

# LEADING INNOVATION THROUGH DESIGN

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## IMPROVING INNOVATION STRATEGIC DECISION-MAKING THROUGH THE COLLABORATION WITH DESIGN CONSULTANCIES

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Innovation and design literature have given limited consideration to the strategic role of design consultancies in the innovation processes of their clients. A plausible explanation is the difficulty to assess the quality of design consultancies' output, given the intangibility of the output itself and the difficulty of connecting a knowledge-intensive output to clients' performance indicators. In this paper we examine design consultancies' impact on their clients' strategic decision-making as a way of capturing design consultancies' strategic role in their clients' innovation efforts. Design consultancies can influence strategic decisions by enhancing three strategic decision-making mechanisms identified by the literature – rationality, intuition, and political behaviour. By examining the Dutch design consultancy industry, we find initial evidence of design consultancies' capability of affecting clients' strategic decision-making. Early involvement in problem definition and long term relationships with clients strengthen design consultancies' influence.

*Keywords: Strategic decision-making; Design consultancies; Collaborations*

### INTRODUCTION

In the era of fast paced innovation, access to external sources of knowledge is essential for achieving higher innovativeness and steady financial performance (Rothaermel and Deeds, 2004). As a consequence, firms increasingly engage in different forms of knowledge-driven inter-firm collaborations for generating and accessing knowledge outside their boundaries (Grant and Baden-Fuller, 2004).

Design consultancies have progressively established as a key external source of specialized knowledge for firms pursuing successful innovation (Cross, 2004; Hargadon and Sutton, 1997). Despite the increasing size of the design consultancy industry, and the growing level of activity at the design consultancies–clients interface, both academic research and business practice developed limited knowledge on how to optimize this knowledge-driven collaboration and maximize its innovation outcome.

There are two main reasons for this lack of progress. First, business practice has limited awareness of design consultants' expertise, given the design consultancies' inability in appropriately packaging and selling their skills and knowledge (Hakatie and Rynnanen, 2004). Second, since design consultancies are professional service firms (PSFs), they are confronted with the issue of transactional ambiguity typical of PSF-client interaction (Alvesson, 2011; Sturdy, 2011). Transactional ambiguity refers to clients' difficulty of quantifying and assessing the quality of PSFs' output – e.g., design consultancy's output - even after its production and delivery. Since

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existing literature and business practice on knowledge-intensive collaborations are based on the measurability of the collaboration output (e.g. patents), it is difficult to conduct empirical research on collaboration with an ambiguous outcome as in the case of the design consultancy-client collaboration.

This paper attempt to address these gaps in both research and business practice by studying the collaboration between design consultancies and their clients from a strategic decision-making perspective. We focus on whether the collaboration with design consultancies can improve clients' strategic decision-making in their innovation practices, by facilitating the decision-making process and/or by optimizing the decision-making outcome. We propose the effect on clients' innovation strategic decision-making as a way of assessing design consultancies' performance, thus suggesting a solution to the issue of design consultancies' transactional ambiguity. We propose that design consultancies may influence the different mechanisms through which clients take strategic decisions, that is rationality, intuition, and political behaviour. By looking at strategic decision-making as the interplay between different mechanisms (rather than the outcome of only one mechanism), we also contribute to strategic decision-making literature and its recent quest for empirical research supporting the integrative approach as a better explanation of strategic decision-making processes (Eisenhardt and Zbaracki, 1992; Elbanna and Child, 2007). We use the Dutch design consultancy industry as a case study to explore design consultancies' influence on clients' strategic decision-making.

The remainder of the paper is organized as follows: first we briefly review the literature areas relevant to our research question, namely strategic decision-making. Second, we describe the empirical setting of our study and the case study methodology used for collecting and analysing the data. Then, we discuss the findings and present a set of propositions. We conclude with our study's limitations and directions for further research.

## **STRATEGIC DECISION-MAKING**

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Strategic decision-making research focuses on the processes through which firms take strategic decisions. Strategic decisions are decisions implying high uncertainty in the final outcome, prolonged course of actions, significant resource commitment, and involvement of several decision makers (Eisenhardt and Zbaracki 1992).

Different perspectives emerged for characterizing the strategic decision-making process (for an overview see Elbanna, 2006). In this paper we adopt the more recent *integrative approach*, according to which strategic decisions descend from the interplay between three mechanisms: procedural rationality, intuitive synthesis and political behaviour (Elbanna and Child, 2007).

*Procedural rationality* characterizes a rational, systematic and linear approach to strategic decision-making. A rational decision-making process implies assessing all pertinent information, evaluating costs and benefits, and, ultimately, making a decision based on conscious deliberation (Dean and Sharfman, 1993; Elbanna and Child, 2007). Although empirical literature has shown that procedural rationality improves strategic decision-making outcome (Dean and Scharfman, 1996; Elbanna and Child, 2007; Miller and Cardinal, 1994; Schwenk and Shrader, 1993), firms are not always able to follow a such a rational process, due to lack of information, environmental uncertainty, and diverging interests among decision makers. As a result, firms tend to combine procedural rationality with intuitive synthesis and political behaviour to select among different courses of action (Nutt, 2002).

*Intuition synthesis* allows firms to make decisions in situations of time pressure, limited information, and task novelty, namely when a rational decision-making process cannot entirely be adopted (Bingham and Eisenhardt, 2011). In intuition-based decision-making, decisions are taken on the basis of "affectively charged judgements that arise through rapid, non-conscious and holistic associations" (Dane and Pratt, 2007, p.40). The involvement of holistic associations emphasises that the process is not random (as it is the case in guessing), but it consists in non-conscious

recognition of patterns stored in the brain, which then determine the judgement. These patterns are rooted in domain-specific cognitive maps developed by the decision maker through experience. The more a decision maker has experience in a given decision-making area, the more accurate his or her intuition will be (Dane and Pratt, 2007). Thus, highly experienced managers can use intuition almost as effectively as rational judgement (Bingham and Eisenhardt, 2011; Khatri and Ng, 2000). However, empirical research on organizational intuition remains scant, and conclusions on the effect of intuition synthesis on strategic decision-making effectiveness cannot be made.

*Political behaviour* arises when people use their formal or informal power to influence a decision. It characterizes decision processes in which decision makers have different goals, and the preferences of the most powerful prevail (Elbanna and Child, 2007). Research on political behaviour in SDM is based on the fundamental assumption that organizations are coalitions of people with competing interests. If personal interests are in conflict with those of the organization, excessive political activity can jeopardise a decisional outcome that serves organizational interests. Thus, empirical research generally agrees on the negative effect of political behaviour on strategic decision-making effectiveness (Dean and Sharfman, 1996; Eisenhardt, 1999; Nutt, 1993; Elbanna and Child, 2007).

Though previous research has predominantly focused on one or the other of the above-mentioned decision-making mechanisms – i.e., procedural rationality, intuitional synthesis, political behaviour –, there is an emerging awareness that the single-perspective approach might represent an oversimplification of strategic decision-making's intrinsic complexity. Therefore, several scholars have advocated the desirability of combining different perspectives when investigating the strategic decision-making process (Eisenhardt and Zbaracki, 1992; Elbanna and Child, 2007). We follow this approach and, through our empirical study, we aim at providing insights on how the collaboration with design consultancies can influence the three decision-making mechanisms previously described, and help achieving a balanced combination of the three.

## **METHOD**

We selected the Dutch design consultancy industry as the empirical setting for this research. Given our exploratory aims, an inductive case study approach was considered appropriate (Eisenhardt, 1989; Yin, 2003). Inductive studies are particularly valuable for generating theoretical insights in research areas not appropriately addressed by extant theory, as it is the case with design consultancies (Alvesson, 2011; von Nordenflycht, 2010) and with the integrative perspective on strategic decision-making (Eisenhardt and Zbaracki, 1992; Elbanna and Child, 2007).

Data were collected through: (1) desk research (websites, archival material, reports, etc.); (2) in-depth interviews with board members and senior designers from eight design consultancies; (3) one group interview during which informants from different design consultancies discussed together the topics that emerged during the in-depth interviews; and (4) informal follow-ups with e-mails, phone calls, and reports' discussion. Table 1 provides summary information regarding consultancies, informants and interviews.

Table 2 - Description of Case Data

Firm	Size (N. Employees)*	Respondents	N. of Interviews
A	Medium (85)	Creative director, Brand director Senior designer	6
B	Small (25)	Managing director, Senior designer	3
C	Small (10)	Senior partner, Senior designer	3
D	Medium (80)	Partner	2
E	Large (400)	Creative director	1
F	Small (10)	Managing director	2
G	Small (6)	Partner	1
E	Small (1)	Managing director	2

\* According to the EU classification, small companies have up to 50 employees, medium companies up to 250 employees, and large companies more than 250.

We first analysed interviews' transcripts, field notes, and archival data for writing reports for each design agency in our sample. Then we compared across different agencies to find similar constructs and themes (Eisenhardt, 1989; Yin, 1994). We started this comparison after most data had been collected in order to preserve the integrity of the replication logic across interviews (Eisenhardt, 1989; Yin, 1994). As a framework emerged, we compared the findings with the extant literature to pinpoint similarities and differences, strengthen the internal validity of the findings, and refine the definition of constructs and relationships. Thus, we undertook several iterations among different data sources, literature, and emerging findings (Patton, 1990). This iterative procedure resulted in five propositions discussed in the following paragraphs.

## FINDINGS

### STRATEGIC DECISIONS INFLUENCED BY DESIGN CONSULTANCIES

Our findings suggest that design consultancies affect clients' strategic decision-making beyond their recognized area of expertise (e.g., industrial design, engineering, etc.). During the interviews most respondents asserted that their contribution is certainly prominent in design-focused decisions (product design, prototyping, visual identity, etc.), but it also extends to other strategic decisions. For instance, design consultancies were involved in planning and managing the entire development process of the products they design (from concept definition to implementation), in taking portfolio management decisions, in defining their clients' brand strategy (not only visual elements but especially brand associations and brand identity), and even in suggesting future strategic directions (vision and mission, product/market combinations, inter-firm collaborations). Consistently with previous studies (Miozzo et al., 2011), extending service offering beyond the recognized area of expertise seems to be the prevailing form of organizational growth for PSFs in general and for design consultancies in specific. Historically, PSFs begin with a narrow specialization, whose breadth of application is not initially known and only unveils itself over time. The rationale for this pattern of organizational growth is twofold. As already observed by Miozzo et al. (2011), the first explanation is in line with the diversification argument posited for manufacturing firms by Penrose (1959) and by adherents of the resource-based view of the firm (Montgomery,

1995): the growth of the firm descends from the economic need of leveraging 'slack' resources, i.e. exploiting underused potential residing in design skills, initially regarded as specialized but subsequently discovered as having a much broader scope of application. The second explanation descends from our data and builds on the intrinsic complexity of design and business decisions, whose scope can rarely be confined to a specific business function or area of expertise. Thus, to maximize the performance of design outcomes, design consultants need to influence other areas of strategic decision-making. Clients understanding the interdependences of strategic decisions and allowing design consultancies to extend their influence accordingly can benefit most from their expertise and the collaboration with them.

**DESIGN CONSULTANCIES' IMPACT ON CLIENTS' RATIONAL PROCESSES IN STRATEGIC DECISION-MAKING**  
Our findings show that firms generally hire design consultancies to fulfil knowledge voids in product design and engineering. In terms of decision-making processes, firms collaborate with design consultancies to get access to as much relevant information as possible for increasing the rationality of design-related decisions. Indeed, when firms use a rational decision-making approach, they strive to consult all the information relevant to the decision area, in order to improve decision alternatives' generation and finally select the optimal one (Elbanna, 2006). Given the uncertainty and the number of knowledge domains affecting strategic decision-making areas (e.g., innovation), firms increasingly turn to external sources – like design consultancies - to achieve information completeness.

Additionally, our results suggest that firms increasingly hire design consultancies because of their knowledge brokering capability – i.e. their capability of learning about potentially useful technologies or product/service solutions by working for clients in multiple industries, and transferring that knowledge into new products/services for industries where there is little or no prior knowledge of these technologies or product/service solutions (Hargadon and Sutton, 1997).

*"I think that one of the main reasons for our clients to work with us is that we are somehow capable to refresh our knowledge on a very regular basis, and they cannot do that within their own knowledge. There is a lot of what I always call cross-overs. What we learn in one project we can apply in another project [...] We keep repackaging that knowledge in different bundles and offer that to a client to meet their expectations. It's not a quick process." (Partner, Firm D).*

*"But now we have an article on a newspaper, let's say about our work on in-flight catering, and the following day we would not get phone calls from airlines. We would rather get a bank saying: 'We also have problems with our future! We don't know what to do. We've tried this and that, but maybe we should talk to you, guys'. And then we tell them: 'Well, but we don't know nothing about banking', and they answer: 'Exactly, that's why we want you'." (Senior Partner, Firm C)*

Through knowledge brokering firms gain access not only to design consultancies' specific knowledge, but also to knowledge domains never regarded as relevant. According to our interviewees, this not only increases available information, but also facilitates the concluding stage of clients' rational decision processes – i.e., the choice of the optimal alternative - since design consultancies' positive experience in other industries is regarded as valuable evidence for assessing decision alternatives.

*Proposition 1: Design consultancies facilitate clients' rational processes in strategic decision-making by providing domain specific knowledge and knowledge brokering.*

**DESIGN CONSULTANCIES' IMPACT ON CLIENTS' INTUITION PROCESSES IN STRATEGIC DECISION-MAKING**  
When asked about their most valuable skills for improving their clients' decision making-processes, design consultants often mentioned their ability of visualizing and materializing issues by means of the drawings, sketches and models that they commonly use to support their interpretive processes. According to our respondents, these artefacts help clients to better understand their market and its future direction, to become aware of their core strengths, to detect hidden problems, to comprehend brand associations, and to reduce the perceived uncertainty of developing new offerings.

These examples refer to highly uncertain strategic decision-making areas – i.e., corporate and competitive strategy, branding, innovation – for which firms cannot rely entirely on rational processes, but rather need to turn to intuition synthesis. Using intuition in decision-making is generally regarded as inferior to rational processes (Dane and Pratt, 2007). Material and visual artefacts used by design consultancies can both reduce client's reliance on intuitive mechanisms and, when the previous is not possible, improve the quality of intuitive judgement.

Since material and visual artefacts make observable and explicit the mental processes through which individuals within the organization make sense of things (Rafaeli and Vilnai-Yavetz, 2004), choices previously perceived as intuitive become rational, thus reducing decision makers' reliance on intuitive synthesis.

*“You can also say that – this is my gut feeling – visualization helped us to make a strategic analysis of what is going on. We were able to transform it [a market opportunity, n.d.r.] into something concrete. Making into something visual made us able to communicate with somebody that was not able otherwise to see that thing. We made that insightful, we made people seeing the problem, understanding the opportunity, what could come in the second step. I think that is one of the stepping stone of our strategic role, I would say.” (Managing Director, Firm B)*

Additionally, according to the literature “mature” intuition could be as good as rationality, and it is achieved when decision makers develop, usually through experience, complex cognitive maps of the decision domain (Dane and Pratt, 2007). By making cognitive maps explicit, designers' material and visual artefacts facilitate the sharing and the explicit learning of complex and domain-specific cognitive maps, thus triggering more effective intuitive judgement when using intuition is unavoidable.

*Proposition 2: Design consultancies' visualization and materialization capabilities (a) reduce clients' reliance on intuition in strategic decision-making, and (b) improve clients' effectiveness in intuitive decision-making.*

**DESIGN CONSULTANCIES' IMPACT ON CLIENTS' POLITICAL PROCESSES IN STRATEGIC DECISION-MAKING**  
In our data collection respondents were frequently confronted with politically powered decision-making, especially in assignments from clients in the public sector or when the client is a group of companies.

*“Because there are many parties involved – the manufactures, those making the packaging, the distribution system – when we have to introduce an innovation it is always crucial to ask...we try to look for beneficial improvements for every part of the logistic chain. So we work with 5,6 parties all the times. And if one of the parties misses an improvement on it real situation, the whole system falls down.”(Managing Director, Firm B)*



Although in presence of strong political powers design consultancies are forced to invest additional resources in negotiation and production of supportive knowledge, they can generally play a facilitator role in power controversies, leveraging on their outsider and expert status.

Empirical studies suggest a negative link between political behaviour and organizational outcomes (Elbanna and Child 2007). Since political power does not necessarily support the optimal decisional outcome, politically driven decisions might be sub-optimal, in the sense that wrong decisions might be taken or decision processes get stuck in power battles. Consistent with previous anecdotic evidence (Sturdy 2011), our data suggest that design consultancies can help to address clients' political bottlenecks by either synchronizing divergent opinions, or reinforcing the authority of commissioning clients, or undermining the political power of opposing parties. As a result, they contribute to legitimise promising ideas and practices and guide clients towards optimal decision-making.

*Proposition 3: By playing a legitimisation role design consultancies can reduce the negative impact of political behaviour in strategic decision-making.*

#### CHARACTERISTICS OF THE DESIGN CONSULTANCY-CLIENT RELATIONSHIP: INVOLVEMENT IN PROBLEM DEFINITION

According to several respondents, due to lack of experience, time constraints or political interests clients do not have good skills in problem identification and, thus, in assignment definition. For instance, it is not rare that behind a request for a new product design there is a product portfolio or branding problem that the client is not aware of or not willing to disclose. Since client acquisition often goes through a bid process, there is always great pressure to accept, in broad terms, the client's definition of the problem. However, this neglects the process of translating or re-defining the problem into a form compatible with design consultancies' capabilities and preferred approaches, thus jeopardizing the final outcome of the collaboration. Additionally, it prevents the client from getting access to the broader spectrum of design consultancies capabilities, and from obtaining a thorough outcome offering a long-term solution to a problem that might have been narrowly defined only by mistake or by lack of experience.

In order for clients to benefit from design consultancies' expertise at most, and for design consultancies to perform at their best, a clear and shared definition of the real nature of the problem is essential at the early stages of the collaboration.

Respondents find that time spent in early stages to investigate clients' real needs, to collaboratively define the assignment, and to ensure congruency in clients' and design consultancies' goals and roles is invaluable.

*Proposition 4: Design consultancies' impact on clients' strategic decision-making is higher when design consultancies are able to influence the breadth and the content of their assignment.*

#### CHARACTERISTICS OF THE DESIGN CONSULTANCY-CLIENT RELATIONSHIP: LENGTH OF THE RELATIONSHIP

All the respondents agreed that their influence on clients' strategic decision making is higher if there is a long term, trusting relationship. Only after repeated satisfactory transactions clients become aware of the full range of design consultancies' capabilities, hire them for broader and more complex tasks, and ask for insights on more strategic decisions such as e.g. portfolio management.

*“And we got involved in the discussion about what the impact of the design is in the whole process. And bit-by-bit, clients start to appreciate our role and start to recognize it. And gradually they learnt that our advice could be valuable in the backside of the process. And over the years we also started to get an impact earlier in the process.”*  
(Partner, Firm D)

Developing long-term, trusting relationships is a condition for success in any kind of inter-firm collaboration. However, the issue is particularly relevant for design consultancies and PSFs in general, given the high level of ambiguity and uncertainty associated with the knowledge intensive nature of these industries (Alvesson, 2011). As explained in the introduction, the design consultancy-client collaboration is characterized by high transactional uncertainty, given the difficulty of assessing the quality of design consultancies' outcomes. Further ambiguity in the relationship is added by the 'institutional uncertainty' still characterizing the design industry (Glückler and Armbrüster, 2003), given the lack of formal institutional standards such as professionalization, industry boundaries, and product standards.

Under conditions of uncertainty, partner choices are driven by personal trust based on previous experience (Glückler and Armbrüster 2003). Once established, experience-based trust enables reciprocal and enduring relations, and organizations will tend to increase the volume of transactions with trusted design partners, by making the collaborations more frequent, but also by broadening their scope.

*Proposition 5: Design consultancies' impact on strategic decision-making is higher in long-term design consultancy-client relationships.*

## **CONCLUDING REMARKS**

Design consultancies emerged as a key innovation partner in the knowledge-based economy, where successful innovation largely relies on quickly accessing several sources of knowledge (Von Nordenflycht, 2011). However, research progress has been conceptually and empirically hindered by the intrinsic ambiguity of design consultancies' outcome and performance, thus leaving the literature unable to specify the organizational and managerial implications of knowledge-intensive collaborations with design consultancies. By examining the Dutch design consultancy industry, we found initial evidence of design consultancies' capability of affecting clients' strategic decision-making, thus providing some initial insights on how effective influence on clients' strategic decision-making could serve as an indicator of design consultancies' performance. Design consultancies can influence strategic decisions by enhancing the three strategic decision-making mechanisms identified by the literature – rationality, intuition, and political behaviour. Early involvement in problem definition and long term relationships with clients seem to strengthen the influence.

Given the exploratory aim of our research, a case-study methodology was regarded as appropriate and allowed us to gather a rich set of qualitative data. However, the number of respondents is still too small to consider replications and opportunities for theory building (Yin, 2003). In the upcoming months, we plan to extend the analysis in several manners. First, we will extend our data gathering to design consultancies' clients, thus collecting dyadic data capturing the perspective of both design consultancies and their clients on a given assignment. This dyadic approach will shed light on the important issue of whether the design consultancies' impact on strategic decision-making highlighted by this paper is indeed perceived in a similar fashion by the clients themselves. Additionally, this paper describes design consultancies' capability of contributing to clients' strategic decision-making, but the intensity and effectiveness of the contribution is not yet examined. By collecting data on the client perspective we can draw conclusions on whether design consultancies play an advisory role in strategic decision making or replace the clients in making some decisions; and on whether collaboration with design consultancies indeed increases the quality and effectiveness of strategic decision-making, thus improving the overall clients' performance. Analysing dyadic case studies will culminate in creating and testing a theoretical framework of drivers of effective design consultancies client collaboration. With effective strategic decision-making as the dependent variable, drivers can include: design consultancies' skills and capabilities making them able to effectively influence their clients' strategic decision-making; clients' characteristics facilitating the interaction with design consultancies and the assimilation of design consultancies' knowledge; and characteristics of the design consultancy-client relationship.



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