Implementing Firm Dynamic Capabilities Through the Concept Design Process: A Conceptual Model for Creating Sustainable Competitive Advantage

Nicky Nedergaard, Copenhagen Business School, Denmark* 
nne.marktg@cbs.dk

&

Richard Jones, Griffith University, Australia and Copenhagen Business School, Denmark
rj.marktg@cbs.dk

Keywords: Dynamic Capabilities; Market Orientation; Design Management; Innovation strategy; Sustainable Competitive Advantage;

Abstract

It is well understood that firms operating in highly dynamic and fluid markets need to possess strong dynamic capabilities of sensing (market trajectories), seizing (to capitalise on these trajectories), and transformation (in order to implement sustainable strategies). Less understood is how firms actually implement these capabilities. A conceptual model showing how managing concept design processes can help firms systematically develop dynamic capabilities and help bridge the gap between the market-oriented and resource-focused strategic perspectives is presented. By placing this model in a design-driven innovation perspective three theoretical propositions is derived explicating both the paper’s implementation approach to dynamic capabilities as well as new ways of understanding these capabilities. Concluding remarks are made discussing both the paper’s contribution to the strategic marketing literature and possible avenues for future research.

---

1 This is an abstract of the full paper submitted for approval into the Proceedings of the ANZMAC 2011 Conference.
Implementing Firm Dynamic Capabilities Through the Concept Design Process: A Conceptual Model for Creating Sustainable Competitive Advantage

Abstract
It is well understood that firms operating in highly dynamic and fluid markets need to possess strong dynamic capabilities of sensing (market trajectories), seizing (to capitalise on these trajectories), and transformation (in order to implement sustainable strategies). Less understood is how firms actually implement these capabilities. A conceptual model showing how managing concept design processes can help firms systematically apply dynamic capabilities and help bridge the gap between the market-oriented and resource-focused strategic perspectives is presented. By placing this model in a design-driven innovation perspective three theoretical propositions is derived explicating both the paper’s implementation approach to dynamic capabilities as well as new ways of understanding these capabilities. Concluding remarks are made discussing both the paper’s contribution to the strategic marketing literature and possible avenues for future research.

Introduction
Since the beginning of the 90’s the concept of market orientation has become a key marketing term suggesting that firms’ capability of adapting to changes in the market leads to sustainable competitive advantage (Day, 1994; Doyle & Bridgewater 1998; Narver & Slater 1990). Market orientation focuses on market intelligence activities that continuously inform management about competitors’ strengths and possible new strategies and about its customers needs and wants. However, it is also dependent on the ability of the firm to strategically exploit this data across the organisation. Coordinating the use of company resources across functional silos is viewed as a key capability in order to reap the benefits of market sensing (Narver & Slater, 1990 pp. 21-22), which suggests that market orientation is compatible with the resource base view of achieving competitive advantage (Barney, 1991; Collins & Montgomery, 1995; Prahalad & Hamel, 1990).

Advanced by Teece and colleagues (Eisenhardt & Martin, 2000; Teece, 2007; Teece, Pisano & Shuen, 1997) the concept of dynamic capabilities has been proposed as the true source of sustainable competitive advantage in globalized and high-velocity markets building on the resource based view. Dynamic capabilities propose that firms need to sense the market, seize opportunities and manage the resource base dynamically in order to stay capable of continuously implementing new value creating strategies (Teece, 2007). Inherent in this dynamic capability framework is a clear need for bridging market sensing activities to the internal management of resources. However, little attention has been placed on the business processes needed to implement these dynamic capabilities and particularly on the schism between bridging outside-in (market oriented) and inside-out (market creating) approaches.

With modern consumers’ needs and desires shifting more often than ever before, being able to adapt to these rapid changes may in fact call for more proactive and market shaping capabilities which envisage completely new propositions and push them on to the market. It will be argued that simply relying on traditional market intelligence streams for competitive advantage can be viewed as inadequate in certain market contexts. For firms operating in industries where the ability to adapt to the newest and even future market trajectories is paramount to firm performance, new ways of dealing with strategic marketing activities for innovation are needed to transcend the established market orientation concept. In such rapid evolving markets the concept of design-driven innovation has been suggested (Verganti,
2006, 2008, 2009); rather than pursuing strategies pulled by the market, the design driven approach seeks to push the company vision about new product meanings and functionalities onto the market following the realization that with consumer preferences changing this rapidly simply following market trends will not be enough - firms have to develop capabilities that dynamically enhance their ability to predict and set market trends.

This paper contributes to the competitive advantage literature by introducing the business process of concept design in a design-driven innovation perspective (and the associated design practices) as a management realm that can systematically help grow and nurture dynamic capabilities (Teece, 2007). Furthermore, a synthesis of the most prevalent concept design phases and the dynamic capabilities framework suggests that this one coherent design process encapsulates both ends of the strategic management dichotomy of relying either on the pursuit of new market opportunities versus exploiting firm resources as the source of competitive advantage (Barney, 1991; Day, 1999; Lamberg et al., 2009; March 1991; Uotila et al., 2009).

**The Strategic Coordination Resource of Concept Design Management**

The ability to market relevant and competitive products and services in a timely manner has become of crucial importance (Eisenhardt & Martin, 2000; Huber 2004; Mohr & Sarin, 2007; Teece, 2007.). Thus, the dynamic capabilities of sensing and seizing (Teece, 2007 p. 1319), which essentially correspond to the behavioural components of market orientation as described by Narver & Slater (1990), emphasize the paramount need of firms to continuously stay informed about market trajectories of their competitors and customers. Moreover, firms should ensure cross-functional coordination of their sensing data in order to strengthen their seizing capability and reap the benefits of the market sensing activities. (Day, 1994; Narver & Slater, 1990; Teece, 2007).

However, even though Teece (2007) stresses the need for firms to master both ends of the strategic management dichotomy in his dynamic capabilities framework, it is not clear just how to go about achieving such a balance. Thus, further investigation into which organisational processes and structures that are needed to support this favourable balance is still needed. Interestingly for design managers there is no conflict in this dichotomy as their work constantly moves between applying inside-out approaches to managing design solutions with an (often implicit) understanding of market needs. A case in point might be Apple’s ability to develop highly innovative and highly successful products without the use of extensive market research (Verganti, 2009 p. viii). This ability to utilise internal capabilities with an intuitive understanding of the market is what lies at the heart of shaping markets through design management.

Managing design as part of an innovation activity can take place on any organizational level (Best, 2006, p. 17). Owen (2001) distinguishes between the various design activities by dividing them roughly into concept design and craftsmanship and detail-oriented design work; It is the concept design phase that works consciously at the strategic level by achieving competitiveness through a holistic integration with the business strategy (Ibid., p. 28). Reviewing the design process literature Concept Design Management typically revolves around an initial explorative research phase, which is followed by an in-depth analysis that leads on to the development of one or more conceptual ideas. From here, the process moves forward from the abstract stage towards a more concrete one. In this phase a synthesis takes
place narrowing down a potentially large quantum of conceptual ideas to a smaller set and eventually just one concept – the one with the strongest strategic fit – which then is invested in for prototype development and in some cases market testing (Borja de Mozota, 2003; Farstad & Jevnaker, 2010; Owen, 2001; Walsh et al., 1992).

Illustrating this flow in the concept design process a conceptual model has been elaborated. The below model; Concept Design for Implementing Dynamic Capabilities, fundamentally builds on two management dimensions: analysing vs. synthesising and on moving from concrete problem statements to the generation of abstract solutions before eventually reaching a decision on a concrete (concept) solution (cf. the toned down horizontal and vertical axes). Moving along these dimensions the model features on the outer rim starting with explorative context search a list of sequential stages that ultimately ends up with final conceptualization. As illustrated these different stages each moves along the three core process steps featured in the intermediate rim: analysis, synthesis and prototyping. Moving forward the paper will go on to demonstrate how these three core process steps when placed in a design-driven innovation perspective (Verganti, 2009) systematically help firms implement dynamic capabilities. Relational arrows placed between the intermediate and the inner rim work to illustrated this argument.

![Model 1: Concept Design for Implementing Dynamic Capabilities](image)

**Advancing Firm Dynamic Capabilities through Design-driven Innovation**

Managing design processes for competitive advantage should be driven by a determined strategic approach (Verganti, 2009). Rather than adopting a (market adapting) user-driven design approach, a design-driven strategy aiming at developing (radically) new product meanings has been proposed (Ibid.) Approaching the market this way must be guided by a design strategy describing (among many things) the firm’s unique design vision – an envisioned future for the firm’s design position in the market (Collins & Porras, 1996), thus placing design as a core growth platform (Jonash, Koehler, Onassis, 2007). To capitalize on such a growth platform, focusing on creating new product meanings by relying on existing market trends obviously will not lead to any radically differentiated market position. And
inasmuch as consumers or users are deemed unable to articulate needs and desires that go beyond the existing socio-cultural models, the concept design process must incorporate different sources of inspiration to improve the odds of rendering any substantial competitive advantage (Verganti, 2009, pp. 55-56). Applying such a design-driven perspective on a business unit level can advance the way we think of dynamic capabilities while simultaneously taking the shape of one single process flow capable of embracing both ends of the strategic management dichotomy in a dynamic and visionary fashion as a total view on the above model 1 illustrates. Going over the three core concept design processes (cf. the intermediate rim of the conceptual model) theoretical propositions are now presented explicating the paper’s main arguments.

Most certainly of high tactical value to firms across-the-board traditional market research based on customer surveys, focus groups, etc. has proven very useful to assess for minor incremental product innovations implying either or a technological or design facelift. However, in order for firms to innovate radically on new product meanings there is a need for sensing not just what is and has been, but more importantly on what might be (Ibid.; Heskett, 2008; Martin, 2009; Verganti, 2009). According to Verganti (2009) performing such sensing activities upon which ones market analyses should be based must involve a strong immersion into the surrounding design discourse. By engaging in a dialogue with key interpreters (academia, futures institutions, sociologists, suppliers etc.), whose common interests in interpreting new design languages and product meanings can be of great value to the firm, the chance of acquiring streams of interpretations of future market trajectories representing potential new value creating meanings to pursue is strongly enhanced. Firms investing in the establishment of strong relations with key interpreters can start feeding their innovation activities with such analyses enhancing the possibility of creating customer value in a proactive way akin to what is now know as a blue ocean strategy (Kim & Mauborgne, 2004).

P1: In highly dynamic markets, market research based approaches to market orientation are insufficient to create and maintain competitive advantages rather firms should rely on sensing new visionary meanings capable of shaping the market.

Of equal importance to acquiring such interpretations of possible new value creating meanings is the ability to capture the right ones (Teece, Pisano & Shuen, 1997). In the second core step of the concept design process the responsible (design) manager must filter through all the various interpretations derived from interactions with external interpreters and the meanings worth developing must then be seized (Ibid.). But, inasmuch as seizing opportunities of such intangible nature are vaguely guided by traditional business planning - most often lacking such forward-looking elements (Heskett, 2008; Martin, 2009) - pursuing a design-driven innovation strategy calls for a refinement of the foundation upon which investment decisions are made. Managerial guidelines will have to encompass visionary pointers on how to identify meanings with the strongest strategic fit to the growth platform. To ease this crucial and highly complex synthesis exercises a managerial tool in the shape of a formalized and visionary design strategy is needed to help align management decision making on new future designs and innovation activities with corporate vision and strategic intent (Farstad & Jevnaker, 2010, pp. 72-73). If properly elaborated using the right words and images such a design strategy can act as a guiding beacon increasing on-strategy rather management subjective strategies being implemented Worth making clear when dealing with the matter of striving to shape markets is the fact that risk will always be a part of the game, however, having in place such a proposed design management tool as a design strategy may enable managers to invest in new meanings, not with greater certainty about the future per se, but with greater certainty that decisions are made on-strategy.
Finally and of paramount importance to reap the benefits of the sensing and seizing activities taking place during the research, analytical and synthesizing phases is the ability to possess or acquire the resources necessary to implement such new initiatives. For firms venturing into rather unexplored territories this inevitably calls for a transformation of the firm over time (Teece, 2007). However, managing the asset and resource base in such a dynamic manner is as mentioned poorly dealt with in the competitive dynamics literature. As the paper’s last proposition on how to build this missing link and develop such transformational capability we must look to the last core phase of the concept design process. This phase, following from the much demanding synthesis phase, covers the activities where the most promising and on-strategy design concept(s) is prototyped to get a quick and more tangible feel for the final outcome with respect to various parameters such as e.g. usability (Farstad & Jevnaker, 2010 p. 88). Employing prototyping practices raises awareness of whether the physical, human and organizational resources needed are all in place or if the resource base in fact needs to be adjusted. Reaching the point in case; it is through such prototyping activities that alignment is achieved between the inside-out and outside-in strategic approaches.

**P3: In highly dynamic markets working with prototyping activities based on strategies springing from visionary market sensing the concept design process forms a strategic link between the market and resources in a single business process.**

**Concluding Remarks and Perspectives**

A major challenge for companies in highly dynamic markets is to align and apply their resources to the market in order to create sustainable competitive advantage. Whilst the literature on dynamic capabilities offers a theoretical approach, it lacks a clear model of how to implement these capabilities in practice. This paper suggests that the Concept Design Process can be used to address this shortfall. Furthermore, it has been argued that working in a systematic manner with all of the concept design phases makes it possible to link together in one coherent business process the strategic market oriented activities (sensing and seizing capabilities) to the internal resource management activities (transformation capability) hereby presenting a novel approach to the strategic managerial paradox of balancing between the market and the resource based view. Moreover, it is argued that dealing with the design process applying a design-driven innovation approach (Verganti, 2009) the behavioural market orientation literature (e.g. Narver & Slater, 1990) is advanced by adding a strong emphasis on the need for letting the sensing and seizing capabilities be driven by a strategic design vision as a strategic growth platform. In this perspective market orientation achieves a stronger fit to dynamic market contexts by stressing that superior competitiveness is not derived from being able to adapt to the market more agile than competition, but truly from being able to shape the market more agile than competition. Finally, as this paper has only touched initially upon the convergence between concept design processes and the strategic management and cultivation of dynamic capabilities there is a need for empirically based research of the propositions presented. Furthermore, such research should not only be limited to traditional innovation fields of research. All too often operating with design approaches and practices is fallible understood and delimited to the development of tangible products, but managing design can in fact be relevant for all organisational processes as a managerial logic when approaching business challenges (Martin, 2009) and the future research into the convergence of the strategic management and design literatures should reflect this notion.
References


