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.

Service Offer

Finding Business Models for Additive Manufacturing

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Finding Business Models for Additive Manufacturing

DIRECT MANUFACTURING RESEARCH

Motivation

Competition has changed substantially in recent years: Successful companies not only launch powerful products but also understand the underlying customer problem and solve it in a unique fashion. That is why we have encountered a shift from competition of products to a competition of business models. Simply put, a business model is an aggregate picture of the business logic of a company. It describes, how a company creates values which are apprehended by the customer and in turn provide incentives to pay for them. Whether conscious or not: every company has a business model.

A fundamental driver of business models is technological development, which time and time again provides new business opportunities. Additive Manufacturing (AM) is a prime example for a technology which supposedly creates opportunities for new business models. As a scalable production technology, AM has proven to create new means of customer involvement during the development process and fundamentally extended the production scope of products. Using AM does not necessarily go along with a substantial business model innovation – however, it may be worth discussing new options.

Our Solution

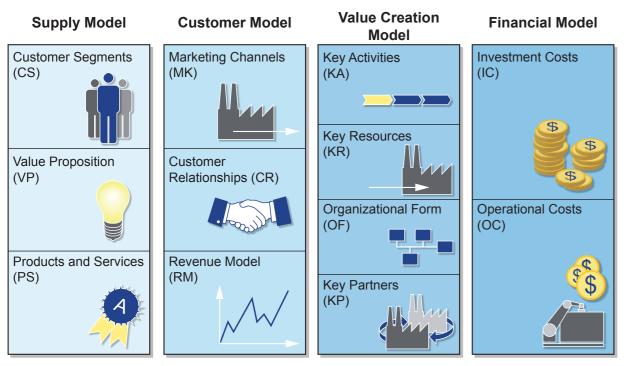
The goal of business model development is a reliable business model which allows for a unique competitive advantage. Such business models rely on the clever combination of business model options. In creating these business models we can look back at a history of successful workshops and industry projects. Our service offer includes the following steps:

Business Model Description

Before even starting to get creative with a business model, we have found that at first it is necessary to describe the status quo – without even considering the production technology, this already yields potentials for improvements in the future. In the context of workshops, the current business model for a company, a product or certain business units is described. The business model of today provides a starting point for the business model development which is to follow.

Finding Business Model Options

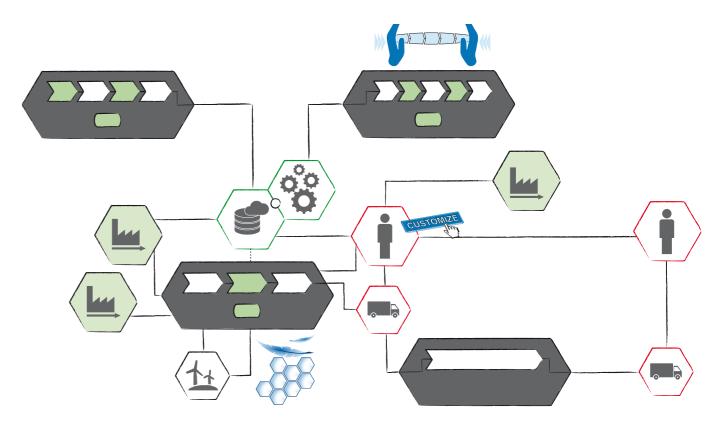
A business model contains statements about the most important elements of businesses (e.g. value proposition, customer segments, etc.). These elements can be combined in an overarching framework consisting of four partial models – Supply Model, Customer Model, Value



Creation Model and Financial Model. The overarching framework is called "Business Model Canvas". Core task of the business model development is specifying the content of each business model element. There are different options available for each element – using AM adds new options to your business model canvas. Together with you, we determine promising business model options for you and develop business models. In doing so, we stay alert for the impacts of Additive Manufacturing, which have proven to aid our partners in enriching their business.

Determine the impact of a business model

Business models significantly affect your value network – in fact, a business model can fail entirely if for instance the necessary partnerships cannot be established. In order to obtain a sound overview of potential threats or unknown benefits, we map the value network for a business model. Apart from finding threats and benefits, the value network has proven to be a powerful creativity technique to refine the business model further. The overview of threats and benefits helps choosing the business model which is to be implemented, eventually.



Modeling the value network and anticipating chances and risks for a business model

Business Model Canvas according to Köster

MANUFACTURING DESIGN RULES DIRECT MANUFACTURING REGEARCH GENTER SELECTIVE LASER SINTERING

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Implementation Planning

The necessary tasks to realize a chosen business model alternative are being collected in a Business Model Roadbook.

Your benefit

Together with you, we create different business model alternatives and align products and value creation consequently along the requirements of your customer. Thereby, you can differentiate yourself from competitors and obtain a sound means of decision making when entering the realm of Additive Manufacturing. All information gathered in the process of business model development will be made available to you in a concise manner.