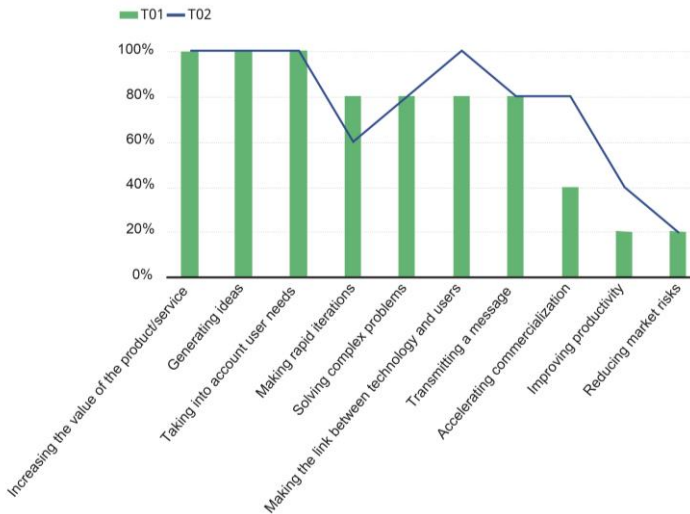
Finally, the four variables in which there was a slight decrease in frequency at T02 were (1) a prototyper; (2) a user-centred designer; (3) a creator of emotion; and (4) draftsman. The drop is, however, very small and, despite this decline, managers still believe that designers frequently play important role in these areas.

**Figure 6 : Q4 - Roles expected from the designers**



Finally, Figure 7 shows the role expected of designers by start-up managers in innovation tasks. The workshop clearly had an impact concerning “Accelerating commercialisation”. In fact, at T02, nearly all start-up managers (4/5) agreed that design could increase the speed of commercialisation compared with only two at T01. This change in perception is reflected in the words of a manager who, after the workshop, now sees the contribution of design to be essential *“to bouncing about ideas as soon as possible. It's hard to get by if you lock yourself in a bubble”*. However, there is a degree of inconsistency in this response because while the role of design in “Accelerating commercialisation” task has increased, managers view the role of design in the “Making rapid iterations” tasks to be less important by T02. This may be because « iteration » is a broad term and can be applied to more than one element in the innovation process.

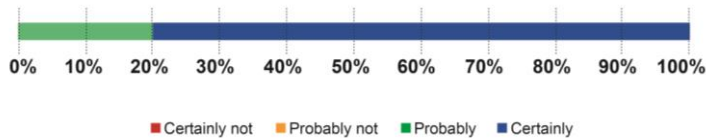
**Figure 7 : Q6 - Role of design in innovation tasks**



#### 4. Start-up managers' feedback on the workshop

In general, the managers were satisfied with the outcomes of the workshop. According to the final questionnaire, 4/5 managers would certainly recommend it to other start-ups and only one manager would probably recommend it. Importantly, the two winning start-up managers hired the designers after the workshop commissioning them to continue with the work undertaken during the week. Other teams have also kept in contact, collaborating in different ways. This support design workshop also helped start up a network of designers and start-ups, which can be used to try out new partnerships, discover design and hire designers.

**Figure 8 : Would you recommend the design support workshop to other start-ups?**



How can we upgrade future workshop programme? The managers were asked several questions during the interviews with a view to improving the next design support workshop. In conjunction with the seven-point advice given by Gulari (2014) on workshop design, their feedback is presented below. The recommendations for the next workshop are in italics:

1. **To avoid jargon and academic language:** No specific comments were made by managers on this subject. This offers confirmation that the introductory presentation had been tailored to the language of the practitioners and that the different expertise of the facilitators coming from business, design, innovation and academic backgrounds had indeed contributed to successful collaboration between teams. The fact that most designers participating in the challenge had previous work experience also contributed to the success of the workshop.
2. **To design specific content relevant to company needs:** Two managers clearly expressed the view that they would have appreciated being in the position of clients commissioning a designer and not in a co-creation process addressing a particular problem. *This was not the objective of the workshop and this point should be better explained in communications about the next workshop. In increasing design awareness, designers should not be used as general performers but rather as supports for reflection, even if workshop outputs are less tangible for managers.*

3. **To inform companies about the rationale and value of workshop activities:** Despite the substantial financial prizes, all entrepreneurs indicated that this was not their main motivation for participating in the workshop. Three clearly mentioned the opportunity to collaborate with ECAL designers as a source of motivation and a key value of the workshop. *The prize budget for the next workshop could be reduced.*
4. **To experience design content:** No specific comments were made about this despite explicit questions about the methodology used in the work sessions. However, it emerged that, over of the days, the groups were self-organising in terms of the tasks to be carried out (regarding the final expected output, i.e. the pitch). *Thus, we should think about the importance of teamwork to the quality of the final output and to achieving greater homogeneity in participant experience. Nonetheless, the progress made by the teams demonstrated that the designers needed to go through a phase where they came to understand the challenge by reframing it, understanding the business context and the customer target. This was essential to a better understanding of the value proposition and to helping the entrepreneurs better define their offer before reflecting on new features and functionalities. It should be mentioned that one team of entrepreneurs did not appreciate being questioned about these matters and it was a difficult experience for them and the designers involved.*
5. **To manage time during evening work sessions:** No specific comments about this topic.
6. **To work with SMEs' time schedule:** One of the managers found the 12 hours of work spread over 4 evening blocks, from 6pm to 9pm, to be ideal. However, another manager felt that this was too short a time to achieve an appropriate result, especially as he was already very advanced in his marketing process. *In the next*

*workshop we will focus more on the impact of on the team's collaboration process.*

- 7. To spread input over time to encourage reflection and networking:** Only one manager referred to this by mentioning that one result of the workshop was the opportunity to network with designers. He mentioned that workshops were an excellent way to identify and try out the right designers to work with in the future. *More efforts must be made to promote networking between start-ups and designers. We should reflect on how best to achieve this objective.*

In terms of Gulari's seven-step evaluation framework, 4 of 5 teams succeeded in reaching level 4 and completed the challenge with a new proposal. Three companies reached level 5 by continuing the collaboration and one company completely changed its value proposition and business model after discussion with the designers and achieved a new business outcome (level 6).

## **Conclusion and Limits**

Design is fashionable term in the 21st century, and is special insofar as it is represented and defined in many different ways (Ralph & Wand, 2009). In addition, design is now of critical importance as a strategic function and methodology in today's businesses. Indeed, many European countries currently invest in promoting design as a strategic resource to stimulate innovation through design support programmes.

However, Switzerland, although considered to be one of the most innovative countries in the world, has very few public or public/private institutions which promote and/or support design to SMEs and start-ups. Indeed, the few initiatives to promote design awareness that exist are mainly concentrated in the German-speaking part of Switzerland.

Given this context, the aim of this article is to assess the ways in which design awareness can be fostered in start-up managers. Consequently, a design support workshop was held on the grounds that (1) it enhances

design awareness (Liu, 2016); (2) there is little in the literature (except for Gulari, 2014; Regions supporting Entrepreneurs & and Designers to Innovate, 2014) that demonstrates the impact of similar methods of raising awareness of design; and (3) no public structure in Switzerland offers this type of service at present. This led to the following research question **“In what ways can a design-support workshop impact the design awareness of Swiss start-up managers?”**

The design support workshop consisted of four work-session evenings to address start-up managers' issues in collaboration with two external designers, one of whom was assigned to each start-up. Two separate data sets had been collected, before and after the workshop, to assess design awareness, namely (1) an online questionnaire; and (2) semi-guided interviews with start-up managers. In the case of the online questionnaire, design awareness was explored according to three key themes:(1) areas of design impact; (2) the value of design; and (3) the roles expected from designers.

Our results showed that most managers had made improvements by the end of the workshop in their perception of the role of design and some managers had even shown an interest in including designers in their future projects. Managers had acquired a more accurate perception of the fields of competence of designers and the ways in which they can help address the challenges faced by their companies.

More specifically, as regards design impacts, the managers' perceptions were shown to have improved significantly in the field of customer orientation. Start-up managers had an increased perception of the impact of design on “exploring user requirements” and “adoption of a user-centred view”. As regards the value of design, their perception of the ways in which design can assist in decision-making and developing strategic directions increased. Finally, the workshop increased the perception by managers of the designer's role as a customer needs identifier, an organiser able to rethink a process and a catalyst for business development.

In terms of the scope of this article, only five start-up managers participated in the study. A wider panel would be needed to achieve more generally applicable results. Furthermore, in addition to the questionnaire quantifying design awareness, we should rely more heavily on qualitative



interviews and observations of managers' interactions made during the event.

As regards the limitations of the design-support project that is the subject of this article, collaboration between designers and entrepreneurs was only made possible thanks to research funding and public sponsorship. The cost of these programmes was supported by public money and this, in turn, reduces its sustainability. In the long term, even if the project has already been renewed for 2018, it is essential to find an innovative business model which enables us (1) to carry out this type of event more regularly, (2) to achieve sustainability, and also (3) carry out a follow-up study with start-up managers to improve the impact of design awareness.

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## **Appendix 1 : Details about public or non-profit initiatives supporting design awareness in Swiss companies (table 2)**

<b>Design Support</b>	<b>Directly to companies (SME or start-up)</b>	<b>Name</b>	<b>Description</b>
x	x	Design Preis Schweiz	The Design Preis Schweiz showcases the importance of Swiss design. Top-quality prize-winning work demonstrates the innovative effect of design as a business success factor. furthermore, interdisciplinary contacts encourage dialogue between designers and companies. Support is also provided for new visions, research projects and implementation in line with market expectations, enabling significant breakthroughs ( <a href="http://www.designnet.ch">http://www.designnet.ch</a> ).
x	x	The Creative Hub	The Creative Hub is a non-profit association supported by Engagement Migros. It is the first Swiss national platform to support Swiss designers in the implementation and commercialisation of their product and business ideas. The Creative Hub is an initiative that encourages designer entrepreneurship, rather than a call for designers by entrepreneurs. it consequently serves more as a way of valuing and promoting design. furthermore, experience of this nature, acquired through the practical implementation of design and business, is of certain benefit to the SMEs in which these

			designers may be engaged in the future ( <a href="http://creativehub.ch">http://creativehub.ch</a> ).
✓	✗	<p>Bachelor in Design Management International (DMI)</p> <p>(Students projects and internships)</p>	<p>The DMI Bachelor's degree is a qualification unique to Switzerland. It allows students to benefit from the proximity of other design programmes and courses offered by other departments of Lucerne University of Applied Sciences and Arts. Students can benefit from an interdisciplinary learning environment. Indeed, the programme benefits from purpose-designed partnerships with a view to establishing direct links between practice and the classroom. External partners involve students in projects and work closely with them during internships. While this type of "commissioned work" offers design support to SMEs, it cannot be considered to help SMEs directly or to sensitise them to design (<a href="https://www.hslu.ch/">https://www.hslu.ch/</a>).</p>
✓	✗	<p>Master of Science HES-SO in Integrated Innovation – Innokick</p> <p>(Students projects)</p>	<p>The Innokick Master's degree was created in 2015 and brings together students in an interdisciplinary way (businessmen, designers, engineers). It is mainly based on learning by doing, and students work in groups with two different companies for a year and a half. As in the case of the DMI Bachelor's degree, internships such as these offer design support to SMEs but cannot be considered to help them directly or sensitise them to design. However, due to the longer relationship between students and SMEs, we believe that they achieve more on both counts than is the case for the DMI Bachelor's degree (<a href="http://www.innokick.ch/">http://www.innokick.ch/</a>).</p>



✓	✓	Swiss Design Transfer (SDT)	<p>The SDT is an association and part of a network of public and private partners. The SDT's mission is to communicate to companies and organisations. the potential of design as a success and value-adding factor. The organisation demonstrates the advantages of design and design management but does not offer design services itself. Rather, the SDT explores the ways in which design and design management can achieve company goals (<a href="http://www.swissdesigntransfer.ch/">http://www.swissdesigntransfer.ch/</a>).</p>
✓	✓	Design capability Ass. tools	<p>Claudia Acklin has carried out a number of academic studies with Swiss SMEs with a view to developing new design-awareness tools and evaluating design-management practice in the application of these tools (C. Acklin &amp; Hugentobler, 2008; Acklin, 2011; Claudia Acklin et al., 2013; Claudia Acklin &amp; Wanner, 2017).</p>
✘	✓	Creative Zürich	<p>The Creative Zurich Initiative is an open and independent association of actors in the creative industries along with other interested parties committed to strengthening the creative industries in the Zurich area. It is coordinated by the City of Zurich's Business Development Department and the Canton of Zurich. Project partnerships exist with partners in the fields of culture, education, research and business. The aim of the initiative is to sensitise business, media, politicians and the public to the importance and nature of the creative industries. The initiative also aims to raise awareness of the innovation</p>

			potential, achievements and competencies of the industry ( <a href="http://creativezurich.ch/">http://creativezurich.ch/</a> )
x	✓	Designseed	This programme Supported by the Gebert Rüt Foundation, brought together designers and engineers to work on six high-tech start-ups selected by the ETHZ Innovation and Entrepreneurship Laboratory. The results of this initiative were greater user orientation, a more professional start-up appearance and a better presentation of the product in order to accelerate commercialisation and support market access (Claudia Acklin & Wanner, 2017).

## Appendix 2 : Questionnaire

<b>1.</b>	<b>Design activities impact on: (several answers possible)</b>
1.	Optimizing development cost
2.	Improving quality
3.	Improving aesthetics
4.	Improving the visual identity of a product;
5.	Improving the functional characteristics of the product;
6.	Improving usage
7.	Improving ergonomics
8.	Making the product desirable
9.	Creating emotion
10.	Adopting a user-centred viewpoint;
11.	Segmenting the market
12.	Exploring user requirements
13.	Generating new ideas
14.	Solving complex problems
<b>15.</b>	<b>Design activities make sense for: (several answers possible)</b>
16.	Business processes
17.	Business organisation
18.	Business offer (product/service design)
19.	Corporate identity/branding
20.	Customer relationship
21.	Business strategy
<b>22.</b>	<b>Classify the value of design by order of importance:</b>
1.	Differentiation from competitors
2.	Improving product/service quality
3.	Improving the development process
4.	Creating business opportunities
5.	Initiating change management
6.	Facilitating dialogue
7.	Assisting in decision-making
8.	Developing strategic directions
<b>9.</b>	<b>Role expected from the designers: Likert scale: 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Always</b>
1.	Technician with an aesthetic sense
2.	Leader capable of articulating several visions
3.	Influencer who knows the value of design
4.	Facilitator encouraging dialogue
5.	Catalyst for product/service development

- |     |   |
|-----|---|
| 6.  | Translator of brand values                                      |
| 7.  | Designer of business strategy                                   |
| 8.  | Organiser able to rethink a process                             |
| 9.  | Director able to make a project tangible                        |
| 10. | User-centred designer   |
| 11. | Expert in creativity  |
| 12. | Customer needs identifier                                       |
| 13. | Draftsman or woman  |
| 14. | Initiator of change   |
| 15. | Creator of emotion  |
| 16. | Storyteller   |
| 17. | Integrator of company objectives with the added value of design |
| 18. | Prototyper  |
| 19. | <b>Role of design in innovation: (several answers possible)</b> |
| 20. | Accelerating commercialisation                                  |
| 21. | Increasing the value of the product/service                     |
| 22. | Improving productivity  |
| 23. | Reducing market risks   |
| 24. | Generating ideas  |
| 25. | Making rapid iterations   |
| 26. | Taking into account user needs                                  |
| 27. | Solving complex problems  |
| 28. | Making links between technology and users                       |
| 29. | Conveying a message   |