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Supply Chains Built for Speed and Customization

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As emerging technologies like 3-D printing begin to bring personalized manufacturing to scale, a new “high-speed bespoke” supply chain model is following suit.

The newest wave of digital customer engagement is developing in one of the oldest of industries: manufacturing. Thanks to emerging technologies like 3-D printing, manufacturers can offer consumers customized products and do so with unprecedented speed. Intrigued by a new product you saw in a YouTube video? Well, soon you may be able to personalize it, order it via the company’s website, and have it in your hands in a matter of days.

We are seeing this phenomenon emerge in a variety of consumer product sectors, including personalized running shoes pioneered by the likes of Adidas AG and Nike Inc. The age of mass customization is finally here, backed by a new kind of supply chain.

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Across product categories, we find companies engaging with customers online and inviting them to customize and order products from a company website. Orders are produced quickly — in factories that are located close to the customer and that use 3-D printing and robotics — and delivered via the highest-speed options available.

We call these new supply chains *high-speed bespoke supply chains*, because they provide both quickness and product customization. And while the emergence of this new model is a function of the manufacturing of personalized products, its value extends to other uses, such as the manufacturing and fulfillment of rarely ordered products. High-speed bespoke supply chains also offer the promise of unprecedented market intelligence for manufacturers by capturing demand signals directly from online customers about specific features they are seeking in existing products and prototypes.

These manifold opportunities also bring new challenges for manufacturers, who will need to strategically integrate a wholly new supply chain model into their operations.



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A New Supply Chain Option

Having the right type of base supply chain — one that is lean for cost efficiency or agile for time efficiency — is well-understood by manufacturers. It is a choice that depends on whether the products are commodities — functional goods for which cost matters most — or fashion goods — innovative products for which time to market is critical. Many leading companies split their supply chains between the two types of products. Spanish clothing retailer Zara, for instance, makes its fashion goods in Europe, to be shipped quickly via truck to European customers, while sourcing its commodity goods from China or India and shipping them by sea.

High-speed bespoke supply chains add a third option to this framework.

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