

A Profession in Flux: An era of leadership for consultant designers in NPD

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Abstract

This paper seeks to discern and chart the recent flux in the territory of practice in the consultant industrial design profession. External market conditions, such as globalisation and the repercussions of immediate digital communications, are evolving to create new ways and approaches to business, manufacture and consumption. These changes are having great impact upon the design industry, and it is suggested that design is moving into a new era of ascendancy. Using a qualitative case study methodology, the research uncovers a distinct shift towards 'design leadership' in the context of the new product development (NPD) process for mature product categories. This flux is manifest in three key areas – designer remit, an expansion in the designer's skillset, and an increased weighting in the importance of design interfaces. The notion of design leadership is identified, defined and described. Finally, the research develops a model to assist practicing designers navigate these changes.

Keywords: *design profession, design leadership, design relationships, designer-marketer interface, NPD, industrial design*

Development in the design profession: a move towards design leadership

In flux: the changing role of design(ers) in business

Design, in its aesthetic trends and its application to business, has in history undergone periods of transition linked to cultural changes and economic prosperity. From the 1700s, with Wedgwood's pioneering use of design to differentiate product lines and segment the market, design started to add value to the product. During the Industrial Revolution of the 1800s, time was of the essence as companies sought to sell vast quantities of generic products quickly: products were designed on a surface level only by teams of non-expert workers.

Next, the economic boom and bust of the 1920s had another profound impact on the role of design in industry (Woodham, 1997): the depression forced business to turn to design at levels greater than solely aesthetics. During this period, a set of consultant designers (Raymond Loewy, Norman Bel Geddes and Henry Dreyfuss amongst others) worked on industrial products for a range of clients, becoming household names in their own right for their contribution to making everyday objects more functional, usable and aesthetic. In this period, consultancy studios were especially marked by their size and diversity: cross-disciplinary practice was the norm, and collaborations involved a breadth of expert employees, such as engineers and technicians. Henry Dreyfuss, in particular, practised an approach of 'total' design integration, where his studio became involved at every level in his client's organisation (Dreyfuss, 1955). It was during this period of growing professionalism and status in design that, argues Sparke (1983), the formative elements of the consultant designer were synthesised into a unique formula where the role was to 'stand firmly in the centre of these specialisations and understand and synthesise them without specialising in any of them' (Sparke, 1983:3).

However, by the 1950s firms had access to the same production technologies, and competition accelerated. As products became more evenly matched, there was a reversal in the design and marketing hierarchy. The tools of mass media, mass advertising and mass marketing became more important selling points than the products themselves. As consumers were persuaded to buy on the visual imagery alone, marketers and advertising agencies were in charge of specifying what should be produced. Product quality decreased and design's role was styling the skin around these product ideas. Decorative design dominated until the early 1990s, when digital technology and globalisation started to confront business with new challenges.

Design today: embracing diversity

Over the last two decades, cultural and economic contexts have changed the commercial environment, and design now finds itself in a new era of ascendancy. For example, CAD/CAM (computer aided design/manufacture), mass customisation and the issues around sustainability and the environment are having a profound impact on current design work (Borja de Mozota, 2003). Likewise, new market conditions – globalisation, immediate digital communications, broader competition and rapidly developing and sophisticated technologies – have significantly changed the power dynamic. The consumer now has greater clout than ever before (Kumar and Whitney, 2007), and with this, co-creation of products is enabled (Chrometzka, 2008). Knowing, understanding and listening to the customer therefore becomes paramount for organisations.

Design therefore has the potential to contribute to business in a multitude of ways. Cooper and Press (1995:42) suggest design is a limitless and multifaceted activity adding value across organisational functions, where “its disciplinary boundaries range from engineering to fine art”. The seismic shifts in the competitive environment are shaping a new landscape for organisations – in processes of doing business and applications of design – as they seek to create products of greater value, and better meet evolving needs and desires.

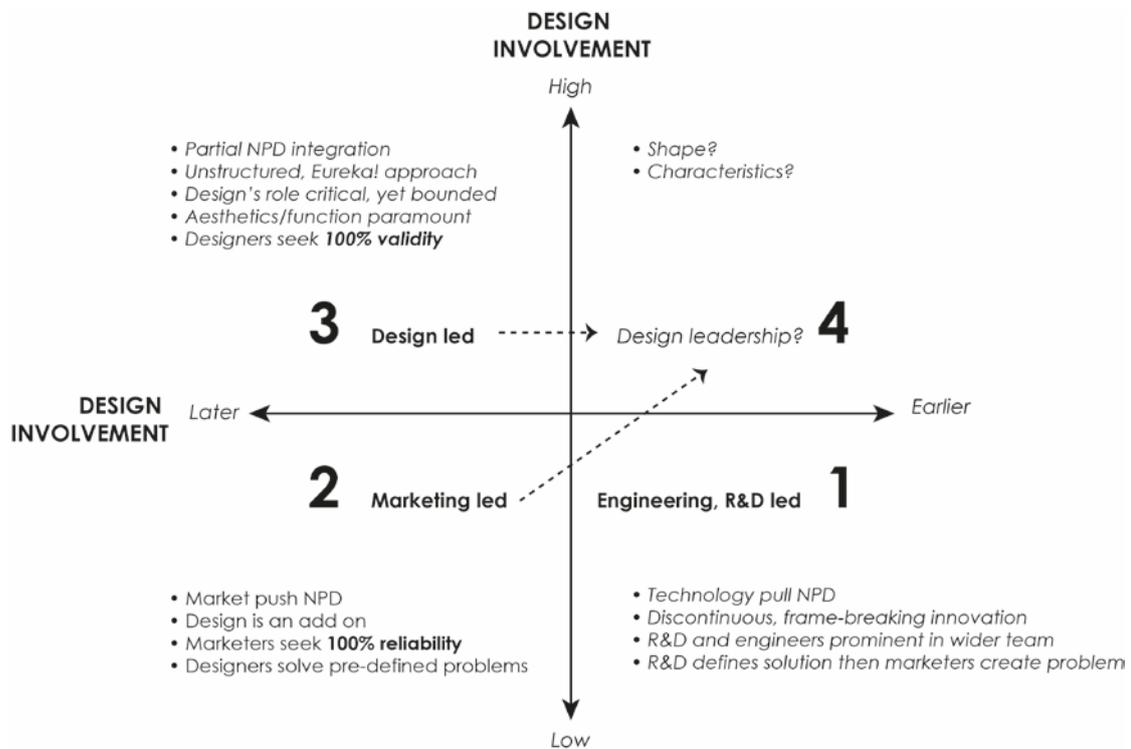
This research seeks to explore the discipline of design and its involvement with business. In doing so, the isolation of *consultant* designers – i.e., those which are external to their clients – is considered to be a rich context in which to look at the changing discipline. This context allows greater isolation of the design discipline as distinct from the client's business function. Like those famous consultancy studios of the 1950s, the study of consultant designers gives the potential to examine a range of design situations and projects, and allow insight into a variety of design-client interactions. Therefore, the study of consultancy designers is rendered a rich and valid context in which to explore the evolving role of designers in NPD.

Design's role in NPD

The new market influences discussed in the previous section are changing processes of NPD. The matrix in Figure 1 indicates four different styles of NPD. In ‘discontinuous’ NPD, R&D technologists and engineers often lead a process which is marked by advances in radically innovative, frame-breaking technologies. Rothwell (1986) terms this ‘tech pull’ form of innovation, indicated in Quadrant 1 in Figure 1. By contrast in ‘continuous’ styles of NPD, marketing and design are the disciplines which have the most profound impact. This research therefore has its focus in more mature, continuous styles of NPD where R&D and engineering play a less prominent role. In mature NPD, marketing and design share an aim to satisfy the customer's needs: both act as a bridge between the producing, inward-facing operation and the consuming, outward-facing customer groups. However, the tools, approaches and outlooks of the two are distinctly at odds.

While the marketing led approach (Quadrant 2 of Figure 1), dominant in the past half-century, focused on persuasion, design, with its specialised tools, is suggested to be more adept and flexible than marketing at understanding and providing relevant value for today's consumer. The role of marketing in NPD is to recognise and anticipate untapped potential within a market place, and to conceive suitable products to fill this gap efficiently and profitably. Marketers tend to be more circumspect, and more explicit in asking exactly what the customer needs at the present moment. The traditional systematic frameworks of the ‘marketing-led’ approach, where design plays a minimal role, are proving too structured and rigid to cope with understanding dynamic cultural contexts and rapidly evolving consumers (Martin, 2009a) in 21st century NPD. In stark contrast, design led NPD (Quadrant 3, Figure 1) denotes a mode of innovation where designers dominate. Design processes are less quantifiably rigorous, and more dependent on designer intuition. Being design-led implies a critical yet bounded inclusion of design in NPD. In this approach, designers embrace the aesthetic and functional in an unstructured approach to NPD.

Figure 1: Design NPD involvement



Source: the authors

Yet the dynamic, complex, ultra-competitive environment of the 21st century, where the customer wields unprecedented power, creates an altogether new set of challenges. Neither of these extremes alone is responsive to addressing new demands, and the imposition of a choice of marketing-led or design-led can be harmful to the organisation. Indeed which party has dominance over the NPD effort is often influenced by managerial attitudes and organisational structures (Hart and Service, 1988). Where conflict, a vying for power, and lack of synergy between the various disciplines involved in NPD occurs, sub-standard products often result. Therefore, many advantages exist in establishing synergy and shared goals in NPD by take into consideration the approaches and methodologies of both disciplines, and several studies point out the shared goals and interrelationship between the disciplines (e.g. Bruce and Daly, 2007; Cooper, 1994; Kristensen and Grønhaug, 2007). This research aims to examine emerging notions of reconciliation and harmony between the two disciplines. As indicated in Figure 1, we seek to explore the movement from the polarity of marketing led and design led approaches to NPD to one which we tentatively term *design leadership*.

Taking leadership: a design approach to the challenges of 21st century business

The integrative, interdisciplinary nature of design – with its roots drawing from technology, marketability and aesthetics – is a vehicle by which to achieve synergy. Indeed, the Dreyfuss consulting studio of the 1950s was a forerunner in stressing that successful design deployment must involve complete integration into the corporation. These ideas are resurfacing in notions of design thinking (e.g. Boland and Collopy, 2004; Brown, 2009; Martin, 2007a, 2007b, 2009a, 2009b) which encourage an organisation-wide adoption of the tools of design. It follows that balance is required between the systematic methodology of marketing and the intuitive approach of design, rather than an imposition

of choice. Quadrant 4 (in Figure 1) indicates a shift to another approach to NPD, driven by design. The authors tentatively term this 'design leadership'.

Designers are commanding more significance than in previous generations, and have far greater gravitas. In organisations, design and designers are being asked to solve problems of greater breadth, consequence and complexity. The constraints of a challenging competitive environment (where value must be found in many different ways) and the issues surrounding the environment and sustainability all impose new conditions and wield new influence over design decisions. Design's role is even more weighty and complicated (Morello, 2000). Buchanan (2001:13) calls this phenomenon 'fourth order' design, where form, function and materials are only one part of a wider investigation whereby designers need to understand what makes a product 'useful, usable and desirable' for the people for whom it is intended.

Together, these shifts and concepts are shaping an era where design, its uses, its tools and its organisation are taking on an increased gravitas. Emerging evidence suggests that designers are embracing a role of greater leadership in the organisation's NPD effort. Perks et al.'s (2005) research charts a range of ways in which designers are involved in product development. At the most sophisticated level, they find that designers are gravitating to a leadership role from the outset of NPD. Valtonen (2005) tracks an evolution in the role of the product designer in Finland, where the designer has taken a more rounded role in innovating new products. Verganti (2008) also suggests a broadened scope in the role of the designer – design-driven innovation – in creating new product meanings and strengthening brands. These authors contribute to the idea of design and the designer in transition towards a role of greater leadership and more significance within the organisation. However, there is shortcoming as to design's role in the NPD and design management literature, and empirical data on how design plays a role in NPD remains limited (Kim and Kang, 2008).

Design with its focus on the future and improvement, appears adept and flexible in its approach to uncovering and interpreting broader cultural and societal trends. Its specialist approaches and methodologies, make it well placed to respond to, and even predict, consumer needs (Veryzer and Borja de Mozota, 2005). Designers' focus on users and usability, along with their testing and prototyping tools, renders their input particularly valid, as it enables errors to be corrected and ideas validated before substantial investment has been made. This research, therefore, seeks to better contextualise the developing approach. To understand the nature and level of changing design and designer involvement in NPD, the research focuses on the design side involvement.

Developing the research issue

Synthesising the argument in the previous three sections, the focus of this research takes shape. As designers and design consultancies grapple with greater expectation, the designer's role in NPD is in flux. The research question was hence developed considering the proposition that the designer's involvement in product development is expanding and increasing in line with design's ascent to strategic prominence in business. However, it remains unclear how the design profession is navigating these changes. In this respect, the aim of the research is to explore and develop existing theory as to the expanded required designer skill set, as proposed by Perks et al. (2005).

We therefore concentrate on consultancy designers, working with clients in mature product development for its ability to better isolate the contribution of design rather than engineering or R&D. The research question becomes:

How is the leadership role of the consultant industrial designer evolving in the new product development process in mature product categories?

Methodology

That empirical evidence on this emerging phenomenon is limited has clear implications for the research methodology. Since extant research is thin, an interpretivist, discovery-driven approach was necessary (Brannick and Roche, 1997) to be able to address the research issue (Easterby-Smith et al., 2002). The interpretivist paradigm, it is suggested, is more applicable to the discovery-driven research aims of the study in hand: its focus lies in being to understand what is happening in a given context (Carson et al., 2001). As such, a case study, with its naturalistic setting, quasi-ethnographic stance, and ability to offer contextual richness (Yin, 2003), was considered the best methodological approach for this exploratory research: the case approach enables an evolutionary development over time (Carson et al., 2001). It also holds the capacity to build theory (Eisenhardt, 1989), and therefore to enhance research contribution. The collection of context-rich, empirical evidence can assist in improving design practice (Tzortzopoulos et al., 2006).

The case study design comprised two periods of case study research. The overall approach to the data collection was of an in-depth, *exploratory* case study to draw out the evolving shape of design leadership, and of a number of so-called *critical* case studies, carried out subsequently, to help develop and further shape the evidence. Four industrial design consultancies were selected for their similarities in (1) number of years established, (2) the industries in which their clients can be categorised, and (3) the level of innovativeness of their work. All of the studied consultancies were established over 25 years, worked with international clients specialising in consumer products, and engaged in largely mature NPD.

The primary exploratory case was conducted at Design Partners, an Irish industrial design consultancy. The lead researcher spent six weeks embedded in the firm in summer 2009, carrying out quasi-ethnographic observation. Later, semi-structured interviews with designers and managers probed upon the issues which had emerged during the quasi-ethnographic period. A rich qualitative dataset was collected from the case notes and diary kept by the researcher. This dataset is based on quasi-ethnographic observation, informal conversations, and attendance at company and client meetings. One year later, in summer 2010, the lead researcher carried out interviews at three subsequent case study sites - frog (US), Smart Design (US) and DesignworksUSA (Germany). The choice of international consultancies was based around the notion that these firms were successful in integration of design and business, as all had internationalised from modest beginnings. Designers and design managers were interviewed using a semi-structured interview technique which drew on the issues arising from the first period of data analysis.

Data from the subsequent cases developed, refined and quasi-corroborated emergent findings from the primary study. Collating the data from four case study sites, in total 19 interviews were recorded, transcribed and analysed. Evidence was synthesised using Eisenhardt's (1989) four-step approach. This constitutes four levels of coding and categorisation of data in tables. Themes were then built from the data. The three

overarching themes derived from the primary and subsequent case studies are presented in this paper.

Findings: a profession in ascendency

The findings suggest an overall transition from a marketing-led NPD approach to one of 'design leadership'. Greater responsibility – leadership – on the part of design was manifest in numerous ways in the work of the designer and studio. First, designers are taking greater responsibility in solving problems of greater weight and complexity than in previous generations. The role and remit of the designer has expanded to embrace some of the tasks traditionally associated with the marketer. Second, the nature of the relationship between designer and client is instrumental in determining how the designer is involved in NPD. A growing closeness means that designers are involved from the beginning, or even pre-project, and this allows greater input in realms beyond product function and aesthetics. Third, consultancies are reorienting their offering to one of involvement across the NPD project. Studios consult in the clients' overall business strategy, and become coordinators – leaders – in the product's realisation. There is a shift from designers following marketers' suggestions to designers acting as consultants in the purest sense.

I. Expansion in designer remit: taking ownership of projects

The first area of change uncovered by this research concerns the work of the designer. There is a shift in the scope of designers' role, remit and responsibility. The research finds that: 1) designers' skill sets are enlarging to cope with a broadened role, and 2) designers are taking responsibility and greater control of a broad range of activities *across* the NPD process. The role is mutating into one of increased involvement and complexity.

The 'designer-marketer': assuming an enlarged skill set

At the four case research sites, designers describe a significant split between managerial work and traditional design activities: more and more of their working time is consumed with organisational tasks, and less is dedicated to the actual design work itself. Ironically, the more experience the designer has, the more managerial tasks he/she undertakes.

As a result, designers are involved in tasks which veer towards the business side of design consulting, rather than sole interest in designing, and therefore their skillsets are broadening to cope with these increased responsibilities. In particular, designers' involvement in the tasks traditionally associated with marketing is marked. For example, before even beginning to sketch, designers participate in researching and fabricating the marketing 'story' around which the product becomes relevant on the market. Designers described the necessity of this evidence as a chief contributor in the design process. Moreover, as one interviewee noted, this research allowed 'translation' of sorts of all the factors which influence any product.

I wouldn't present a concept based on "here's an idea". I think that it needs a story to have credibility, even the subtle detailing ... So you're kinda translating, or taking some of that inspiration and translating it into design (R2:6)

Therein, the links between marketing and design are pronounced. Designers have become increasingly sophisticated in their knowledge of sales and selling. In effect, the designer's remit is gravitating towards quasi-marketing. Even more strongly, another respondent saw the job of design as client brand development:

to develop a brand, you've got to be really careful on what products you release, not only for the target market, and for all the other reasons, but for the brand itself and to help the brand grow. You need to be very selective, you have to choose a direction, so there has to be a much higher bird's-eye view of what you're doing (R2:7)

This incarnation of 'designer-marketer' takes responsibility for an entire brand. These marketing-savvy designers are well aware of the theory of brands, values, visions and promises, and strive to encapsulate these in products. This represents a further dimension to the designer's mission.

Responsibility across NPD

The findings of the present research indicate that the designer-marketer's influence is prominent across NPD stages – from briefing and problem forming, to design development work, and input in launch and marketing. In assuming these strategic tasks, designers are taking on the role of business consultant. For example, at all of the studied case consultancies, there were examples where direction was offered to the client outside of the initial design brief. Guidance was offered on business direction as well as design and product strategy.

The 'wicked' nature of a design process means that its course is typically marked by numerous tributaries, and where wooliness and uncertainty on the part of the client occurs, it enables designers to seize a greater degree of project leadership. An interviewee revealed that it is normal for a client to arrive without a clear vision of the outcome. The onus is on the designer to 'ask the right questions':

inherently in a design project, especially the more ambitious ones, there are unknowns and the client will admit to that, he'll say "here's what we know, here's what we think, we're coming to you because you can make this real, we know that you'll ask the right questions" (R9:6)

The result of assuming greater responsibility for project specifications and design outcomes, the client's reliance on designers asking the right questions, reflects an orientation towards an authority as a consultancy, rather than merely provider of a service. By adopting some of the tasks traditionally in the remit of the marketer, by offering the client a greater degree of guidance and insight, designers are assuming

greater control of the product development process, beyond the traditional realm of design.

II. Leading the client: value of managing design interfaces

The second area of change concerns the interface between the designer and client. Building on research by Bruce and Docherty (1993) and Bruce and Morris (1998), interpersonal rapport is found to be an extremely important conduit of the NPD process, and of new business development. As such, designers often nurture positive and intense relationships with their clients, and the greater extent and clarity of this partnership, the smoother the project progression. Management of relationship thus becomes the ideal situation, allowing designers to have greater input in, and control over, a successful project.

Personalities and team orchestration

Relationships and personalities constitute a large part of solidifying working partnerships and ensuring smoother project progression. As such, designers and consultancies are found to devote significant time to nurturing these relationships. At the four consultancies studied, management spent significant time ensuring that project teams had a good 'fit' with the personalities on the client team. Design teams are strategically orchestrated and tailor-made to ensure good synergy with the client team, for example according to interests, age groups or previous working experience. A project manager noted that resourcing to get the 'right' team members onto the right project is an essential component of his role:

sometimes you're actually like a casting director, fitting the right people together ... to get the right designer at the right time (R9:2)

As design begins to solve problems of even greater complexity, and outside of the traditional scope of design, emphasis upon 'hard' skills is significantly reduced. At the consultancies studies, designers hailed from many disparate backgrounds such as anthropology, business and research. Recruitment is hence increasingly based on passion and personality, rather than hard technical skills. As such, a 'learning by doing', participatory policy is common.

Long-lived versus short-lived partnerships

By tailoring teams to fit, partnerships with clients often become positive and enduring. These are seen as beneficial to the design consultancies studied for their scope to take an even greater leadership of client and projects. In general, good, positive relationships enhanced a mutual trust between client firm and consultancy. Where trust was high, designers were given an even greater control over the project across NPD, from briefing to launch. A designer described a situation with an enduring client, noting that the

consultancy was able to offer even greater insight and input – consulting skills – as a result of having built this relationship:

they will ask you your opinion as well because there's a very good relationship there and they trust us, sometimes they ask for our feedback as well. And in general when you're presenting concepts now to xxxx, it's more opinion-based than descriptive (R4:8-9)

By contrast, in situations where trust is low (as often is the case in the first project with a new client), designers respond to specific briefs. In these cases, input is curbed. It is therein worth noting a disparity in types of relationship. While in some projects with trusting clients, greater input and leadership arises from the designer, in others cases often with distrusting clients, input required from the designer is specific and controlled. A gap can emerge between notions of the designer as an autonomous authority who takes NPD leadership, versus the designer as fulfiller of service-providing duties. This can often cause tension and frustration in the relationship. While this is an interesting topic, it is outside of the scope of this paper to describe such variation in greater depth.

III. Taking ownership: reconfiguration of design consulting

The third area of key finding is a reconfiguration in the business of design consulting. This is the consequence of the two previous areas of change – enlarged designer remit and responsibility across NPD, and the trend for designers leading complex NPD projects –described in this paper. Consultancies are diversifying to offer clients extra services, and are taking greater ownership of their NPD processes. At the four consultancies studied, all offered clients industrial design, brand communication and strategy elements in an integrated package.

Broadening of intangible client requests

As expectation and value of design increases, and as consultancies manoeuvre into the position to offer widened and more varied skills, clients are becoming more design-savvy and hence more willing to open themselves to the new opportunities presented by design. This is having implication on what the client asks and expects of design providers.

Designers at the studied consultancies noted a broadening in client requests, and this shift has had considerable impact upon design deliverables. Several designers spoke about increasing requests for intangible outcomes. For example, at one consultancy, designers worked on a range of 'directories' which would guide its clients' future design language and create a holistic design strategy. A designer at another consultancy spoke about clients' requests for design 'platforms' rather than specific objects:

some companies don't even want to design anything, but they want us to create a design platform, and the deliverable would be a CD. And then the marketing gets much more in the foreground, because they just want to know what we would think their brand would need to succeed the next two or three years out in competition (R14:4)

By taking ownership of the strategic dimensions of the design process, as well as the client and its brand, the designer becomes the medium to steer the client business portfolio. Design no longer encompasses aesthetics, or simple products, but rather about the extension and strategic management of the clients' business. This striking example illustrates the consultancy's role as leader, authority, and client guide. This constitutes an important part of the shift to design leadership.

Increasing complexity of designing

In the previous section, creating new meaning for products was an element in the strategic offering of modern-day consultancies. By using an approach of 'total design for experience', designers aim to reframe the scope in which the product is considered, which is in turn making the process more complex and multifaceted. As clients require an increasingly integrated, and hence complicated, approach to design, designers must become acquainted with a broader spectrum of factors.

The early embracing of the language and craft of business and strategy have enabled the case consultancies to reorient into a more powerful and increasingly knowledgeable position and, in doing so, they have assumed a degree of ownership and responsibility outside of the traditional sphere of influence. As the whole landscape of business reorients towards the production of services and experiences rather than objects, as processes provide the chance to obtain competitive advantage, the offering of design consultancies (and the client firms) is changing in tandem. As both take on new challenges, these major shifts account, in some way, for better alignment of design and business.

Technology, society, culture, the economy and the environment – along with responsibility and obligations to employer and user – are all areas of concern for designers. Today, products are assuming extra and relevant meanings and value, and designer is being challenged to identify and incorporate these in the objects they create. As a senior designer noted, 'anyone can design a mouse, but why is this relevant for [the client]?' (R3:12). No longer are the illogical and random skills enough for design consultants in their enlarged, business-oriented domain. The case consultancies' amalgamation of the strategic and the practical by increasingly selling a unique blend of premeditated and functional insight, is allowing transition to take a greater leadership for clients' NPD processes.

Conclusions: a shift to designer leadership

This research outlines an overall reorientation from a passive, and often late, design inclusion in NPD where client dictates direction, to one of more rounded and instrumental designer input from the early stages of NPD – i.e. leadership of clients and projects. This we term ‘design leadership’. We suggest movement from the two poles of product development – the market-led and the design-led – to this new style, as indicated in Quadrant 4 of Figure 2. Design leadership has three key characteristics, as detailed in the three findings of this study: 1) an expansion in the designer’s remit, 2) importance of design-client interface management, and 3) a reorientation in the nature of consultancy to one which is ever more broad and complex. Overall designers participate across NPD in both a functional *and* strategic capacity. These characteristics are clarified in Quadrant 4 of Figure 2. Figure 2 therefore acts as a guide for consultancies and clients seeking to understand and navigate a shift to greater design leadership.

Design leadership denotes the assumption of a pivotal coordinating position in the process, resulting in an extensive and early involvement. The designer is thereby moving from influencing only the functional and surface attributes of products to having input that is significant, important and decisive. The designer uses wide- reaching skill to become expert on client business, brand and strategy, and thereby acts as a consultative authority. In this sense, traditional definitions of ‘designer’ are outmoded and in need of revision. In design leadership, partnerships with clients are close and symbiotic, and design consultants are highly regarded and trusted members of the NPD effort.

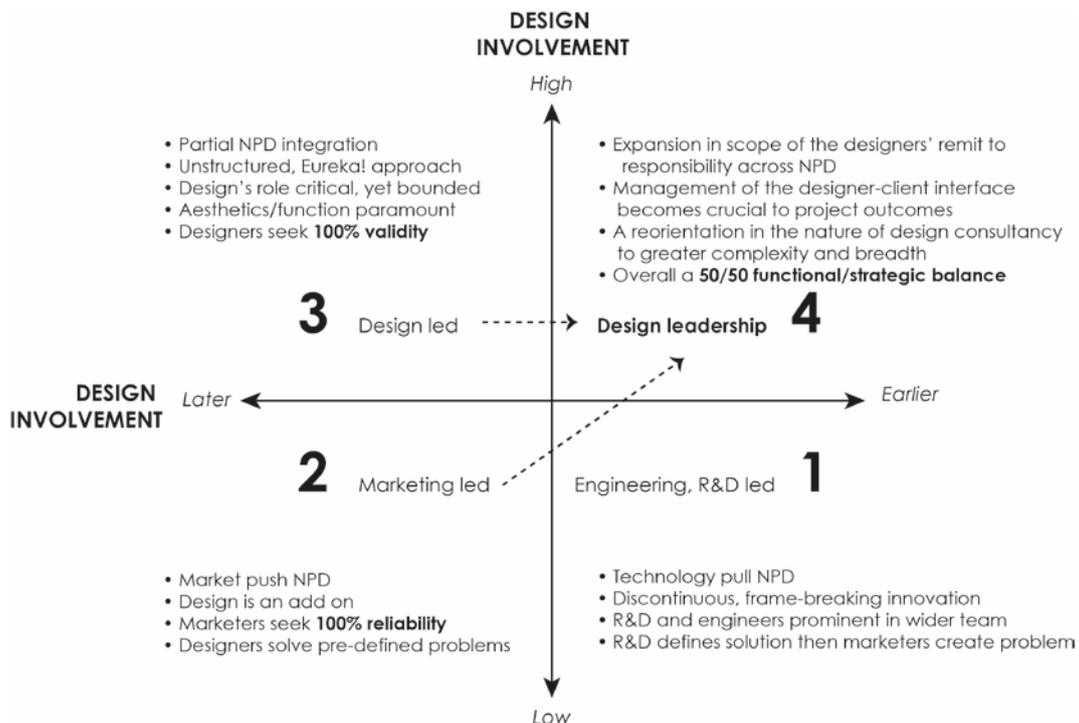


Figure 2: Mapping designer leadership

Source: based upon the authors' findings

As designers engage in quasi-marketing tasks, they seize significantly greater freedom, control and ownership of NPD. Ironically, by becoming more marketing-led and business-aware, as designers embrace the language and craft of marketing, the design consultancy moves into a position where it propels its clients' NPD strategy, and oftentimes even its brand and corporate strategies. Paradoxically, blurred boundaries and close collaborations mean greater autonomy. In all, these characteristics mark the move from the designer as a service provider to a design authority, from a follower to a leader, and an overall shift from marketing-led NPD to a new paradigm of design leadership.

References

- Boland, R.J. and Collopy, F. (2004b). Design matters for management. In: *Managing as Designing*, Richard J Boland and Fred Collopy (eds.). Stanford, CA: Stanford University Press, pp. 3–18.
- Borja de Mozota, B. (2003). *The design dimension: Using design to build brand value and corporate innovation*. New York: Allworth Press.
- Brannick, T. and Roche, W. K. (1997) *Business Research Methods: strategies, techniques and sources*. Dublin, Oak Tree Press.
- Brown, T. (2009). *Change by design: How design thinking can transform organizations and inspire innovation*. New York: Harper Collins.
- Bruce, Margaret and Cooper, R. (1997), *Marketing and Design Management* (1st ed.). London: International Thomson Business Press.
- Bruce, M. and Daly, L. (2007). Design and marketing connections: Creating added value. *Journal of Marketing Management* 23(9/10), 929–953.
- Bruce, Margaret and Catherine Docherty (1993), 'It's all in a relationship: a comparative study of client-design consultant relationships,' *Design Studies*, 14 (4), 402-22.
- Bruce, Margaret and Morris, B. (1998), 'In-house, outsourced or a mixed approach to design,' in *Management of design alliances: sustaining competitive advantage*, Margaret Bruce and Birgit Helene Jevnaker, Eds. Chichester: John Wiley.
- Buchanan, R. (2001). Design research and the new learning. *Design Issues* 17(4), 3–23.
- Chrometzka, L. (2008). Designers and managers facing consum-authors: The rise of a self-governing design? In: *International DMI Conference*. ESSEC, Paris.
- Cooper, R. (1994). Marketing and design: A critical relationship. In: *Marketing interfaces: Exploring the marketing business relationship*. Ian Wilson (ed.). London: Pitman, pp. 127–168.
- Cooper, R. and Press, M. (1995) *The Design Agenda: a guide to successful design management*. Chichester: John Wiley and Sons.
- Dreyfuss, H. (1950). The industrial designer and the businessman. *Harvard Business Review* 28(6), 77–85.
- Easterby-Smith, M., Thorpe, R. & Lowe, A. (2002). *Management Research*, London: Sage.
- Eisenhardt, K.M. (1989). Building theories from case study research. *Academy of Management Review* 14(4), 532–550.
- Hart, S.J. and Service, L.M. (1988). The effects of managerial attitudes to design on company performance. *Journal of Marketing Management* 4(2), 217–229.

- Kim, B.-Y. and Kang, B.-K. (2008) Cross-Functional Cooperation with Design Teams in New Product Development. *International Journal of Design* 2, 43-54.
- Kristensen, T. and Grønhaug, K. (2007). Editorial essay: Can design improve the performance of marketing management? *Journal of Marketing Management* 23(9/10), 815–827.
- Kumar, V. and Whitney, P. (2007). Daily life, not markets: customer-centered design. *Journal of Business Strategy* 28(4), 46–58.
- Martin, R. (2007a). The design of business (keynote address). In: *DMI Strategy Conference*. IIT, Chicago.
- Martin, R. (2007b). Design and business: Why can't we be friends? *Journal of Business Strategy* 28(4), 6–12.
- Martin, R. (2009a). *Design of business: Why design thinking is the next competitive advantage*. Cambridge, MA: Harvard Business School Press.
- Martin, R. (2009b). The design of business. *Business Week* (October 14).
- Morello, A. (2000). Design predicts the future when it anticipates experience. *Design Issues* 16(3), 9.
- Perks, H., Cooper, R., and Jones, C. (2005), 'Characterising the role of design in new product development: an empirically derived taxonomy,' *Journal of Product Innovation Management*, 22, 16.
- Rothwell, R. (1986). Innovation and re-innovation: A role for the user. *Journal of Marketing Management* 2(2), 109–123.
- Sparke, P. (1983). *Consultant design: The history and practice of the designer in industry*. London: Pembridge Press.
- Tzortzopoulos, P., Cooper, R., Chan, P. & Kagioglou, M. (2006). Clients' activities at the design front-end. *Design Studies*, 27, 657-683.
- Valtonen, A. (2005). Six decades – and six different roles for the industrial designer. In: *Nordic Design Research Conference: In the making*. Copenhagen, Denmark: www.tii.se/reform/inthemaking/proceedings.htm
- Verganti, R. (2008). Design, meanings, and radical innovation: A metamodel and a research agenda. *Journal of Product Innovation Management* 25(5), 436–456.
- Veryzer, R.W. and Borja de Mozota, B. (2005). The impact of user-oriented design on new product development: An examination of fundamental relationships. *Journal of Product Innovation Management* 22(2), 128–143.
- Woodham, J.M. (1997). *Twentieth-century design*. Oxford, UK: Oxford University Press.