Embedding Design

into Business

by Roger Martin

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Firms everywhere are realizing they can jump-start growth by becoming more design-oriented. But to generate meaningful benefits from design, they will first have to change the way they operate along five key dimensions.

The topic of design is as hot as a pistol these days. Everywhere you look, there are cover stories, conferences – you name it, if it's related to design, people are talking about it. Firms look wistfully at the stupendous growth that the iconic iPod has provided previously-stagnating **Apple Computer**, and are hopeful that design can help them create their own version of the iPod and restart their growth engines.

Unfortunately, it's not as simple as hiring a Chief Design Officer and declaring that design is your top corporate priority. To generate meaningful benefits from design, firms will have to change in fundamental ways to operate more like the design shops whose creative output they covet. To get the full benefits of design, firms must embed design *into* – not append it *onto* – their business.

Design organizations vary significantly from traditional firms along five key dimensions: flow of work life; style of work; mode of thinking; source of status; and dominant attitude. Left unchecked, the stark contrast between traditional firms and design shops on these attributes will impede any attempt by traditional firms to become more 'design-oriented'.

Flow of Work Life

In traditional firms, the flow of work life is organized around permanent jobs and ongoing tasks. 'Vice-president of market-ing' is a permanent position with a set of tasks that are considered ongoing, without finite duration: managing the annual advertising plan; setting marketing budgets; coordinating with sales; reporting quarterly on share trends to the CEO, etc. The vice-president of marketing is rewarded primarily for fulfilling these ongoing responsibilities consistently and adroitly. By and large, colleagues mirror this flow of work life.

In design shops, the work flow is radically different, consisting primarily of projects with defined terms. Designers are used to being assigned to a given project with a specific deadline; when the deadline comes and the project is completed, it disappears from sight, and the designer moves on to other projects, each with its own fixed duration. Designers get used to mixing and matching with other designers on ad hoc teams that are created with a specific purpose in mind. They view their careers as an accumulation of projects, rather than a progression of hierarchical job titles – i.e. manager, director, AVP, VP, SVP, EVP, and CEO.

Dropped into a traditional setting with a 'permanent job' defined by the performance of an ongoing set of tasks, a designer will feel completely alienated from his or her 'normal' way of operating. Indeed, it could be argued that traditional firms actually fool themselves by attempting to portray jobs and tasks as 'ongoing' and 'permanent', when in fact, the majority of work life is naturally a set of projects, each with its ebbs and flows. Many managers complain that because they are constantly 'fighting fires', they can't seem to get their 'real jobs' done; but I would argue that they have a skewed sense of reality, and that the fire-fighting they are called upon to do is probably more 'real' than the set tasks associated with their 'real job'.

Style of Work

Traditional firms have a style of work that is consistent with the ongoing, permanent tasks that characterize their flow of work life. Roles tend to be carefully, if not rigidly, defined, with clear responsibilities for each individual laid out and economic incentives linked tightly to those responsibilities. Individuals are typically much more adept at describing 'my responsibilities' than they are at describing 'our responsibilities'. They are inclined to work away at these responsibilities, refining and honing outputs before sharing a complete, finalized 'product' with the appropriate individuals. For example, the SVP of marketing will be inclined to toil away on the annual marketing plan, refining and adjusting it until it is 'perfect', and only then presenting it to the CEO, who will hopefully agree.

In a design shop, the style of work is much more collaborative. While there is

likely some hierarchy within teams, projects are typically assigned to groups rather than to individuals. A design team is mandated to come up with a design solution together – explicitly *not* as individuals. And throughout the process, the team is expected to interact with the client by bringing them into the design collaboration.

Because of this collaborative atmosphere, the work style also tends to be *iterative* – the opposite of waiting until something is 'right'. This involves prototyping, honing and refining through multiple iterations with the client. Architect **Frank Gehry** is famous for this style. When his first design for a project goes public, it is typically greeted with a firestorm of protests for its

through observation that something actually works – and *deductive* – proving through reasoning from principles that something must be. For example, a retailer may study the cost structure of all of its outlets to determine which has the best cost position in order to set, inductively, a cost target for the whole chain. Or a consumer packaged goods firm can use its engrained theory – i.e. 'build market share and profits will follow' – to deduce the appropriate action in a given situation. However, any form of reasoning or argumentation outside these two forms is at a minimum discouraged, and at the extreme, exterminated. The challenge is always, "Can you prove that?", and to prove something in

deductively. But their reasoning processes went well beyond the inductive and deductive: they imagined what a chair of the future *could* look like, and how that chair could forever change the way users would think about office chairs. Could they prove any of it in advance? No. In fact, when users first saw the chair, it received a decidedly chilly reception — but only because it looked like no other chair they had ever seen.

In short order, users warmed to the Aeron chair, because Stumpf and Chadwick had indeed created a product that no consumer could have described, but that nonetheless met their unarticulated needs and sought to be better than anything that came before it. Despite bearing a price tag double the prevailing level for a high-end ergonomic office chair, the Aeron became the best-selling office chair of all time and a must-have for boardrooms everywhere. Among other accolades, it won the award for the best design of its decade. None of this would have happened without the design shop sensibilities that fostered Stumpf and Chadwick's abductive reasoning.

Source of Status

The primary source of status in traditional firms is the management of big budgets and large staffs. When executives have the occasion to boast about themselves, they are inclined to refer to the number of people for whom they have direct responsibility and/or the bottom line that they deliver each year – i.e., "I run a 5,000 person organization and our bottom line this year will be $700 million." And of course, bigger is always better!

In a design shop, one would be hard-pressed to find someone bragging about big budgets or large staffs. If anything, the bragging would be about how small and elite the shop is. The source of status and pride in design organizations derives from solving 'wicked problems' – problems with no definitive formulation or solution, whose definition is open to multiple interpretations. This reality is confirmed from looking around the office of any star designer: desks, credenzas and shelves likely display the world's best designs – the ones that have solved the most difficult design challenges in the most elegant fashion. Designers become

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inadequacies on a number of dimensions– making clients, users and observers extremely nervous, because they generally work in organizations in which nothing sees the light of day until it is 'right'. They can't imagine that Gehry is only beginning, and that even though he is a brilliant visionary, he wants to get valuable feedback for the next iteration (which won't be final either, by the way.) Indeed, 'final' only emerges many iterations into the future.

When traditional firms hire designers, their managers often find designers disappointing because, like Gehry, they bring them prototypes for feedback instead of final products. Unfortunately for the designers, these firm managers think they are seeing a final product, and when judged by that standard, the product is patently sub-standard and the designer is considered incompetent.

Mode of Thinking

Traditional firms utilize and reward the use of two kinds of logic: *inductive* – proving

a reliable fashion means using rigorous inductive or deductive logic.

Designers use and value inductive and deductive reasoning too, inducing patterns through the close study of users and deducing answers through the application of design theories. However, they also encourage and highly value a third type of logic: *abductive* reasoning. As described by Darden School of Business Professor **Jeanne Liedtka**, abductive reasoning is the logic of what *might be*. Designers may not be able to prove that something is or *must be*, but they nevertheless reason that it *may be* – and this style of thinking is critical to the creative process.

When **Bill Stumpf**, head of his own Minneapolis-based design shop, and **Don Chadwick**, head of his own design shop in Santa Monica, designed the award-winning Aeron chair for **Herman Miller**, they had lots of detailed consumer research from which to apply inductive reasoning and robust sets of design principles to consider

known for their great solutions, whether it be the Apple mouse, the Bilbao Guggenheim Museum, or the **Nike** swoosh. These designers enjoy the highest status inside their firms and across their industries, and as a result, everyone in the design field seeks to earn status through tackling and solving wicked problems.

Dominant Attitude

The dominant attitude in traditional firms is to see constraints as the enemy and budgets as the drivers of decisions. The common argument is, "We can only do what we have the budget to do." If only budget constraints could be relieved, these managers seem to imply, so much more would be possible. As a result, 'budget constraints' are pegged as the reason why a product's packaging is cheap-looking, it is late to market, or its range is too narrow. 'The budget' – arch enemy of the traditional firm manager – simply makes it impossible to do any better.

By contrast, in design shops the dominant mindset is, "there is nothing that can't be done." If something can't be done, it is only because the thinking around it hasn't yet been creative and inspired enough. For **Buckminster Fuller**, the problem of buildings getting proportionally heavier, weaker and more expensive as they got larger in scale was not an intractable problem: it was only intractable until he designed the geodesic dome, which gets proportionally lighter, stronger and less expensive as it gets larger in scale.

For design shops, constraints are never the enemy. On the contrary, they serve to increase the challenge and excitement-level of the task at hand. In fact, given the source of status in these organizations, constraints actually increase the level of a problem's 'wickedness', making its potential solution that much more rewarding. Hence designers are disinclined to say, "That simply cannot be done," or, "We don't have the budget for that". Instead, they are inclined to say: "Bring it on!"
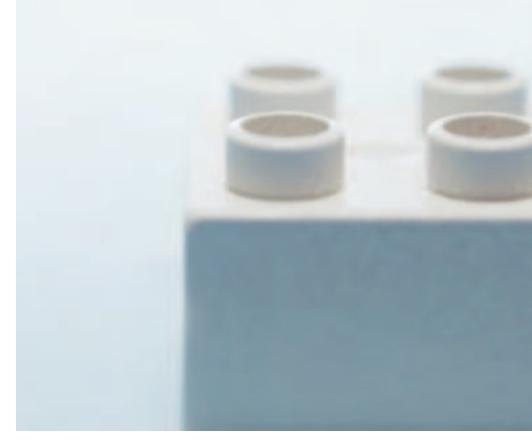
The Journey from Appending to Embedding

It is both unrealistic and unproductive to think that traditional firms will ever transform themselves completely into design

shops. There are reasons why even leading international design shops are tiny by corporate standards. However, given today's design-centric environment, traditional firms can – and should – make subtle but important changes in their values to embed and meaningfully exploit design, rather than append it as nothing more than the latest management fad.

The linchpin of the required change lies with 'wicked problems'. Traditional firm values result in assuming away wicked problems as the product of immutable constraints with which the firm must live: managers avoid working on wicked problems because status comes from elsewhere, and concentrating on ongoing tasks crowds out working on and thinking about wicked problems. Even if a wicked problem is taken on in a traditional firm, the lack of appreciation of both abductive reasoning and iterative/collaborate work make it less likely that it will be tackled productively.

If instead, traditional firms recognize that wicked problems represent their biggest opportunities for value creation, they will be spurred to see that tackling them requires a project-based approach – and that the important role of projects in firm life must not be ignored, but rather protected from the tyranny of ongoing

tasks. They will be more inclined to assign their best and brightest to tackle 'wicked projects', which will signal that solving wicked problems is a very high status activity. And by recognizing these issues explicitly as 'wicked problems', the firm – and those assigned to tackling the problems – will be more inclined to recognize that abductive logic and iterative/collaborative processes are necessary, given the wickedness of the problem at hand.

Firms that truly want to embed design into their fundamental operations need to wade into – not avert their eyes from – wicked problems. The response to these problems must be "bring it on," rather than "nothing can be done." Wading into wicked problems using the approach described here will provide the catalyst to introducing key design shop characteristics into a traditional firm. And as some of today's most successful firms have shown, infusing an organization with design principles can pay big dividends in terms of value creation.