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Design to Value: a smart asset for smart products

When done well, Design to Value (DTV) can increase product margins by 350 to 900 basis points.

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Rising commodity prices, consolidating supply markets and ongoing economic pressures are making it difficult for consumer goods companies to maintain margins. Many input costs have more than doubled over the last year, driven by rapid growth in emerging markets, which is fueling an ever-increasing need for raw materials and creating a growing mismatch between demand and supply. In addition, consolidating supplier markets have tipped the competitive balance in favor of suppliers and limited CPG companies' ability to fight price increases. Consumers, under tremendous pressure from the economic downturn, are significantly reducing their purchases or trading down to lower cost products. As a result, companies are having a hard time passing on rising costs to consumers through price increases. Combined, these three forces are creating a perfect storm that threatens the profitability of CPG companies.

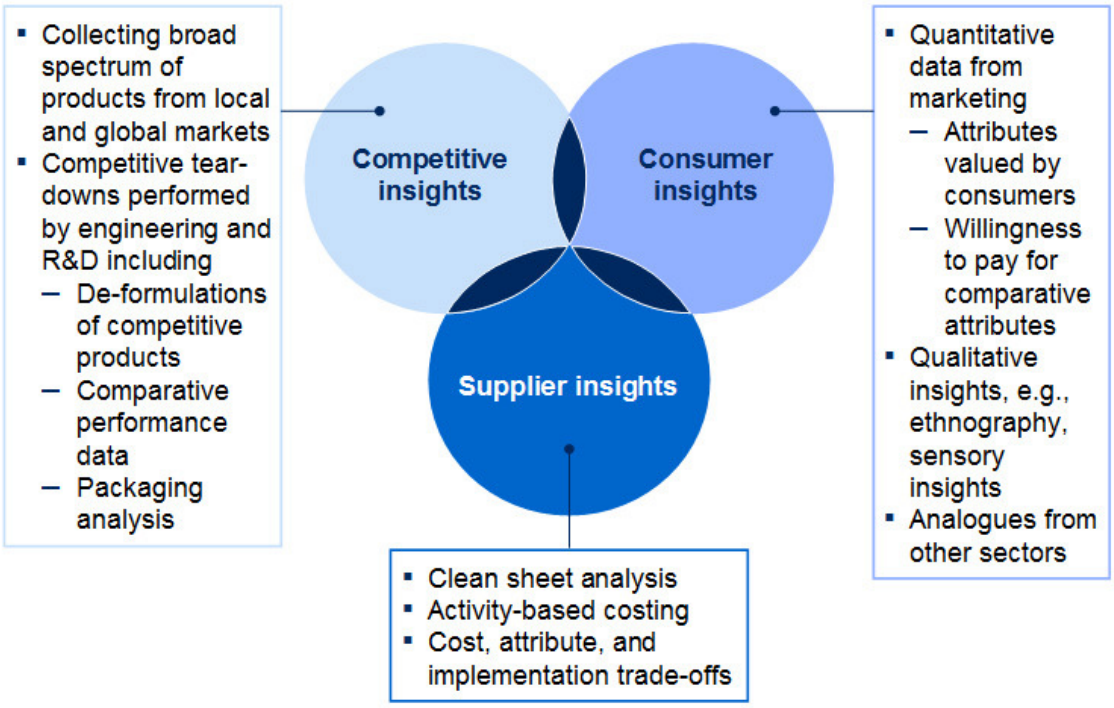
Design to Value (DTV) is a fact-based, multi-dimensional approach that typically enables companies to improve margins by 350 to 900 basis points through improvements in product preference together with reductions in packaging and raw material costs of 10 to 20 percent. Even for companies that already have efficient value engineering systems, DTV represents the next frontier of excellence on three dimensions.

First, DTV ups the ante on the required depth of consumer, competitive and supplier insights to drive ideation. This is a big departure from typical value engineering efforts, where engineers rely on historical experience to generate ideas, rather than building a robust and up-to-date fact base. Second, DTV efforts are much more cross-functional in nature. Marketing is involved from the start, with operations and R&D teams working together towards a jointly owned target. This is a sharp contrast to the typical value engineering approach, where marketing is normally only involved at the end of the process to make go versus no-go decisions on proposed ideas. Finally, DTV encourages teams to optimize the full product (e.g., frozen dinners, kitchen cleaners) versus the component level optimization (e.g., bottles, labels, flavors) typically addressed by value engineering.

How Design to Value works: sources of insights

The DTV approach combines deep insights on what consumers value in products, competitive insights into how other companies design offerings to meet consumers' needs, and supplier insights into new technologies and the cost to manufacture products. (Exhibit 1).

Exhibit 1: DTV combines consumer, supplier, and competitive insights



Leveraging consumer insights

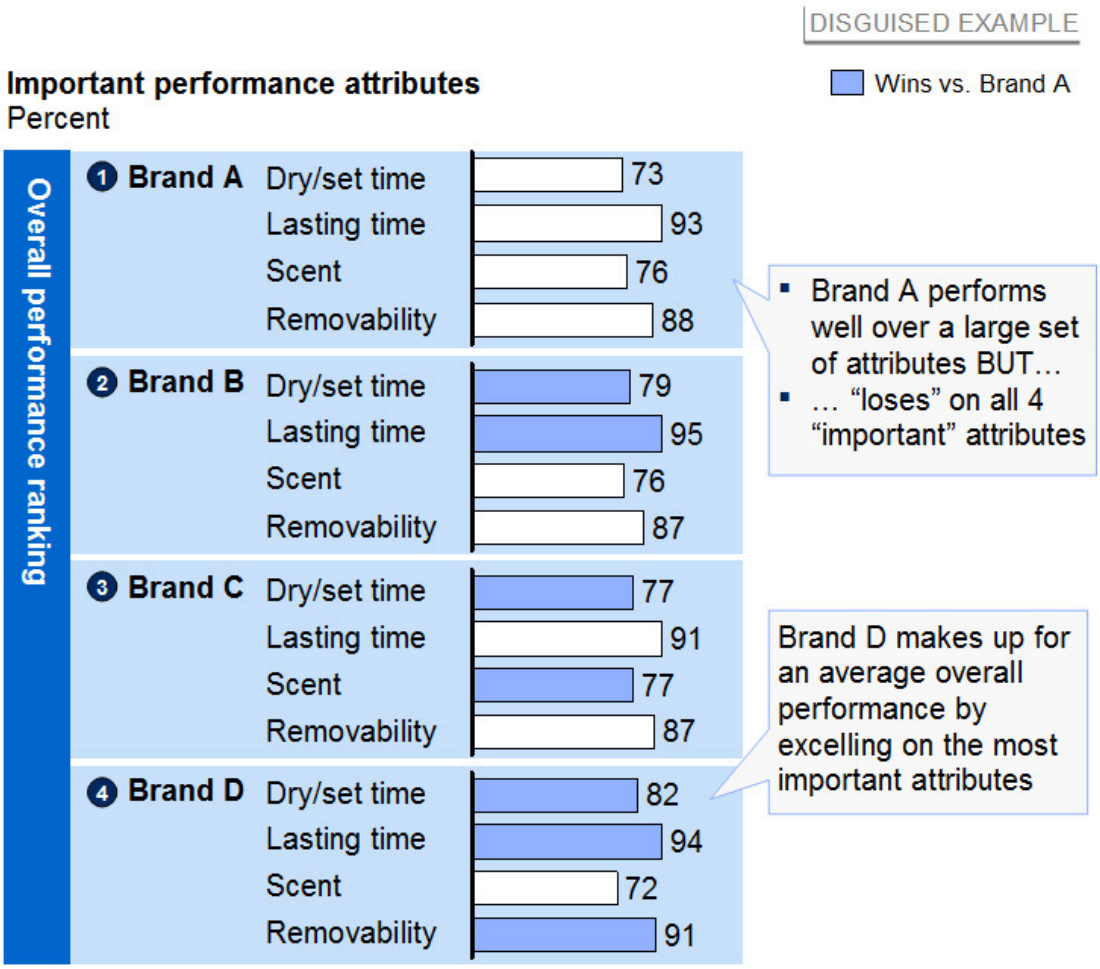
Although they are drowning in a sea of consumer and shopper data, companies are constantly struggling to mine meaningful insights on what consumers value and then use it to drive efficient and effective product designs.

Our experience highlights three big drivers of this issue. First, most product development engineers cannot access the consumer insight data that should guide product designs. Second, data on consumers' willingness to pay for comparative product attributes is often missing. Third, manufacturers rarely augment consumer data with sensory insights, which are particularly important for food products. As a result, product engineers must often design their products with limited transparency into cost-benefit trade-offs, tweaking product attributes to create news in the market. Unfortunately, they often miss the "sweet spot" with the mix of attributes that drives maximum value.

The DTV approach bridges the consumer insight gap by providing a rounded view of consumer preferences based on existing and new research. Gaps in existing consumer research can be closed quickly at relatively low cost through online surveys, focus groups, shopper intercepts and in-home diaries.

Exhibit 2 demonstrates results from a rapid consumer insights study that highlighted the strengths and weaknesses perceived by consumers for the company's product versus competitive offerings. While the product performed well on four key attributes, it did not win on any dimension, occupying a "no-mans-land" for product preference. This information, combined with a conjoint analysis on the relative value of each attribute, allowed the company to redesign the product to target what consumers valued most, reigniting growth.

Exhibit 2: Consumer insights help uncover product preferences



Leveraging competitive insights

Insights into the design choices competitors are making can often unlock significant opportunities; these insights create a new benchmark for design efficiency, often exposing material choices that add limited value while significantly increasing costs and complexity.

Product packaging plays a dual role in consumer packaged goods. It has a critical marketing role to play by differentiating a product from its competition at the shelf, and it has a technical role, providing physical protection and containment. Competitive benchmarking often reveals new, creative designs that provide better usability and shelf appeal and/or greater efficiency. Opportunities to reduce material usage by 10 to 20 percent are common, whether by reducing the material weight used in existing package designs adopting more efficient designs (e.g., moving from three-piece to two-piece cans) or moving to alternate materials.

Deconstructing competitor products and conducting efficacy/sensory testing on them offers an even richer treasure trove of information for improving product appeal and reducing costs. Exhibits 3 and 4 shows an example of a leading CPG company that realized one of its

competitors was able to achieve the same efficacy at almost half the cost by using far fewer, more effective ingredients.

Exhibit 3: Performance-cost analysis example for a household product

DISGUISED CLIENT EXAMPLE

Plot of Efficacy vs. Cost (CPG example)

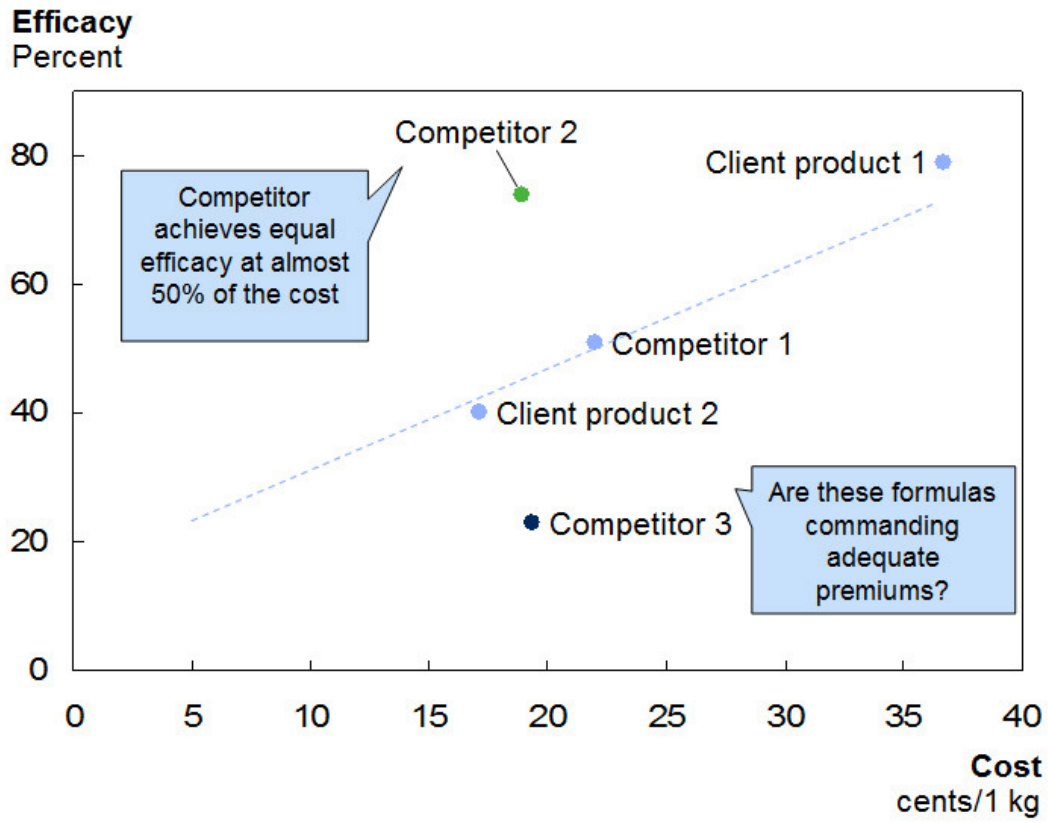
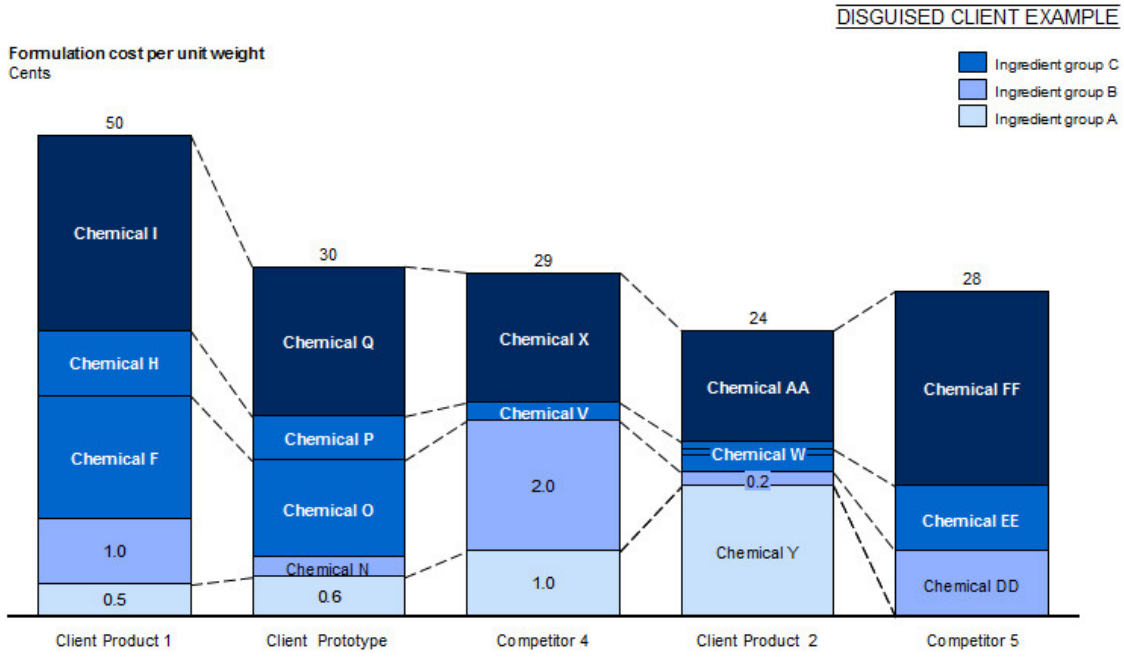


Exhibit 4: Competitive de-formulation results for household product helped uncover cost reduction opportunities



Source:Outside-in analysis, teardown, industry experts, McKinsey Product Development Practice; SRI report; CMAI; client BOM; chemical testing

Leveraging supplier insights

Supplier insights provide a critical missing link on the costs required to optimize products. Leading companies extensively use cleansheets (activity-based cost models based on supplier economics) to achieve unprecedented transparency into supplier costs for existing designs. This enables companies to model the effects of changing design attributes (e.g., reduce the amount of material, changing the shape of the container) and SKU volume on costs. For example, one consumer company realized that the unit production costs for one of its packaging types dropped by 10 percent once it hit the 40 million production threshold. This understanding allowed the company to establish guidelines to maximize usage of priority packages. In addition, suppliers can often be a rich source of design ideas to improve costs given their technical knowledge of manufacturing processes and experience serving other customers.

How Design-to-Value works: combining insights to generate ideas

Cross-functional teardown workshops, an essential part of DTV, build on consumer, competitive and supplier insights to generate a rich set of ideas to improve product preference while driving costs down. Typically, companies can generate 60 or more ideas in a single day. Further, these ideas tend to be larger in size (e.g. $500K or more versus $25-30K) and more scalable across the portfolio than those from value engineering efforts. For the workshop to capture its maximum value, it

needs to have the “3Ps” in place: the right preparation, the right products and the right people.

Roughly 60 to 70 percent of the effort to generate ideas using the DTV approach happens before the actual workshop. Preparation for running a successful 6 to 8 hour workshop requires a cross-functional team made up of three or four members from marketing, R&D and operations to collect the consumer, competitive and supplier insights for the target product.

A rich set of competitor and analogous products (from adjacent categories) helps participants in idea generation by providing visual stimuli. The wider the net companies cast in terms of geographic reach and analogous product categories, the better the stimuli for ideation. Often, European markets have leading designs from a sustainability perspective, for example, while emerging markets excel at low cost.

Finally, it is key to have the right set of people from each function attend the teardown. It is critical to balance the right functional depth with open mindset to explore new ideas. All key departments, including R&D, manufacturing, purchasing, marketing, supply chain, and quality assurance should be represented. The big breakthroughs come from every function developing an end to end understanding of the business. The workshop also provides a “risk free” environment in which companies can ask the hard questions around choices that may have driven significant costs without delivering sufficient incremental value.

Embedding DTV capability in an organization

Embedding a robust DTV capability in an organization is the key to capturing long-term impact. Companies can benefit from following five best practices. First, P&L owners need to own the process, and set top-down margin targets and an implementation schedule that is cascaded throughout the organization. Second, it is critical to create shared goals and incentives cross-functionally across marketing, R&D and operations to ensure alignment. Third, a well-defined DTV process with roles, responsibilities, decision rights and metrics ensures that execution goes smoothly and things do not fall behind. Fourth, to attract a cadre of high performing, motivated employees, companies need to create an attractive career progression that rewards them for driving product renovations versus just new product launches. Finally, hard-wiring change into the organization often requires setting up an independent cross-functional group outside of base R&D to manage margin improvements■

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Design to Value is a powerful asset for consumer packaged goods companies looking to preserve their margins in tough economic conditions. The approach can allow them to unlock 350 to 900 basis points of margin improvement and change the game against their competitors by driving improved consumer preference in addition to lower costs.

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