

Film: Complexity is Free

JUNE 1, 2015

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One of the groundbreaking aspects of 3D printing is that it takes complexity out of the equation. In conventional manufacturing there is a gap between the design of a product and the manufacturing process required to manufacture the product. The conventional process involves tooling. And highly complex, geometric shapes may be difficult or too costly to tool.

With 3D printing if you can envision the product and express it in a digital file you can print it. This enables the building of parts in one piece that used to take many sub-parts and steps, if they could be built at all. For example, companies using additive manufacturing are now building airplane parts in one build that are lighter and more efficient, saving fuel costs. Recall that these parts are printed in metal! The geometry for these parts is very complex but with 3D printing it is just one print job and one part (rather than manufacturing multiple parts and then assembling).

3D printing will result in more efficient industrial parts. The cost for regulatory approval also plummets.

In other videos we explore how consumer products will be vastly changed by the technology, e.g., buying fashion items that are perfectly formed to your unique body structure.