

THE FAST LANE



3D Printing Speeds Design, Drastically Cuts Prototyping Costs for 3M

"The Objet 3D Printer has allowed us to shorten modeling time from seven days to one day, cut prototyping costs by 90 percent, and systematize our design process."

— In-Hwan Lee, 3M Korea

Switching to in-house prototyping with the Objet 3D printer enabled 3M to significantly speed up its product design and review process.

3M serves customers through six business segments, producing some of the world's best-known consumer brands, such as Scotch, Post-it and Scotch-Brite. The 3M Korea branch produces a wide range of household and electronic products.

3M Korea was facing a rapid increase in design projects. This required a more systematic and streamlined approach to the design, review and verification of new products, prior to molding and manufacturing.

"Outsourcing was clearly slowing down our design and verification process," said In-Hwan Lee, specialist product engineer/mechanical designer. "It was not only an issue of timing and schedules, but also of versatility and quality. It affected our ability to verify products with different materials and surface properties, and the number of design iterations we were able to fit into a schedule."

A New Solution

The 3M Korea team decided to bring prototyping in-house. It evaluated several prototyping technologies and solutions, closely comparing machine and materials cost, model precision, maintenance and simplicity of post-processing operations.

"We selected the Objet® Eden350™ 3D Printer because of the combined effect of its features," said In-Hwan Lee. "For us, some of the top features were the 16-micron printing resolution, the wide selection of materials and the ability to use the same machine to produce prototypes with different rigid and rubber-like materials."



3M Korea selected PolyJet™ technology to produce prototypes with multiple materials.

The Objet 3D Printer has become a key component in 3M Korea's design and confirmation process. With the ability to quickly produce models that provide a highly realistic representation of final products, the 3D printer is now an indispensable step prior to molding.

"With outsourcing, it took us seven days to produce a prototype," said In-Hwan Lee. "Now, it's a single-day process. Cost-wise, the change is even more dramatic – 10 times cheaper. A mockup used to cost us \$2,500 to \$3,500 whereas now the cost is \$250 to \$350."

The accessibility of the 3D printer and the significant time savings have allowed the 3M Korea team to speed up its design process and run more design projects simultaneously. In-Hwan Lee added that "another soft benefit that cannot be overlooked is the stability and predictability it has brought into our process. We have much higher confidence in our process and in the manufacturability and outcome of our final designs."



Prototype costs with the in-house 3D printer are now 10 times cheaper.

www.siam3dprinter.com | www.applicadthai.com



3D PRINTER / SHOWROOM

69 Soi Sukhumvit 68, Sukhumvit Rd.
Bangna, Bangna, Bangkok 10260 Thailand

Tel : 0-2744-9045
Fax : 0-2744-9049

URL : www.applicadthai.com
www.siam3dprinter.com
facebook.com/siam3Dprinter

