

**THE PROBLEM** How can a large global consumer products manufacturer create new products that surpass those currently on the market while reducing the product's footprint and meeting or exceeding its own already aggressive sustainability goals?

**THE CLIENT** The Air Care products division of Henkel, a major global corporation with headquarters in Dusseldorf, Germany.

**THE SERVICE** The project included the following three phases:

- A comparative product and market analysis of Henkel's air freshner products and its competitors
- Airflow modeling to explore the effects of product design on flow factors, energy use and efficiency
- The creation of four non-electric air care product prototypes

**THE SOLUTIONS** The new air flow models and non-electric air care product designs and prototypes provided insights into improved product performance and identified key mechanisms to incorporate sustainability into each aspect of the supply chain, which will reduce product footprint while creating value.

**THE OUTLOOK** The results of this study will help Henkel to maintain its leadership position as an innovator in the Air Care product category while meeting the goals of its Factor 3 development strategy.

"This initial air flow modeling project pointed the way for us to understand how to more completely understand the performance dimensions of our air care products. We will continue with more detailed modeling work, which ultimately could lead to superior customer satisfaction, less physical prototype testing and more rapid product development."

Dr. Debra Park, Director of Home Care Product Development, Henkel

"Achieving more with less is at the center of Henkel's plan to expand our role as a leader in the field of sustainable development. The work we're doing with the Global Sustainability Solutions Services is helping us to accomplish our goals of sustainability, profitability and innovation."

**Uwe Bergmann, Head of Sustainability Management, Henkel**