

Case: P&G CarpetFlick⁵⁷

In 1999, Procter & Gamble launched the Swiffer, a floor sweeper with a disposable cloth that fits over a rectangular head. The cloth actually trapped dust and thus was a big improvement over regular sweepers and brooms. But one thing the Swiffer could not do was clean a carpeted floor. Since about three-quarters of the floors in U.S. homes are carpeted, this posed a unique challenge and an opportunity for P&G. In late 2003, the company decided to do something about it and set a target launch date of mid-2005.

P&G had a long-standing relationship with IDEO, the Palo Alto, California, design consulting firm. Over the years, IDEO had worked on several "one-off" projects with P&G, such as on the redesign of a toothpaste tube. Recently, the two firms moved closer together with the intention of collaborating on innovative products. By 2003, the collaboration was already showing a promising track record: Pringles Prints (potato chips with trivia questions written on them) and Mr. Clean Magic Reach (a bathroom-cleaning wand with a removable scouring pad). While successful in their own right, these products didn't really break into any new markets. P&G was turning to IDEO for help in the design of a new Swiffer product for use on carpets, which would be the most ambitious joint project so far, but one that potentially opens up a whole new market for P&G.

The P&G chemist assigned to the project was Bob Godfroid, and his first day at IDEO headquarters was an interesting one, to say the least. IDEO had started by visiting homeowners, asking them questions about existing sweepers and taking pictures. They discovered that there was a real need for an effective sweeper that didn't make a lot of noise and could pick up just about anything. Then, in November 2003, IDEO went into "deep dive" mode. About 15 IDEO designers went to the local hardware store and bought all sorts of random items that might be even remotely handy in carpet cleaning. Then they placed several carpets all over their facility and got them as filthy as possible. When Bob walked into the session, he noticed one designer sucking up dirt with a suction gun, while several others were busy trying to pick up dirt by rolling balls of Play-Doh around on it. He observed that the room "looked like a bomb went off. . . . I don't know if we're going to come out of here with anything other than a bunch of pictures of a trashed room."

On the morning of the second day, Bob took a squeegee blade and scraped a dirty carpet with it. To his surprise, dirt and paper confetti particles popped up in the air, as if they were Tiddly-Winks. He angled the blade differently, and the pieces popped up higher. Someone else thought of suspending a balloon overhead, which trapped the pieces of paper with static electricity. Soon enough, Bob and IDEO's Mike Strasser had built a prototype—a plain box, really, with a slit in the bottom to mimic the action of the squeegee blade—which they immediately named the Shagilator. By the end of the two-day period, IDEO had several crude

⁵⁷Information for this case was obtained from Sarah Lacy, "How P&G Conquered Carpet," *BusinessWeek Online*, businessweek.com, September 23, 2005; Beth Belton (ed.), "Lafley on P&G's Gadget 'Evolution,'" *BusinessWeek Online*, businessweek.com, January 28, 2005; and other public sources.

but working prototypes, which used either suction, glue, or scraping to get the dirt up, and the Shagilator was judged to be the best. Bob returned to P&G's Ohio head offices and demonstrated the Shagilator to Gilbert Cloyd, P&G's chief technology officer, by spilling crushed Froot Loops on the carpet and successfully sweeping them up. Impressed, Cloyd wrote out a check for several hundred thousand dollars in seed money to keep the project rolling.

IDEO's "deep dive" model resembled a kind of lickety-stick approach (see discussion in Chapter 3), except it was company designers and engineers, not customers, who were trying out and evaluating the crude prototypes. IDEO employees were trying out all kinds of variations on the box-and-slit idea. Thinking P&G all the way, one even made a Shagilator out of a Pringle's can, crushed and spilled the Pringles, and made the can "eat" them back up! By early 2004, a more refined version of the Shagilator had been designed. IDEO tried another novel touch, a disposable strip that ejected out of the box, but decided against it for manufacturing cost reasons.

By late September 2004, the design was fixed, and the prototype was being beta tested in 350 homes. The beta test households noticed one drawback—the sweeper couldn't pick up hair or lint. P&G was planning an August 2005 launch, but were reluctant to go without addressing the hair and lint problem. IDEO staffers took another "deep dive," buying lint rollers, Brillo pads, glue, and anything else they could find. The P&G lab engineers did the same. The P&G engineers thought adhesive paper was the way to go, but it kept sticking to the carpet. Finally, one of them tried gluing a chopstick down the center of the adhesive paper (to keep the latter from touching the carpet). This solution worked: The paper was high enough not to stick to the carpet, but was low enough to trap hair and lint.

A few additional tweaks were made. The sweeper's color was changed from "Swiffer green" to a new bright orange, to emphasize that this product was to clean a whole new kind of surface. A more appropriate name, CarpetFlick, was chosen. It was shipped, first to Europe, then on to other parts of the world, by the end of July 2005, exactly on time.

What was IDEO's contribution in the development of the CarpetFlick? What was unusual about it, and in what unusual ways did P&G gain from this contribution? How else might P&G have generated a concept or concepts that would address this market opportunity? Suppose you are called in as a creativity consultant to assist in further development of this product. How could new product concepts that would further satisfy P&G's wishes be generated?

R4D Case: Aquafresh White Trays⁵⁸

This case details how GlaxoSmithKline (GSK) entered into an open innovation relationship with a small manufacturing company, Oratech LLC, to get into the teeth whitening market with Aquafresh White Trays. In one sense, the partnership

⁵⁸This case is drawn from Scot Andersen, Kevin Foley, and Lee Shorter, "A Story of What Happens When Opposites Attract—Hint: It's Something to Smile About," *Visions*, 31(4), December 2007, pp. 16–17.