

Direct Manufacturing Research Center

Interdisciplinary Additive Manufacturing Research Institute

The DMRC is a proactive collaboration of key technology stakeholders who have a common interest in advancing Additive Manufacturing technologies from Rapid Prototyping towards dependable, production-ready Direct Manufacturing technologies. The aim of the DMRC is a reliable, repeatable and production capable Direct Manufacturing System. As an interdisciplinary scientific organization, the University of Paderborn is the hub of the DMRC. The DMRC's integration within a university makes it possible for students of engineering sciences to be trained on the newest generation of equipment. In addition, the DMRC relies on the skills of several experienced industrial partners who are part of the DMRC. With this approach, all important elements of the Direct Manufacturing value network are represented, allowing a holistic approach to finding technical solutions.



University of Paderborn
Direct Manufacturing Research Center (DMRC)
Building W.0
Mersinweg 3
33098 Paderborn

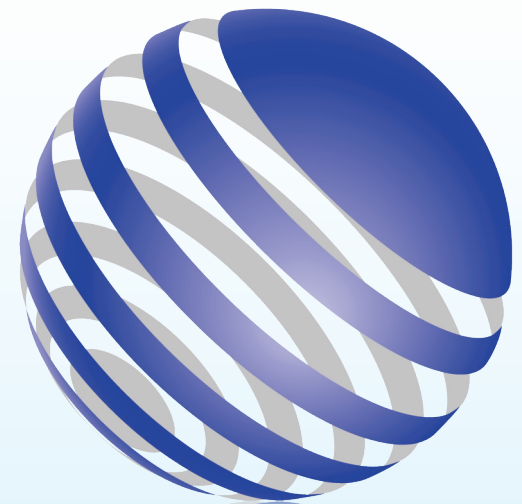
Phone: +49 (0) 5251 | 60-5415
Fax: +49 (0) 5251 | 60-5409

Web: <http://dmrc.uni-paderborn.de>



Service Offer

Finding Product Ideas for Additive Manufacturing



© Mammut Vision (Fotolia)

Finding Product Ideas for Additive Manufacturing

Motivation

Additive Manufacturing automatically brings to mind totally new products: The media is cluttered with innovative product designs, sparked by the almost unlimited freedom of design. That is why, Additive Manufacturing is being closely monitored by many companies with regard to its application potentials.

The potentials of the technology are oftentimes covered one-sidedly for Additive Manufacturing not only yields new products, but also services. Think about a local machine shop printing formula one parts tailored to the weather situation on the race day.

In reality, companies oftentimes struggle when it comes to creating new products for Additive Manufacturing. Oftentimes it turns out hard to leave the realm of conventional design and getting acquainted with the unorthodox solutions now possible. Established companies often have large product portfolios: Which product can be produced with the technology? When it comes to new products, companies find themselves urged to draw a Picasso on an empty canvas – the well-known ‘blue ocean problematic’.

Our Solution

Together with you, we are envisioning new market offers for your company. A market offer can be both, a product or a service. We emphasize thinking about market offers because it is too easy to prematurely jump into the mere product realm. There are two ways to find market offers: 1) Checking the product and service portfolio of today for applications of the technology and 2) creating new products from scratch. We cover both approaches:

Setting the scope

We emphasize, setting degrees of freedom beforehand. That is, we determine promising main business areas which we are going to focus on in the following. Also we clarify boundaries: Is it the mere redesign of a product or are you even willing to change your spare parts logistics? If you are specifically interested in a detailed proceeding of this step, please consider our service offer ‘Finding Potentials for Additive Manufacturing’.

Scanning the product portfolio

Product and service portfolios usually grow historically. Therefore, companies oftentimes struggle to identify products which could eventually benefit from Additive Manufacturing. For many years, we have consulted

companies in feasibility analyses: We know, where Additive Manufacturing shines. For instance, sometimes the real gains can only be harnessed when considering the whole lifecycle of a product. Together with you, we scan your product portfolio and find the sweet spots of Additive Manufacturing.

Creativity Workshops

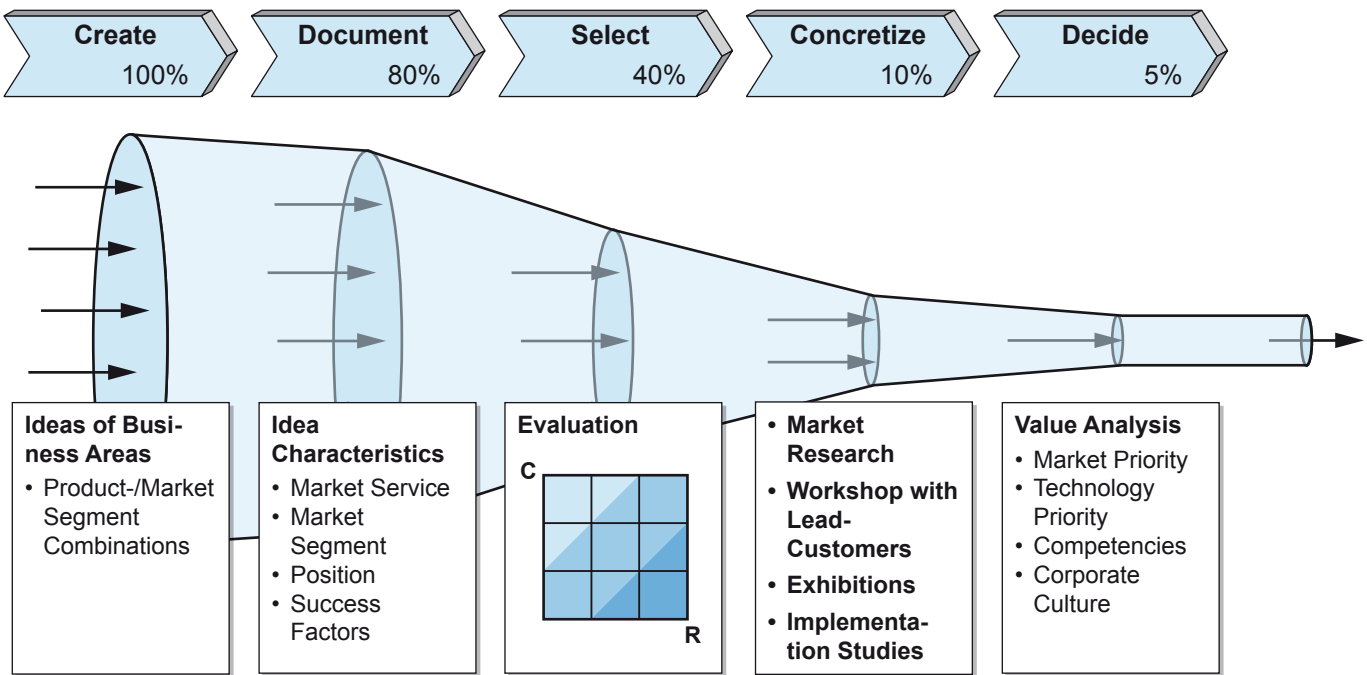
Oftentimes reengineering of existing products is just not enough: Planning radical innovations requires ideation and creativity. Instead of awaiting the redeeming serendipity, companies usually use creativity techniques such as Brainstorming. From our experience, conventional creativity methods however rarely yield the expected results. That is why the DMRC offers guidance for creativity workshops specifically tailored to the creation of products and services on the basis of Additive Manufacturing. In a creativity session with about six interdisciplinary experts we create ideas and assess them.

Strategic Implications

For selected product ideas, we create follow-up plans. That is, we e.g. identify necessary R&D advances and show you how the DMRC and its partners can help you pursue certain product ideas. We create a product concept and outline the product environment, requirements, application scenarios etc. At the end of this step, you will have obtained all necessary information for a business case.

Your benefit

Together with you, we find the products and services of tomorrow and specifically take advantage of Additive Manufacturing. Ideas are prioritized and detailed in exclusive profiles. If necessary, consequences and measures in order to pursue certain ideas are defined. All information, generated along the way towards Additive Manufacturing's application potentials in your company will be made available to you in a concise manner.



Funnel of Idea Selection



Creativity workshop (© Zsolt Nyulaszi, Fotolia)