From this Day, Forward

By DAVID REIS, Stratasys CEO
3D technology is all around us. It’s changing how we design and manufacture products, make movies, heal our bodies and interact with the world. Work that used to take place on a page or screen now reaches into space. And faster than ever before, 3D technology is transforming our world.

To see the impact of 3D, look to the realm of design. Designers led the way in embracing 3D CAD and then 3D printing, incorporating more and more physical models into their iterations and thinking with their heads and their hands. And they’ve reaped the benefits: Design problems surface sooner and solutions are less costly. Inspiration happens faster. Ultimately, products are better and consumers are happier. Black & Decker makes a safer tree trimmer and Lamborghini makes a faster car because reviews and trials are more frequently executed on models very much resembling a final product.

Now, 3D printing applications are expanding from design into production, and freeing manufacturers to build without traditional restrictions. DDM stands for direct digital manufacturing, a way to produce a finished product, part or tool straight from a computer design. More importantly, DDM means the rewards of faster, leaner, smarter methods are coming to the production floor. When we at Stratasys (and publications like The Economist, Forbes and The New York Times) call 3D printing “the next industrial revolution,” we’re not exaggerating.

A hundred years ago, the assembly line changed the world with mass production. It brought luxuries to the middle class, good wages to workers and economies of scale to investors. Today, companies like BMW already know that DDM is mass production’s heir apparent. One factory-floor fixture, a nameplate-application device, offers an elegant example. Liberated from tooling constraints, BMW engineers reduced the device’s weight by half and replaced its blocky stock-metal handles with ergonomic grips — a great relief to workers who might lift the fixture hundreds of times per shift.

Today, NASA can shape a complex, human-supporting vehicle suitable for Martian terrain, despite the fact that its parts are too complex to machine, too rapidly iterated to outsource and too customized for traditional tooling. In a 3D world, we leave behind injection molding, casting and machining, gaining economy without the scale. 3D printing leads us beyond mass production and into mass customization.

It’s how a researcher at a Delaware hospital creates a durable ABS plastic exoskeleton customized to perfectly fit one child, Emma, allowing her to play, explore and hug for the first time. Then that researcher can make a 3D-printed exoskeleton to fit a different child. And another. And a dozen more. Now 15 children

with rare disorders can raise their hands because of mass customization. Ideas born today — your ideas — are freer to solve problems faster than ever before. A few weeks ago, two innovators who helped spark this revolution fused to lead the charge together, and more great changes are at hand.

Welcome to the new Stratasys, leader of the next industrial revolution.

What's your take? Please feel free to comment below! For more information, please visit www.stratasys.com *[1].*

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