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# **A Conceptual Model to Link Deep Customer Insights to both Growth Opportunities and Organisational Strategy in SME's as part of a Design Led Transformation Journey**

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**Abstract.** Although Design Led Innovation activities aim to raise the value of design within the business, knowledge about which tools are available to support companies and how to apply them to make the connection between design for new product development and design as a strategic driver of growth is needed. This paper presents a conceptual method to supplement existing process and tools to assist companies to grow through design. The model extends the authors' previous work to explore how through storytelling, customer observation can be captured and translated into new meaning, then creating new design propositions shaped into product needs, which can drive internal business activities, brand and the strategic vision. The paper contributes to a gap in the theoretical frameworks and literature by highlighting the need to align and scale design processes which match the needs of SME's as they transition along a trajectory to become design led businesses.

**Keywords:** Design Led Innovation, Design Thinking, Deep Customer Insights, Competitive Strategy, Prototyping, Design Propositions.

## **1 Introduction**

The importance of design to a firm's innovation has been the subject of much previous research particularly in the design and development of new products. More recently it is now widely understood that design can add significant value to a firm's strategic capabilities beyond the development of a product or service. Design continues to reposition itself from a downstream manufacturing related activity to one which adds strategic value to business. The relationship between design process and business systems has been of interest to both practitioners and researchers exploring the numerous opportunities and challenges of this unlikely relationship. This union of design and strategy is often referred to by Brown as design thinking: "a discipline that uses the designer's sensibility and methods to match people's needs with what is technically feasible and what business strategy can convert into customer value and market opportunities" [1]. The value that design thinking brings to an organisation

is a different way of thinking, of framing situations and possibilities, doing things and tackling problems: essentially a cultural transformation of the way it undertakes its business.

The work of Martin [2] has clearly highlighted the generalised differences between design thinking and business thinking, highlighting many instances of where these differences have been overcome, but also noting the many obstacles of trying to unify both approaches within an organization. Liedtka [3] encourages firms to try and persist in overcoming these barriers as she has noted that “business strategy desperately needs design ... because design is all about action and business strategy too often turns out to be only about talk ... fewer than 10 percent of new strategies are ever fully executed”. Therefore this paper attempts to extend the conversation of the role of design within business to go beyond developing the argument for the adoption of design thinking within a company. The paper identifies practices and tools which can address the barriers of the adoption of design which in turn will lead to the successful adoption and execution of strategy through design led practices.

The term ‘design led’ in the context of this paper is defined as the tools and approaches which enable design thinking to be embedded as a cultural transformation within a business. Being design led requires a company to have a vision for top line growth within their business, which is based on deep customer insights and expanded through customer and stakeholder engagements, with the outcomes being mapped to all aspects of the business to enable the vision to be achieved. This paper will outline a conceptual framework to achieve this goal.

## **2 Business Context – SME’s**

In a recent report prepared by the OECD [4], SMEs were identified as playing a significant role in the global economy, employing more than half the labour force in the private sector. Within the European Union they account for more than 99% of all enterprises, however it was highlighted that of these firms 91% employ less than 10 workers. Within Australia, similar statistics can be found, with data identifying that 96% of total businesses employ less than 20 full time staff [5]. Given the impact SMEs have on a global economy it is critical that these businesses are provided with the necessary support to remain both productive and competitive.

The role of design to support SME businesses is well established in certain geographic regions, with government policy being translated into design intervention programs such as *Better By Design*, *Design Demand*, *Design Boost*, to support business growth through design practices. There has been a significant rise in the number and type of design support programs in recent years. Raulik, Cawood and Larsen [6] provide a good summary of existing programs and highlight their differences in the type of support they offer to firms and the value they provide. They note that,

*“It well known that SME’s lack the skills and resources for the development of innovative products, which is often the reason for their market failure. For such reasons, design support programs are mainly targeted on the enhancing of economic*

*advantage of the small business sector ... these programs are an important part of a national design policy”*

When referring to the different types of programs the 4 step Danish Design Ladder [7] is often presented as a useful framework to highlight how design intervention programs can assist companies grow in their maturity towards their attitude to design. The 4 step ladder consists of the following stages:

- Stage 1 - No Design
- Stage 2 - Design as Styling
- Stage 3 - Design as Process
- Stage 4 - Design as Strategy

The higher up the ladder, the greater strategic value design will have on that company. The goal of design intervention programs is to enable companies to shift their perspective on the value of design and therefore move up the ladder over time, from negligible attention to design, to design being critical to the company's success. The combination of awareness activities and direct company interventions are generally deployed to assist companies in their transition along the design ladder. For the purpose of this paper, the focus will be on higher order interventions which focus on companies who have utilised design as a process, and see the value on moving further up the design ladder.

Although design intervention programs at this level differ in their specific activities, typically the programs are structured around a core activity such as a design audit to identify how the company is currently using design within their business and then to recommend how this can be enhanced through specific recommendations. Actions that result from the recommendations are then generally embedded within the company through the assistance of a design mentor who is external to the firm. Rather than focusing on specific design challenges, the goal of these programs is to transform the business to adopt design practices that become central to their innovation activities, and encompass all aspects of their business. Therefore a considerable part of these programs is managing cultural change through design tools, which is often the responsibility of the mentor and CEO.

As mentioned previously, several reviews of these programs have reported that the role of design can lead to significant economic growth for the companies who undertake such programs. However as noted by Matthews and Bucolo [8] who undertook a retrospective interview of a company's experience within such a program, it was noted that no single intervention (such as a design audit) could be linked to specific company change within the organisation. This finding is supported by Ward, Runice and Morris [9], who note that the expertise of the design mentors who work with the companies bring their own “techniques, methodologies and flexible creative thinking to each company”, which supplements the methodology unique to each program.

Although there has been a focus on the value of design intervention programs, there is a gap in knowledge and research of what processes and frameworks may be adopted by companies to assist them along their journey to becoming design led outside of a design intervention program. Although a significant number of design tools are available (see [10]) to companies to assist them in a design led

transformation, it is the authors' opinion that the process of how they are embedded into business practices is not well understood.

### **3 Research Approach**

The motivation for this research originated from the first author's experience as a design practitioner and educator, who over the past 5 years has seen a significant transformation in the role of design in business. During this period, the first author has been engaged with many companies across many sectors and size to assist them in becoming design led, through the delivery of long term design intervention approaches. Companies have ranged in size from multinationals to SMEs and start up enterprises. The sectors that they represent also varied from medical devices, consumer electronics, agriculture, and manufacturing to service delivery.

The common theme that linked these companies was a realisation that their market share was being eroded as they no longer had a significant point of difference in the market. Through a design intervention, which could consist simply as a customer mapping exercise to better defining their existing customers, these companies realised that traditional business practices alone were not allowing them to capitalise on their innovation efforts. The authors have previously presented a design led innovation model [11] which frames the types of activities a company may undertake as part of a design transformation journey. However, the goal of this paper is to reveal the key challenges companies face in embedding such an approach and provide some strategies to proceed.

Therefore in the spirit of Schön's Reflection in Action Paradigm this research presents observations captured during the first author's immersion into the data through his practice over this period of time. As Schön [12] notes "Practitioners do reflect on their knowing-in-practice. They may do this in a mood of idle speculation, or in a deliberate effort to prepare themselves for future cases. But they may also reflect on practice while they are in the midst of it. Here they reflect-in-action ... (however) the pace and duration of episodes of reflection-in-action vary with the pace and duration of the situations of practice". Using this framework as a foundation, and being situated in the domain of the study the ongoing research outcome of revealing new understandings by undertaking an in situ review of authentic business transformation is presented.

### **4 Two Approaches to Growth**

As mentioned, this paper focuses on a reflection of companies who have previously adopted design as a process, have seen the value at a project level and were eager to see how they can obtain greater value through strategic design activities at the company level. The companies had all undertaken some form of design intervention (audit, pilot project, project review, company review) and following this initial stage engaged the first author (through mentoring, consulting or university projects) to implement the findings of the initial review. Although the companies who form part

of this study differ significantly in size, age and revenue, they shared a common goal of wanting to achieve top line growth, through a unique and radical shift in their product / service offering. What was unique was in the approach to undertake the growth strategy that is discussed further below.

Typically at the conclusion of the initial design intervention, companies were shown a range of design tools (activity map, ethnography, narrative, prototyping, customer journey mapping, visualisation to name just a few) to assist them in implementing actions that may have arisen out of the initial design intervention. Although the specific focus of the activity could have been predetermined by the mentor, the firm was encouraged to experiment with a number of tools until they felt comfortable with the approach that could be embedded into their current work practices. What emerged was that there were two distinct approaches which were the preferred path to assist a company to achieve growth: (i) through the development of a clear competitive strategy which highlighted a new and revised value proposition; and (ii) through the development of deep customer insights which identify a latent or untapped customer need. These broad issues are not new and have been widely reported in the literature. However what has been revealed through this reflection is how the two approaches are generally seen as mutually exclusive within the company and undertaken by different parts of the organisation. Yet it is the combination of the different approaches that will have the most significant aspect for the growth prospects.

#### **4.1 Growth Through Competitive Strategy**

Porter [13] defines competitive strategy as being different ... “It means deliberately choosing a different set of activities to deliver a unique mix of value”. He notes that these strategic positions can be based on customers' needs, customers accessibility, or the variety of a company's products or services and are not mutually exclusive and often overlap. Porter notes that there is not one ideal position and it is the mix of activities that define a particular position and then the identification of trade-offs between activities which will make the competitive strategy sustainable. The use of activity maps is a way for a company to visualise how its strategic position is contained within a set of business activities that is unique to the business. These activities and their trade-offs form the basis of the company's brand value and promise and need to be reflected in all aspects of the delivery of the product and service. However as noted by Collis and Rukstad [14], many executives of firms are unable to articulate the objective, scope, and advantage of their business (essentially their competitive strategy) in a simple and clear manner. If the senior management of a firm cannot communicate their strategy, it would be difficult to expect staff to ensure they can execute on it.

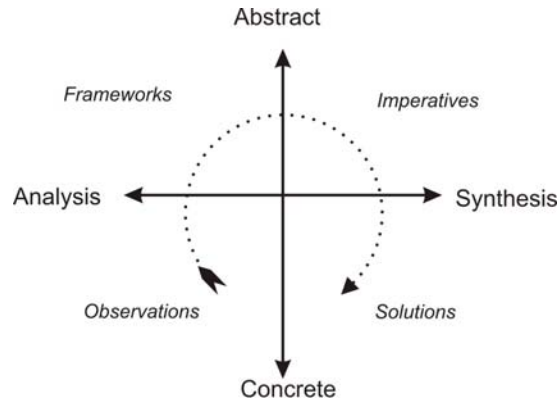
Within the companies who form the part of this study, interest in exploring the role of activity maps to firstly refine and then communicate a strategic competitive advantage was strong. Generally this was a new approach to the organisation, particularly in the smaller sized firms and it was generally the senior management who preferred to work at a company strategic level to help define growth. The role of design in this sense was to get the company to focus on the customer and build

strategy around this understanding. Although through the use of this approach an understanding of customers, competitive strategy and activity systems could be developed over time, most companies continually struggled when trying to communicate and execute this vision to the entire organisation. Comments such as “I try for months to get an initiative off the ground, and then it is shut down because; it doesn’t fit the strategy; Why didn’t anyone tell me that at the beginning; I don’t know whether I should be pursuing this market opportunity; I get mixed signals from the powers that be”, as found by Collis and Rukstad [14] were observed in the companies who formed part of this study. As previously noted in this paper, translating strategy into action is often a difficult task. Although design can assist a company develop a competitive strategy through focusing its attention on customers, there is a gap in the tools and process to translate this strategy into action.

#### **4.2 Growth Through Deep Customer Insights**

The alternative approach that was preferred by firms who had undertaken a design intervention, was to gain a better understanding of their customers through building deep insights across their market segments. Typically groups who preferred this approach, were project orientated teams (senior project managers), who were responsible for the delivery of a product innovation within the organisation. Often they were not aware of company strategy or could not clearly communicate key aspects which formed a unique value proposition. Of all the tools shown, Beckman and Barry’s [15], Elements of Design Thinking framework (figure 1) has greatest resonance with the firms.

Beckman and Barry [15], note that “the core elements of design thinking require designers to toggle back and forth between analysis and synthesis and to operate in the concrete and abstract worlds”. To achieve this designers undertake four different types of activities: observation – developing a deep understanding of customer needs through ethnography and to develop both an understanding of usability needs and meaning based needs; frameworks – to reframe the observations to develop new problem statements; imperatives – translating the problem statements into a value proposition, but not the features or capabilities of the solution; solutions – creating the artifacts which embed the meaning and value proposition.



**Fig.1.** Beckman and Barry [15] Elements of Design Thinking framework

When discussing and presenting this framework to companies, we found that firms can generally identify the most significant gaps in their design process. Typically this is moving directly from observation to solutions, without transitioning through the frameworks and imperatives in the abstract and synthesis phases of the model (as shown in figure 1). Once this path was highlighted and explained to the firm, it was possible to build in practices into the firm to expand their design capabilities that are grounded in customer insights and the explorations of the meanings behind these observations.

However at the conclusion of this process, the question of ‘how do we know which solution to go forward with?’ is typically still asked, as the overarching question of strategy has not been considered or easily accessed. Therefore a combined approach which extends the previous model and integrates competitive strategy activities and the development of deep customer insights based on design tools has been proposed and is discussed below.

## **5 Design Led Innovation Framework**

The proposed conceptual framework (figure 2) has been developed to assist companies who have the desire to grow through embedding the strategic value of design within their business.

The framework acknowledges that within any business a continuum exists between operation and strategic activities and activities that have an internal and external focus. Different organisational groups and staff are tasked with these different activities and have specific KPI’s, dependant on their functional role within the organisation. Core to this framework is that to achieve growth any innovation should create change at all levels of the business and therefore a key objective of the model is to identify and design these changes at the time of product conception rather than at product launch. Therefore the model uses the term ‘opportunity’ or ‘proposition’ as the unifying theme which binds all aspects of the business. As the design concept matures, all aspects of the business are informed by or have the ability to inform the opportunity.



Although it is possible to start at any particular point in the framework, the framework is best described by starting at the observational stage. Observation requires the firm to commit to engaging with its customers early in the design process and going beyond shallow customer insights. Typically organisations are not clear about who their customers are, and therefore tools such as a customer journey map is used to help identify the value chain, from which ‘day in the life’ narratives can be developed for each part of the value chain. The challenge identified with this stage is ensuring companies stay open to observation and resist the temptation to begin to solve discrete solutions.



**Fig. 2.** Design Led Innovation Conceptual Framework

Introducing the concept of reframing has been one strategy that has proved to be effective in achieving this. Reframing requires the firm to take an observation and translate this into meaning rather than solutions. During this stage the firm is challenged to constantly ask *why* that observation occurred, rather than how this observation can be solved. It is these meanings that are developed during this stage of the process which are critical. In the initial implementation stage of this framework, ensuring there is sufficient time to undertake this task is often one challenge as companies do not see the value in spending time on this activity. Another challenge is the discomfort and difficulty that companies face in thinking in unaccustomed ways, outside their previous mindsets, and a mentor or facilitator is often essential to raise the tough questions and work beyond established patterns.

In order to help communicate these insights, the use of narratives is recommended. There has been significant interest in the role and value of narrative as a design process in recent years [15]. This interest has occurred, as firms move from solely product offering to include user experiences. The process of storytelling lends itself to retelling the softer aspects of the insights and for the story to be built upon by other

members of the team. The final narrative will then take the form of an opportunity, which embeds the identified observations and meaning.

What has been described thus far does not impact on strategy, and the process can continue independently with just the expertise of the product development staff to refine the proposition with external customers. However what is critical at this stage is that the proposition is then cross-referenced with the company strategy, or more likely that a company strategy is developed from this proposition.

Presenting the proposition as a concept, a value statement and also a series of activities which are required to deliver on the identified opportunity, will allow for staff to see the potential impact on their functional roles and for senior management to better see the link to company strategy or if company strategy should be changed to execute this opportunity. Once the competitive strategy has been considered, a review against the brand promise and messages can be undertaken. Again this should be done to both inform the proposition to increase its maturity and to challenge the existing brand promise.

This alternating process continues, generally with two separate teams within the organisation, operationally focused staff and strategy focused teams. The ongoing prototyping of the proposition is key and this needs to be informed by the and perspectives of both groups. Conversely the proposition should also challenge each group and modify organisational activity as required. Once the firm believes the proposition is at an appropriate level of maturity, the company can move towards a solution phase and a revised vision stage. These latter stages should not present much difficulty as they will build on the thinking that has informed the maturity development of the proposition.

## **6 Next Steps / Conclusions**

This model is currently being trialled with a small number of firms through a variety of engagements. It is hoped that this paper will encourage other researchers and practitioners to explore this approach and report on new findings. Based on the work to date, gaps that need to be further explored include building a better understanding of the term 'proposition' and the most critical element is the linking between product and strategy. It is the authors opinion that building a common language for both firms and design mentors around this term 'proposition' will contribute to the success of developing design led businesses.

Secondly, what has become clear in this ongoing trial is that ownership of the 'proposition' requires a new role and responsibility with the organisation. The term design champion is sometimes used to describe this role, but the authors believe that it is more than just a champion, as this term implies primarily an advocacy role. In addition to advocacy, the role also requires a deep understanding of operational requirements, business needs and strategy and is therefore more of a design interpreter which can influence and direct across the organisation. Our findings from working with companies indicate that this skill set is not easily found within organisations and the creation of a new position is challenging, given the deep company insights which are required to effectively undertake the role.

Further it is the authors opinion that universities do not currently provide this knowledge and skill set as part of traditional design programs. To ensure that firms

have the ability to become design led will require educational institutions to adjust their course offerings.

Finally this framework acknowledges that building strategic design capability inside a company requires significant time as well as expertise. What underpins this model is the need for the firm to have a belief in the fundamentals of design thinking, specifically the value of prototyping and iteration. Although the framework does not specifically address how this aspect is embedded inside a firm, it is hoped that by undertaking a design intervention these aspects would be addressed. These elements of emerging development of strategic design capability have been the authors experience to date and highlights what expectations could be placed around design intervention programs.

Much work is required to ensure all firms are given the opportunity to transition to become design led. This framework is a small step in assisting with this journey and it is hoped that this paper will inspire firms and or services providers to explore and extend this approach with the view of assisting companies to grow through design.

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