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Mass personalization: From data analysis to print – and how AI helps

B. Petersen[1*]

[1] *Materialise GmbH, Gilching, Germany*
[*] *Corresponding author, email: bjoern.petersen@materialise.de*

Personalization is quickly becoming an expectation in many industries. Driven by digitization, companies increasingly offer personalized solutions tailored to the user in the form, fit, or function. Within healthcare, personalization is driven by the desire to address unmet clinical needs and the ambition to tackle the healthcare system's massive challenges. Medical device treatments can leverage technological innovations in 3D printing, artificial intelligence, or mixed reality to accelerate the level of personalization within patient care.

Specifically, AI-based data analysis opens the doors to disruption in the medical device field by offering entirely new personalization avenues. Driven by creating cost-effective and sustainable solutions that better answer clinical challenges, targeted investments in infrastructure, software, knowledge, and partnerships are already making mass personalization a reality.

Materialise has gathered insight from its 30-year history to demonstrate the medical device industry's progress and opportunity. We determined that five pillars must be addressed in order to realize the benefits of mass personalization in support of the healthcare industry at large: Health Economics & Regulation; Next-Generation 3D Printed Devices, Cost-Effective & Scalable Operations; Predictive Planning, and Personalization at the Point-of-Care.

AUTHOR'S STATEMENT
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