

# INNOVATIVE ANSWERS



## P&G HARNESSSES MODELING & SIMULATION TO GAIN COMPETITIVE EDGE

Innovation is not merely a buzzword thrown around at Procter & Gamble. It's at the heart of everything the Ohio-based, multinational consumer goods company does, and high performance computational modeling and simulation is a major enabler.

"Modeling and simulation give us an edge," said Don Bretl, associate director for modeling and simulation at Procter & Gamble. "Some experiments you run on your computer you can't run in the physical world. If it's worth building, should you build it? That's one of the questions we ask a lot."

One important AweSim aspect is making engineering service providers available to small- and medium-sized manufacturers as mentors to help fine-tune how software can be optimized to

*"You really need to develop simulations specific to a group's needs. You need a platform, a way to deliver those efficiently. AweSim put all the pieces together to support somebody at a small enterprise to use sophisticated HPC software for getting better, cheaper, faster results in one stop."*

— Don Bretl, associate director for modeling and simulation at Procter & Gamble

## VIRTUAL DESIGNS. REAL BENEFITS.

individual organizations, such as supply-chain businesses and large manufacturers like P&G.

While P&G has its own HPC resources, OSC has helped in P&G's biotech area with regard to workflows and open-source software. In the 2016 fiscal year, P&G turned to OSC for nearly 300,000 core hours of run time.



BIOHEALTH



## THE CHALLENGE

Modeling and simulation in consumer-goods products, such as understanding how a laundry detergent works, often isn't as straightforward as in other industries for which the methods and tools were originally designed to serve. Large companies like P&G were under pressure to use simulation to drive product design, and many small- and medium-sized corporations didn't have access to the same modeling and simulation programs.

## THE APPROACH

P&G was a leader in collaborating with OSC to get the AweSim program rolling to promote the benefits of modeling and simulation to small- and mid-sized manufacturers. AweSim is making engineering service providers available to these smaller manufacturers as mentors to help fine-tune how software can be optimized to individual organizations, such as supply-chain businesses and large manufacturers like P&G.

## THE SOLUTION

Modeling and simulation of consumer goods helps P&G save time and money by using computational experiments rather than physical testing. These experiments lead to better products. And now, unlike in the past, the pressure isn't all on large corporations like P&G to figure out ways to best use simulation to drive value to the product design; smaller corporations can get access to the same modeling and simulation tools.