



Sumi N. Cate David Pilosof Richard Tait Robin Karol

## The story of Clorox Green Works™ — in designing a winning green product experience Clorox cracks the code

Sumi N. Cate, R&D Group Manager, The Clorox Company (Sumi.Cate@clorox.com); David Pilosof, R&D Director, The Clorox Company (david.pilosof@clorox.com); Richard Tait, Principal, Product Development Consulting, Inc. (rtait@pdcinc.com); and Robin Karol, Executive Director, PDMA (rkarol@pdma.org)

*Over the last decade, a new market has emerged for natural—or “green”—consumer cleaning products. Initially created by several pioneers, the space has expanded as larger consumer product companies have jumped into the fray. One of the most successful of these companies has been Clorox with its line of Green Works™ cleaning products. Here is the story of how the company developed this line of products and so quickly achieved market success.*

**G**reen product innovation has had a mixed history. In its first incarnation, so-called “green” consumer products developed a bad name because companies simply affixed new labels to existing products. The result of these less-than-truthful claims, often described as “greenwashing,” was consumer skepticism, leading to limited market acceptance. The consumers were skeptical because products labeled as green, sustainable, or natural often were less effective and cost significantly more than their traditional counterparts. Some later entrants more closely matched consumer

the “chemical-avoiding” naturalist, and deep insight into this demographic, and (2) the design and delivery of a total product experience that met the full range of this segment’s critical needs. This emerging segment was looking for the right green or natural product, and Clorox found that these consumers felt other products lacked one or more vital element of the experience desired. As we go on to describe, Clorox orchestrated a symphony (and we use that word consciously) of product and brand experiences across the full spectrum of possible elements that found a highly receptive audience (see box on bottom of page 11).

### Understanding the chemical-avoiding naturalist

For Clorox, this target market was new. With its existing product line, dating to the introduction of bleach in 1913, Clorox had historically attracted consumers with products that provided effective cleaning and disinfecting by virtue of their synthetic chemical-based formulations. But as the company conducted consumer market segmentation work, it uncovered a new segment looking to lessen their environmental impact on a personal and family level, in concert with the broad social trend toward greater environmental consciousness. This group was accustomed to the performance of existing cleaning products but had a desire to avoid unnecessary chemicals throughout the house whenever possible. (Clorox’s long-standing interest in health and wellness had yielded a rich history of consumer data that helped highlight this emerging demographic early in the research process.)

With this new demographic revealed, Clorox conducted Voice of the Customer (VoC) research to understand what made this consumer—a woman—tick. Clorox already knew that, in this



“Green product innovation has had a mixed history.”

expectations of what a green label should stand for but still fell short in the consumer’s total experience, and the products did not develop major market penetration.

The Clorox Company launched its innovative Green Works line of natural household cleaning products in early 2008, in an attempt to overcome these obstacles. The Clorox Green Works line is the first family of natural cleaning products introduced by a major consumer packaged goods company. By mid-2008, the Green Works line had become a market-share leader in the natural cleaning products category, ahead of earlier entrants, and it was helping to lead rapid growth and mainstreaming of the whole category.

We believe that there were two reasons for this success, and we identified the following foundational factors: (1) the identification of a new customer demographic, whom Clorox termed

market, 85 percent of the time the primary shopper in the family was a woman. So throughout this article, we refer to the consumer as “she.”

This group was defined not by such demographic breakdowns as age, income, and geography, but rather by a shared belief system. Clorox’s research showed that this consumer’s primary motivation was a belief that some chemicals might be dangerous to

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her family’s health and well-being. She was motivated by that concern, rather than a generalized desire to help the environment or to act in a socially responsible manner (although these reasons were part of the equation). The target

consumer, a chemical-avoiding naturalist, sees defending her family—particularly, by keeping her home safe—as one of her main roles in life.

It became clear that the consumer’s belief system—her conviction that it’s her job to protect her family—was the key to a powerful emotional experience that could draw her to sample a new natural product. It also was clear that this consumer was not a fanatic about green choices and that she incorporated them into her daily life when it made sense and didn’t compromise her overall commitment to her family. In other words, there was a set of must-have features and attributes without which the rest of the customer experience wouldn’t matter and the original purchase would likely be her last.

### Elements of the desired customer experience

This line would be a new brand in a category in which Clorox had traditionally not competed and where much consumer skepticism remained. Clorox competes in traditional cleaning products; however, natural cleaning products is a new segment for the company. Consequently, a thoughtful product definition effort, beginning with terminology, was needed to design a total experience that would turn the target consumer into a repeat customer (see smaller box on this page, “Choosing the Focus”).

The development and marketing teams used in-depth targeted customer interviews and follow-up in-home ethnographic research to understand broadly what is important to the target customer, and specifically, why chemicals were such a concern. Based on

### Choosing the Focus: Natural Versus Green or Sustainable

The choice to produce a “natural” product as opposed to a “green,” “sustainable,” “carbon-neutral,” or any of several other categories was a conscious one based on Clorox’s demographic research. Many of these words are not well defined or have poorly understood or multiple definitions, or they focus on areas that would not play to Clorox’s core competencies. In addition, unlike the term “organic,” there is no governmental regulation/standardization of any of these terms. The word “natural” seemed to resonate with the target customer, and the term was one that Clorox felt it could satisfactorily define for itself, communicate effectively, and authentically live up to.

SOURCE: The Authors

## Deconstructing the Customer Experience

It can be argued that businesses sell products and services, but customers buy experiences. In other words, although businesses receive payment for products and services, the customer is actually buying the experiences provided by those products and services. To make this experiences-based construct useful for product/service designers, we have developed a taxonomy of customer experiences to help classify and systematically identify those experiential elements involved in a given customer/market situation.

### A Taxonomy of Customer Experiences

Functional utility and use experience	How did the customer find the product or service performing in the job he or she hired it to do?
Aesthetic experience	Did the customer find beauty, harmony, simplicity, and elegance in form and function for all of the senses?
Content experience	How did the customer experience being informed, educated, enlightened, or entertained?
Social experience	What did the customer experience person-to-person or as part of a social or cultural group?
Emotional experience	How did it make the customer feel? What emotional need did it fulfill?
Financial experience	How did the customer experience the exchange of \$, ¥, €, £, and so on?

SOURCE: [http://howe.stevens.edu/fileadmin/Files/research/HSATM/newsletter/v12/Karol\\_Tait.pdf](http://howe.stevens.edu/fileadmin/Files/research/HSATM/newsletter/v12/Karol_Tait.pdf)

In the hypothetical example of a company that makes washing machines, a large part of a customer’s experience of the washing machine certainly will be functional: How well does it clean the clothes? But as home décor changes and laundry moves from garage or basement to an indoor laundry room or even a kitchen or living area, aesthetics may play a larger role in the customer’s experience of the product. And if the company were to tap into consumers’ growing desire for environmentally friendly products with a washing machine that makes them feel good about their positive contribution to a cleaner environment, then emotion and social engagement also become part of the equation.

SOURCE: The Authors

this customer research, Clorox identified a number of elements that the chemical-avoiding naturalist desires in the product/brand experience. The product must do the following:

- Support her deep emotional commitment to protect her family (and, by extension, to help protect the world environment) by dramatically reducing the use of harsh chemicals
- Not compromise functional performance
- Not compromise convenience or ease of use
- Be priced right
- Be readily available
- Offer assurance that it comes from a credible and trustworthy source

### Getting natural right

A critical first step was to ensure that the company's definition of natural resonated with the target consumer. In Clorox's research, the term "plant-based" came up frequently. The research team also

heard a lot about "kitchen-lab" chemistry and about people who want to get back to basics by doing things such as making their own cleaners out of mild, natural ingredients, including vinegar and water. And they heard people say, "Why are we messing around with all these

harsh chemicals that make me gag when I use them, when we could have something more natural that doesn't make me gag?"

With this input, Clorox developed and market tested its own definition of natural that prominently appears on the company's website:

- At least 99 percent free of petrochemical ingredients
- Plant- or mineral-derived
- Biodegradable
- Minimally toxic to aquatic, human, and animal life
- No significant chemical processing
- Not tested on animals

The 99 percent figure was derived from the fact that Clorox wanted to set a high standard for natural and it wanted to demonstrate that it was serious about this market without being misleading. The ideal would be to claim 100 percent natural composition, but Clorox recognized that stable and effective versions of some

key components of a product that consumers prefer, such as fragrance, color, and preservatives, currently are not available in exclusively natural form. These materials were screened to ensure limited impact on health and environmental safety. The 99 percent figure conveys the message that the product is virtually 100 percent natural, while Clorox is still being truthful about its contents (see Exhibit 1 on this page).

### Identifying the must-have elements

#### Performance and ease of use

Functional cleaning performance and the product-use experience fell in the must-have category. Green Works needed to work as well as—and be as easy to use as—existing synthetic chemistry-based products. Over the years, the major consumer packaged goods companies (Clorox included) had put together such a simple and effective household cleaning experience—and had educated the consumer so well about its value—that the overwhelming majority of consumers, the chemical-avoiding naturalist included, were not willing to compromise.

#### Availability

A key element of the total functional experience for consumption of consumer packaged goods is product acquisition—that is, purchasing it and getting it home. Here, too, the major companies had spoiled the customer by making their products so widely available in groceries, pharmacies, discount stores, and other convenient outlets that the consumer had become addicted to convenience of purchase and saw it as critical to helping her manage her hectic life. Consequently, to achieve major market penetration, any new natural product had to be readily available in familiar retail outlets.

#### The right price

Given her commitment to the overall well-being of her family, this new consumer was as protective of her family's budget as of her family's health. Although she would be willing (and was expecting) to pay a price premium for a natural product to limit exposure to harsh chemicals, she was not willing to have a break-the-bank financial experience to acquire it. Clorox homed in on a range of 20 to 25 percent above equivalents in the non-natural aisle as an appropriate price point, pricing a bottle between three and four dollars—making Green Works stand out among similar natural cleaning products, many of which sell for seven or eight dollars a bottle.

Exhibit 1: Building Credibility with Transparency in Labeling

<b>Cleaning Agent</b>	Coconut based non-ionic surfactant	<b>Fragrance</b>	Essential lemon oil
<b>Solvent</b>	Corn-based ethanol	<b>Preservative</b>	Biodegradable active
<b>Thickener</b>	Natural polysaccharide	<b>Other</b>	No phosphate, no bleach

Complete disclosure of ingredients helped Green Works credibly convey the natural message.

SOURCE: Clorox Corporation

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### Aesthetics

Clorox's market research revealed that for Green Works, the consumer's aesthetic experience was an important contributor to her overall perceived functional experience. The aesthetic qualities of color and fragrance as well as the shape of the bottle not only had to indicate that the product was natural by conjuring up thoughts of cleanliness and simplicity, but they also had to convey effectiveness. The ultimate expression of clean and simple might be a clear, unscented product, but without color and fragrance, customers were reluctant to believe that the product was any different from plain water. Color, fragrance, bottle design, and performance all had to come together so that when people used the product they felt that the product was delivering on its promise.

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### Credibility

The chemical-avoiding naturalist is well informed. Her quest for knowledge and information supports her desire to protect her family. She reads labels and educates herself about product ingredients. Clorox needed to supply as much information as possible in a transparent way to be credible to this discerning and highly aware buyer. The

company fully describes its definition of natural on its website and discloses all ingredients on its label (see Exhibit 1 on page 12).

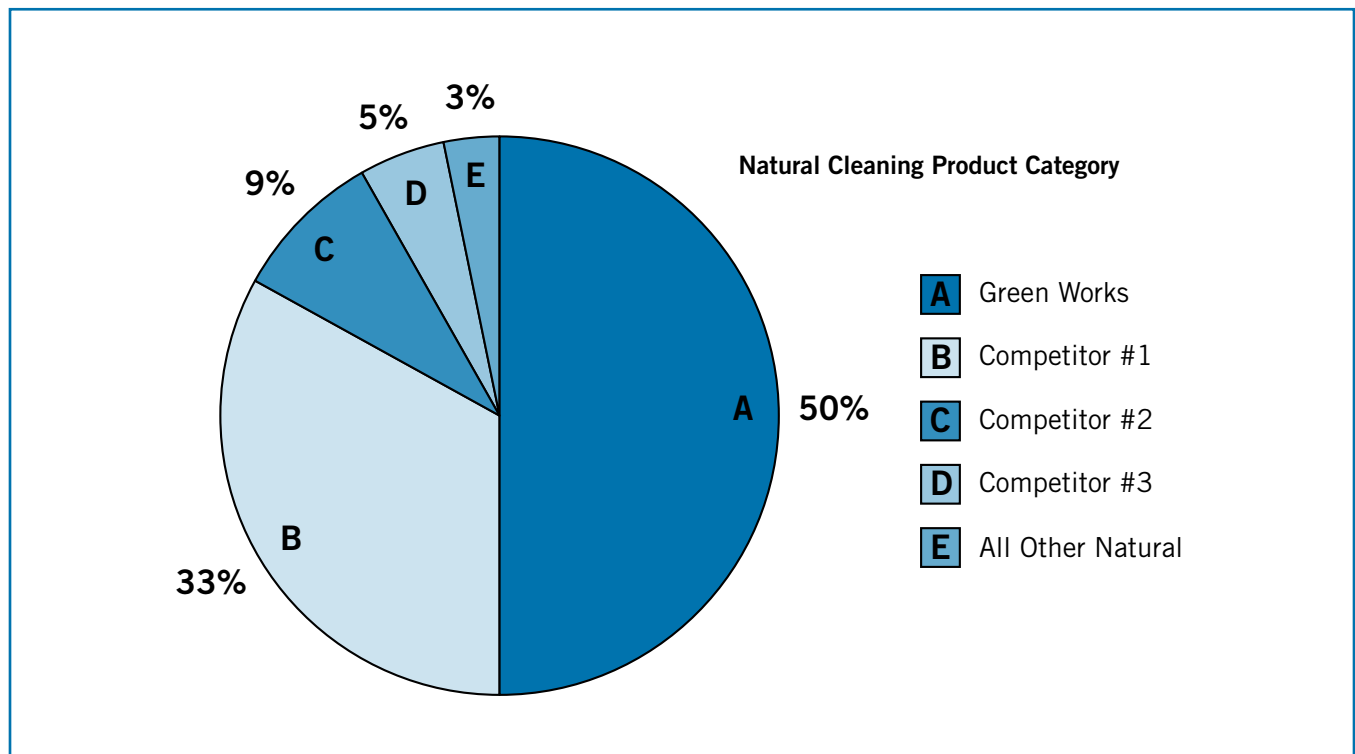
Clorox also strengthened its credibility message by gaining endorsement from organizations trusted by its target consumer. During the development of Green Works, Clorox partnered with the Sierra Club, which now features the product line on its website (one of very few products to receive such placement). In addition, the product line was noted under the EPA's DfE (Design for the Environment) Formulator Program.

Finally, the Clorox name itself was used to build credibility. In its research, the company discovered that most consumers did not believe that natural products work. The Clorox name, with its long history and association with effective cleaning products, helped carry the efficacy message for the Green Works product line. Of course, for that brand message to be effective, the product actually did have to work.

### Exploiting the technology opportunity to deliver the target product experience

With the desired customer experience defined, the challenge was to deliver a natural cleaning product that would live up to the definition. The development of effective plant-based chemistries is decades behind petroleum-based synthetic chemistries. Synthetic chemical-based formulations are now extremely effective at household cleaning, and they have set a performance standard that would have been impossible for Clorox's Green Works formulators to meet just a few years ago.

Exhibit 2: Green Works Market Performance



Less than a year after its introduction, Green Works had made major inroads into the natural cleaning market.

SOURCE: IRI FDMx Date Ending 8/24/08

But in fact, the original idea for the Green Works product line was sparked by the availability of new chemical technologies based on plant and mineral resources. Of particular note were advances in two of the workhorses of cleaning products: surfactants and solvents. Surfactants based on coconut oil and various sugars were becoming far more effective, offering performance that would be competitive with conventional formulations. And the increasing availability of corn-based ethanol showed great promise as a verifiably plant-based solvent (see Exhibit 1 on page 12).

### Putting it all together for success

Clorox has an existing internal new product development (NPD) framework, a variant of Stage-Gate® it calls Develop Products Mega Process (DPMP), which it applied to the development of Green Works. DPMP is a long-standing process that provides guidance for development teams across the full range

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of product development activities, including the detailed VoC research and the endorsement partnering activities described earlier. Although Clorox was going into new marketplace terrain, the company's DPMP process held up well, with its team hitting the target launch date.

One critical thing that Clorox did learn—and will use to tailor its DPMP process in the future—was the importance of the supply chain for bio-based raw materials and the need to consider it earlier in the development process. Clorox had a well-established stable of suppliers for its existing synthetic chemical-based products, but the new bio-based chemistries provided new means to create the type of product Clorox had identified. Clorox needed to investigate whether existing suppliers could meet its newly defined requirements for plant-based formulations as well as for transparency. In some cases, Clorox worked out partnerships with suppliers that allowed a much clearer view into the supplier's supply chain. To support the integrity of the Green Works story, Clorox required a level of traceability it had never before asked of its suppliers: It needed to know exactly where the coconut came from that yielded the coconut oil in the Green Works cleaner. This induced the suppliers to develop an unprecedented insight into their own supply chains.

### How it turned out

Working closely with its ingredients suppliers, Clorox's development team made great advances—to the point that the final Green Works formulations performed as well as or better than

existing synthetic-based products in blind head-to-head competitions. Clorox worked closely with the big retail buyers so that they prominently displayed the product. And Clorox built a winning launch strategy that got it major positive press.

Efficacy and good value were a baseline that allowed the emotional aspect of the Green Works' experience to drive its success. Clorox knew that if it gave people the right product, including the must-haves, in a way that reinforced their desire to protect their families and answered their questions about how the product was formulated, that it would be successful. It was the act of orchestration—calibrating all the right elements—that led to a level of marketplace success that exceeded the company's original expectations and has been recognized in top new brand ratings.



### Lessons learned

We would like to share some of the things that Clorox learned from its experience developing Green Works—principles other companies might want to follow in developing green products.

First, be prepared to spend extra time, money, and resources if you are innovating in an area that lacks regulation, oversight, or basic agreement on terminology. Get alignment within your organization early, and then stick to your vision.

Second, consider supply chain issues early in the development process. You may need to spend extra time educating existing suppliers and searching for alternate sources for new materials.

In addition, you will need to structure your development process to identify, prioritize, and deliver against the full set of critical customer requirements, including product must-haves as well as product delighters. Resist the temptation to focus exclusively on one or two high-profile requirements.

You may also want to enhance sensitivity to signs of emerging new and unique customer segments/demographics in your market space, particularly ones that are starting to self-identify. These segments are routinely underserved and open to product innovation.

Also, continuously scan for the emergence of new technologies or capabilities that could be exploited to meet emerging customer needs and evaluate product decisions based on the desired customer experience. From product formulation to packaging and marketing, each decision will contribute to the ultimate experience of the customer. These decisions all must be in tune to allow the desired experience to emerge.

You will want to explore the complete range of customer experience elements, including the emotional and social elements; don't limit yourself to looking only at functional performance—this is a particular challenge for business-to-business (B2B) companies.

Finally, part of your success will lie in identifying the right team leader—a leader who can think like an orchestra conductor in order to oversee the entire development effort, pulling together the often disparate strands of research, technology, and customer input. ■