3D Printing – Exploiting profitable applications with new technologies

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Abstract

Additive Manufacturing (AM) enables toolless conversion of digital data into three-dimensional complex, functional and nature inspired bionic components. Hence, it is a core technology for implementation of industry 4.0 by coalescing virtuality and reality. A disruption of traditional design patterns including an optimal utilization of bionic principles in product development is necessary. But not only a change in design thought patterns, but a rethinking of factory structures and production layouts leading to bionic smart factories is required. The combination of profitable bionic design and interconnected smart factories will boost leading competitive positions when 3D printing takes over further innovative applications. This is especially true with new upcoming and promising 3D printing technologies.