

Elle Langer

# Media Innovations AR and VR

Success Factors For The Development  
Of Experiences

 Springer



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Elle Langer  
Berlin, Germany

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## Foreword

Virtual, mixed, and augmented reality (VR/MR/AR) are immersive media that take digitization in business and society to the next level. These media enable new forms of use. They simplify communication and production processes and thus the way we will learn, communicate and work in the future. This results in new challenges for companies and society.

Numerous applications for the immersive media AR, MR, and VR are currently being developed for areas such as education, marketing, health, and product manufacturing. However, uniform technical and legal standards as well as methods for workflows for the development of content and products are still missing for mass market maturity. Distribution channels through which larger user groups can use these media are also only just emerging.

In short, augmented reality, mixed reality, and virtual reality are media innovations that are in an early stage of development. These media still lack the relevance to enter the mass market.

This book by Elle Langer is a good example of a scientific work with a high practical relevance. The author analyzes the initial situation of the immersive media AR, MR, and VR in the context of media innovations in a scientifically sound manner. In doing so, she primarily considers the user and producer perspectives, which are relevant for the successful entry of media innovations into the market. The aim is to identify success factors that make it easier to develop products for AR, MR, and VR because they meet a user need and thus facilitate the production process and market entry.

For her analysis, Elle Langer draws from the fund of different scientific disciplines. Through her analysis of media and communication science, she expands the definition of “digital media” to include “immersive media” and places these in the context of media innovations. User experiences and emotions are an important success factor for the author, which she derives by means of theories from the cognitive, film, and social sciences.

The author systematically derives media-specific success factors for content development and the production process and condenses the results into action-guiding checklists.

These give the reader a good overview of the minimum standards needed to use modern innovation techniques to produce content for MR, VR, and AR that will lead to a high level of user acceptance and is truly wanted.

The checklists serve as a guideline for all those who produce immersive media content, and they are also a basis for the further development of IMMERSIVE STORYTELLING and IMMERSIVE MEDIA BUSINESS.

The basis for the findings in this book are 14 interviews, some of them lasting several hours, with experts from various industries who are already working with immersive media.

In addition, the author Elle Langer's many years of professional experience as a media producer and developer of media projects and media innovations comes into play, which she incorporates into her analysis. These increase the direct practical relevance.

Successfully implementing media innovations as projects depends on a variety of factors that go beyond the previously known criteria for media and digital products. In Elle Langer's scientific work, the author has highlighted the essential success factors from the user and producer perspectives.

The results presented in the book are presented and condensed in a very clear manner, resulting in a coherent structure of results throughout the book.

Overall, Elle Langer has succeeded in transferring the findings derived from the secondary literature and the expert survey very well, which are underpinned by a large number of practical examples. It is a pleasure to be introduced to the world of immersive media by the author.

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## About the Author



**Elle Langer** is an experienced and award-winning media producer and director for high-quality documentaries, non-fictional TV formats, and image films. Her projects cover cultural, edutainment, and social topics and are aimed at children, young people, and adults.

Since 2015, Elle Langer has focused on augmented, mixed, and virtual reality. For her, these media immediately have the potential for groundbreaking new forms of knowledge transfer and entertainment. At the same time, they are so new that too little is known about storytelling and production methods.

The author acquired profound knowledge about new media during her master's degree in "Leadership in Digital Communication/Innovation" (Universität der Künste/Universität St. Gallen), which she completed in 2017.

The success factors developed within the scope of this scientific work enable a scalable process. In the process, field-tested and scientifically based creative techniques for the production of VR and AR experiences are applied, such as design thinking and agile innovation management.

With her agency pimento formate, Elle Langer today designs VR and AR products for edutainment, marketing, and health. Her clients are media, creative agencies, museums, NGOs, and industrial companies looking for innovative media and communication products, including for AR and VR. User-centered, creative, and strategic-economic aspects play an important role.

In her workshops and lectures, Elle Langer presents the most important factors for success with the aim of introducing interested parties to the new media of augmented, mixed, and virtual reality.

As a co-founder and board member (2017–2020) of Virtual Reality Berlin-Brandenburg Association ., she is also actively involved in the expansion of the XR economy in Germany and Europe.

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*Those who engage with immersive media today will secure their future viability.*

Virtual Reality (VR) and Augmented and Mixed Reality (AR, MR) are new media technologies. They are subsumed under the notion of Extended Reality and are referred to in short form as XR<sup>1</sup> (cf. Sect. 3.2). They are said to change the way people communicate, work, live, learn and perceive reality (cf. Metzinger and Madary 2016, p. 2; Hildt 2011). By adding digital information and objects to a natural, real-physical environment, the immersive media<sup>2</sup> AR, MR and VR manipulate reality.

They open virtual spaces in real space people can enter. These virtual and virtually expanded spaces are empty, not yet modeled, like a cave, a new planet, or a construction site that needs to be designed and defined. It is in this area where the potential of immersive media technologies lies. The design and conquest of new spaces and the search for new experiences are part of human history and attract adventurers, business people, creatives and researchers.

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<sup>1</sup>The terms virtual reality, augmented reality and mixed reality are defined in Sect. 3.2. For linguistic simplification, the short forms are used for the introduction: Virtual Reality as VR, Augmented Reality as AR, Mixed Reality as MR. This corresponds to the abbreviations commonly used in business and science. The term Extended Reality (XR) is rarely used in this book and only as a collective term (cf. Section 3.2).

<sup>2</sup>Since AR, MR and VR have an immersive effect on the user, they are also called immersive media or immersive media technologies (see Sect. 4.2.3).