

# Design Value: A Framework for Measurement

by Thomas Lockwood

*Design may enhance performance, but unless there are metrics to gauge that benefit, the difference it makes depends on conjecture and faith. Confronting this perennial challenge, Thomas Lockwood enumerates 10 categories in which design value and performance can be evaluated. They vary from time-to-market and cost savings to customer satisfaction and the ability to influence preferences, but all of them should serve as useful ammunition for the designer, design manager, and business executive.*

As businesses increasingly recognize the power of design to provide significant benefits, business executives increasingly are asking for metrics to evaluate the performance of design.

**What** is needed, and presented here, is a framework for measurement, a specific set of criteria and methods to be used as a structure to define and measure the values of design.

As design has caught the attention of the business world, so too we must strive to better understand and consider design on business terms. But "Businesspeople are from Mars, and designers are from Venus," explains the founder of Frog Design, Hartmut Esslinger. And Darrel Rhea, CEO of Cheskin, notes, "The central challenge of the design profession is to make our-



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selves relevant to business leaders." There is a chasm between design and business, particularly when it comes to measuring design.

To analyze design, we must find a balance between creative intuition and research sensibilities. Jerome Kathman, CEO of LPK, the largest independent design firm in the world, recently noted that often designers state that qualitative research is for "us," and quantitative research is for "them"—and that designers tend to underline their importance with anecdotes and quotes ("good design is good business" comes to mind) rather than with numbers, because "creativity resists quantification." The design and creative communities at large are traditionally known to resist quantification. Gus Desbarats

of Alloy Ltd. in London agrees, stating that "designers are not numbers people." Even so, he calls for what he describes as a results-oriented creative culture, noting, "It's not necessarily about numbers, but it is about being rational about emotion."

To an extent, being rational about emotion is something designers already do. The problem comes when they try to convey those thoughts to company management; that requires either design-aware executives or a leap of faith. Unfortunately, not many companies are led by design-aware executives, making design a rather mysterious ingredient for many business managers. But if the design industry is to capitalize on its new popularity in business, it needs to do so in ways that business executives understand—that is, with measurements.

#### A framework for value

The following identifies 10 categories of design measurement, all of which are relevant to business criteria and are presented here as a framework for measuring the value of design. These measurements represent areas in which design contributes; and when design can be isolated, the contribution areas can be measured. This framework stems from research and from various inputs, including thoughts emerging from two recent DMI conferences, one held in the US and one in Denmark.<sup>1</sup> We have conducted this research and assimilated this point of view because businesses need to capture real value from their investments in design, and design managers and leaders are increasingly asked to provide evidence of success. The most difficult part is isolating the role of design and design management, a task this framework can help to accomplish.

The 10 categories of this framework to measure design are:

1. Purchase influence/emotion
2. Enable strategy/enter new markets
3. Build brand image and corporate reputation
4. Improve time to market and development processes
5. Design return on investment (ROI)/cost savings

6. Enable product and service innovation
7. Increase customer satisfaction/develop communities of customers
8. Design patents and trademarks/create intellectual property
9. Improve usability
10. Improve sustainability

This framework is not meant to suggest that each category is required for each design project, but rather to suggest that any project will find one or more categories relevant to setting measurement criteria. Let's look more closely into these categories in terms of measuring the values of design.

#### Purchase influence/emotion

Design has the ability to influence purchase preferences, to support premium pricing, and to improve product sell-

through. And it can have a positive effect on the customer's emotional relationship with a brand. According to Esslinger, "Money buys, but emotion sells." Consider the Mini Cooper automobile, an emotional attraction indeed; its parts cost about the same as those of other vehicles of similar size and quality, yet it maintains a premium price based on the emotional connection people have with their Minis—from ordering to ownership. Design is, of course, an imperative in the shift from selling products to selling experiences. And experiences can be measured, as well as designed; simply remove the intended design elements, then ask your customers about their experience.

Target, for example, looks to set an emotional connection and measure the impact of product design on customer experience—and on sales. Robyn Waters, president of RW Trend and former vice president of trend, design, and product development at Target, notes that the business world is beginning to lose its "analysis paraly-

*Design has the ability to add value in many ways, including economic, social, and environmental criteria.*

1. All the quotes in this article are derived from conference proceedings.

sis"—the belief that "if it can't be counted, it doesn't count." At Target, it became clear that shopping can be an emotional experience ("It's about the treasure hunt," says Waters, "not the saved nickel"), so Waters began to evolve a philosophy she refers to as "trend from the inside out." Target's new mission was to be "trend right, guest-focused, and design-driven." Trends were not sufficient by themselves to create product success; they had to be interpreted and translated into something that made sense in customers' lives. Design, in this context, needed to be the tool that could translate a trend into something fun and meaningful that would inspire desire, as well as fulfill a need. There have been many successful new products that use design as a key

selling point at Target, and these have been isolated and tested on the retail shelf.

In a related model, the role of design in purchase influence is particularly measurable in packaging design. Rob Wallace, managing partner of Wallace Church, in New York, has isolated the role of design in

packaging numerous times and has demonstrated incredible return on investment for design activities. One client achieved a sales increase of 30 percent and more than \$300 million in incremental sales gains based solely on a new suite of packaging. Same product, new packaging. Wallace argues that design can be quantified, and that design generates the highest ROI of the marketing mix. The measurement is not too difficult: Design new packaging, put it on the shelf side-by-side with the old, and see what sells. Then deduct the cost of design from the new sales. and voila: ROI design based on actual numbers. Eventually, says Gus Desbarats, you will arrive at this equation: *Design's value equals attributes affecting sales (trial or repeat) minus the extra cost due to design's input.*

Enable strategy/enter new markets

A second way to measure the value of design is through its ability to enable corporate strategy or to enter new markets. One only has to mention iPod, Dyson, OXO Good Grips, or Amazon to get the idea here. And the design of these

products, communications, interfaces, and experiences can be isolated. Here's a simple example: British Airways had built a business strategy around increasing its long-haul international flights. So the company looked to see how the interior design of its planes could be improved to offer more comfort to customers. BA's designers flew all over the world, for days on end—as passengers. What resulted was the first seat in the industry that could lie completely flat, allowing customers to sleep prone rather than simply slouch as in conventional airline seats. The result was a significant increase in sales and profitability for long-haul international flights. Design alone made the difference, because everything else remained the same. Granted, in some product situations the difference between design and engineering is vague, but at minimum the two should be symbiotic, and design must always involve multidisciplinary work teams engaging in design thinking processes.

Many firms, of course, use design competencies to help visualize business strategy. At the Danish national railway (DSB), according to design director Pia Bech Mathiesen, design is used to create strategic maps for departments, and this helps to visualize DSB strategy goals. And at Philips Electronics, says design director Clive Roux, "design direction-setting" takes place across Philips product lines. Going even further, Harry Rich of the British Design Council claims that sustained design strategy allows companies to take leadership positions in their sectors. He compares the electronics firms Sony and Panasonic, noting that Sony prefers to innovate and be known as a design-driven company, and Panasonic, which prefers to follow trends, is more of a design follower. Both have sales of about \$62 billion; yet Rich notes that Sony has a brand value of \$12 billion and a brand rank of #26—three times that of Panasonic's brand value and rank. He attributes this difference to the value of design strategy, and to making design part of the corporate strategy.

Shaping brand image and corporate reputation

Here's another comparison, Apple achieves about half the amount of profit as Dell, but it does so with only about a third of the revenue and is thus much more profitable. Esslinger believes this demonstrates that it pays to invest

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—Hortmut Esslinger

in design, and in your suppliers. In fact, Apple reported 34 percent revenue growth of an astounding 33 percent gross margin for Q3 2007. Target has clearly established a brand image and set itself apart in the discount category by being about design (and value). In the United Kingdom, interestingly, brand value is quantified on the balance sheet, noted as goodwill.

Design that receives design awards also contributes to corporate reputation and brand image. By providing an independent and expert critique of design, awards can provide valuable feedback, help build company pride, and confer prestige upon the business—prestige that is valued by the consumer, as well. I've toured many design studios and corporate design centers all over the world that proudly display their collections of design awards.

According to Cathy Huang, president of China Bridge International, there are four types of design award providers: professional award organizations (such as IF, Red Dot, and Good Design); governments and institutions (such as country design councils and design schools); companies (such as Braun and Sony); and the media (such as *BusinessWeek/IDEA*, *HOW*, and *Communication Arts*). Design award competitions generally seek to identify excellence in design aesthetics and design innovation. Unfortunately, today most award competitions, notably those administered by the media, government/institutions, and companies, take the easy (and efficient) way out by having judges simply review online pictures or PDFs of design entries, which can of course be misleading.

Generally, the professional award organizations provide the most thoughtful design award processes. Germany's Red Dot, for example, insists that the judges evaluate all submissions in person and abide by strict criteria. However, physically collecting all the award entries and physically assembling an expert panel of judges for days of thorough inspection and evaluation is costly and difficult. Yet this process and attention to quality has elevated the Red Dot Award, which has become the seal of design quality throughout Europe and Asia.

Denmark's Index award looks at the environmental benefits of design. Britain's Design Effectiveness Awards are judged purely on commercial results, based on written documenta-

tion. More akin to an analysis of the success of a new-product launch, these entries must prove their merit by demonstrating improved bottom-line performance. To do so, they must be able to isolate the contributions of design.

#### Improving time to market and development processes

It is also possible to measure design based on process and time to market. Here, the design manager is always looking for the best combination of process efficiency and design success. One common way to do that is by establishing design standards or at least design guidelines. Today it is becoming more common to have guidelines. The thinking is that this improves design flexibility because it allows the brand to demonstrate innovation while giving designers parameters to work within so that they don't have to reinvent the wheel with every new project. "When I was responsible for design at StorageTek/Sun Microsystems, we established simple guidelines and a design platform approach. Graphic guidelines included typography, color, photography style, diagram style, and iconography. Product guidelines included a common platform for computer hardware and a standardized chassis and interface, as well as other shared components. In this way, our engineers didn't have to design components, only functions; development time was greatly reduced. The cost and time savings based on platform design, guidelines, or even standards can be easily evaluated; just watch your project costs rise without them.

Han Hendriks, a vice president at Johnson Controls, notes a methodology for measuring design performance internally and with customers in the car industry. The company's design-quality metrics look at craftsmanship, perceived quality, design-to-cost ratio, and ROI for design processes. The main metric for ROI is based on asking internal customers how the design solutions compare to those of external design firms; in this way, process efficiency also involves a comparison of internal design service performance to that of other providers.

*"Creativity  
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quantification."*  
—Jerome Kathman

### Design ROI/cost savings

Julie Hertenstein and Marjorie Platt, from Northeastern University's School of Business, have conducted research in conjunction with DMI on the financial performance of design since the mid 1990s. In their first study, they identified a set of 51 firms in four industries that positioned design as a key strategic advantage. They chose a panel of design management

*They found that firms rated as having good design were stronger on virtually all financial measures, from a practical and managerial perspective, as well as from a statistical perspective.*

experts from DMI to rank the design effectiveness of the sample firms. They then evaluated the financial performance by using traditional financial ratios, such as return on assets and net cash flows to sales, for the sample period. They found that firms rated as having good design were stronger on virtually all financial measures, from a practical and managerial perspective, as well as from a statistical perspective. By looking at the study sample as companies, not products, this research also suggests that "good

design" is a characteristic of a company and indicates many financial successes in a variety of industries.

Similarly, for more than a decade, the British Design Council has been tracking the performance of the stocks of design-aware companies on London's FTSE 100 and FTSE All-Share indices. The original Design Index, which ran from 1993 to 2003, followed 63 companies recognized as effective users of design (they were grouped together as a result of their consistently winning design awards). Those companies outperformed the rest of the FTSE by 200 percent in that decade. Those companies outperformed the rest of the FTSE by 200 percent in that decade. The Design Council has continued to follow the Design Index, as well as a broader Emerging Index of companies identified as emerging users of design, and has found that the performance

of both groups has continued to outpace their peers. Since March 2003, the Design Index has risen by another 43 percent and the Emerging Index has gone up by 74.3 percent, while the FTSE 100 and All-Share indices have grown by 26.2 and 32.1 percent, respectively. (Note that this is a long-term study and has covered both bull and bear markets.) Companies whose success could be seen as merely the result of transient consumer or business trends are not likely to have lasted this long.

Further Design Council research, in an independently run study, is based on 1,500 British businesses across all sizes and sectors. Titled "Design in Britain, 2003-2004," the study indicates that the UK's most successful businesses rate design as the second most important factor for success (only marketing is judged more important). However, UK companies as a whole rate financial management as the number one factor, with design running in seventh place.

These are some telling numbers. They go a long way toward demonstrating the financial value of design in business.

### Enable product and service innovation

Design is also a critical component for product and service innovation and can be measured as such. What if a car dealer used design to create the perfect customer experience and increased sales by more than 25 percent? Open Road Toyota, working with Karo Design in Canada, did just that. They redesigned all their touch-points for a specific customer experience, and in 2006 they became the number-one Toyota dealer in Canada. The cars did not change, but the design of everything else did, and sales skyrocketed. We see similar results from Portland-based Umpqua Bank's work with Ziba Design. Both of these successes stemmed from a deep understanding of customers, which was used to design the desired customer experience, and then to design every touch-point so that it would support that experience. These projects can isolate design on a before-and-after basis with any number of customer satisfaction methods.

Sophie Bartlett of consulting firm Kaiser Associates notes that companies often measure *what can be counted, not what counts*. Many

firms simply don't have an appropriate measurement protocol—they use too many metrics, or they fail to standardize and align their metrics, or they don't have clear processes for measurement. Kaiser's metrics measure output rather than input, studying parameters such as revenue, organic growth, and something Kaiser calls IGPM—innovation for growth performance measure. Bartlett points out that companies are always looking for new ways to create value, or to reinvent value. It is easy to develop one successful idea, but finding a model for innovation is difficult. Companies need to integrate and orchestrate innovation across the whole company. This is an area in which design can help by integrating multifunctional input and bringing in design thinking techniques.

IDEO's Diego Rodriguez is a believer in metrics for innovation—with reservations. As he likes to say, "Measure less; understand more." Rodriguez recently identified two kinds of metrics: generative (designed to get you somewhere), and general (to be used as a tool for design teams, managers, and stakeholders). Either kind should be fodder for an ongoing conversation. Moreover, because every company is unique to itself, there is no one silver bullet metric. However, good metrics do exhibit some shared characteristics. They are simple, but not simplistic; they are "sticky"; and they are actionable. Rodriguez asks, "What's the point of measuring things if you're not going to do anything with the results you get?" Innovation is important because it leads to improvements in a company's bottom line, promotes organic revenue growth, and (one hopes) creates a better quality of life. All these factors are part of creating value. And measurement is important when guiding innovation; it can improve efficiency, boost effectiveness, and make the whole process less of an art and more of a science.

Design is often considered an intangible, notes Pamela Cohen of Communications Consulting Worldwide (CCW). Co-author of *Invisible Advantage: How Intangibles Are Driving Business Performance*, Cohen insists that such intangibles as communications and design are actually measurable, and that the data needed to evaluate them often already exist. Factors that contribute to communications, for example,

include relations with analysts, customers, employees, shareholders, and suppliers, as well as capital structure and brand. This framework does so for design.

Increase customer satisfaction/develop communities of customers

Many new companies have been tremendously successful in developing new communities of customers. Consider Facebook and Google among these companies; design not only plays a role but is partially carried out by customers. This is engaging, sticky, and extremely effective. At times, the professional designers need to allow the customers to play a part. Hard to measure? Not really, since it's based on individuals.

Effective? Yes indeed; consider the usage and rapid growth of online communities of customers.

Some more-traditional companies, such as Procter & Gamble, take a keen interest in the measurement of intangibles in customer satisfaction. P&G has always measured the "first moment of truth" (purchase decision) and the "second moment of truth" (repeat purchase), but it now includes the role of design as an influence. Today, more and more designers and design managers are gaining important insights from qualitative types of research—ethnography, focus groups, directional learning. And that research is based on what best solves customer needs. As a measurement, Kathman notes that "consumer-preferred design outperforms management-preferred design." Designers might argue that metrics can lead to formulaic decisions and that the rush to numbers can limit interest in improving on concepts. However, synthesis of the quantitative and the qualitative is needed, and designers should be conversant in all areas of generally accepted research methods. Above all, Kathman notes, designers should always engage the reasonability test—examining the metrics they use to ensure their relevance and efficacy.

*Companies  
[on the Design  
Index] outper-  
formed the rest of  
the FTSE by 200  
percent [from  
1993 to 2003].*

Design patents and trademarks/creating intellectual property

Another way to measure design's contribution is to consider how much you've lost if it's stolen. In today's economy, a company's IP assets are often more valuable than its physical assets. Consider Coca-Cola's signature bottle, or Nike's swoosh. Joshua Cohen, of intellectual property firm RatnerPrestia PC, notes that IP laws do not give

us the right to do things in the marketplace; however, they do give us the right to exclude others from using our designs. That's what patents—either for design or for utility—do, along with copyrights and trademark and trade-dress protection.

Because any product can, and often does, include features that provide brand identity or aes-

thetics along with features relating to performance and manufacturing advantages, comprehensive IP protection often calls for separate protections covering various aspects of the same product. A product or a package can benefit from utility patent or trade secret protection for its functional features, while the aesthetic elements of that same product or package can enjoy protection through design patents, copyright, and trademark and trade dress protections. Strategies aimed to maximize the ROI of design efforts by securing comprehensive IP protection, avoiding the IP rights of others, and integrating IP-building efforts into design processes can be isolated and are of significant value. The concept of design ownership is central. Nearly every day, brand acquisitions take place in which the purchase price greatly exceeds the value of the plant and equipment assets.

Improve usability

There are many ways to isolate, measure, and improve design based on usability. Very often, the usability of an interface design is measured by analyzing the efficiency of user navigation through observation, click-through, or interviews. Websites are constantly monitored for user performance, and most web marketers

watch our behaviors very closely and make design adjustments to improve performance. All manner of design-based usability issues can be isolated and evaluated.

Lavrans Lovlie, of the UK's Live/Work, has developed a usability index to help companies better understand how their businesses are experienced by their customers. The index starts with broad questions and then goes deeper to assess how the customer's experience ranks at each touch-point. Experience can be evaluated at call centers, online, through marketing materials and retail environments, and the design of that experience can be changed to reflect customer feedback.

Measuring design by usability also includes areas such as signage, wayfinding, and employee experience, which can also be measured. At StorageTek, we introduced an interior design program that affected about 5,000 employees and garnered astonishing returns in employee satisfaction. First, we benchmarked via an employee survey and interviews; then we implemented a fairly modest interior design renovation that involved artwork, paint, carpet, and lighting in common areas, corridors, and cafeterias, as well as about 75 conference rooms. A second employee survey carried out after the renovation found these results:

- 72 percent of our employees said the new design reduced their stress.
- 84 percent said it improved their mood or attitude.
- 69 percent said it improved their morale.
- 60 percent said it improved wayfinding.
- 91 percent felt it demonstrated company efforts to improve the work environment.

Perhaps the most influential direct impact of design for usability was the 2000 US presidential election that pitted George W. Bush against Al Gore. Famously, the ballots used in the state of Florida featured a very poor graphic design that made it difficult for some voters to know exactly which hole to punch for the candidate of their choice. The consequences were far-reaching and permanent.

*Measuring the value of design does not need to be complex or foreboding.*

### **Improving sustainability**

It's a fact: Good design is good for all. We must all look to measure design in terms of its ability to improve the world and improve people's lives. We all have an obligation to practice responsible design, inclusive design, and design that has minimal impact on the environment.

Hartmut Esslinger has called on designers to help move our world forward toward sustainability and toward creating a more adequate and balanced model. The creative economy is a greener economy, and we all need to help; designers and design managers have considerable influence in this area. Valerie Casey, a creative director at Frog Design, argues that green design is a business issue and a moral issue, and that designers and design managers have the freedom to adopt some design criteria and on this basis make what, in their view, are better choices. In effect, given that ethics is defined as dealing with good and bad, right and wrong, designers have to make ethical choices. Casey suggests a Kyoto Treaty for Design featuring collective and individual criteria—the goal being to advance our intellectual understanding of environmental issues from a design perspective. Undoubtedly, design has considerable impact on our environment, and that impact is easily measurable.

### **Conclusion**

Indeed, there are many ways to measure the value of design; one can even divide them into 10 categories, as this research suggests. We have to consider design as integral to the triple bottom line—which consists of economic benefits, social benefits, and environmental benefits. What's more, managing design is a science, as well as an art, and requires the integration of the two; in effect it is the convergence of business, strategy, and customer experience.

Brigitte Borja de Mozota has been researching design performance for many years, much of them as a life fellow at DMI. She argues that there are four powers of design: as differentiator, as integrator, as transformer, and simply as good business. One model she has adopted and modified to reflect design value is the Balanced Scorecard, which should be eminently familiar to any business manager.

As this framework demonstrates, measuring the value and performance of design does not need to be complex or foreboding. There is a case for intuition, a case for qualitative research, a case for quantitative research, and a case for synthesis. And there is even room for imponderables, because some things are simply beyond definition or measurement. Indeed, we must continue to appreciate that at the heart of creativity and design is not just design skill but also intuition. I hope this framework will empower that intuition and creativity, and yet help all concerned find a more definitive way to value design solutions. And I hope this framework for design value is embraced by design owners, practitioners, and educators everywhere, so that we don't fall prey to the wiles of the bean counters. &

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