New Work
in Metaverse

**Experiences, application examples
and potentials
from three years
Metaverse Business Practice**

from

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Introduction

The metaverse (in any definition and sometimes even without...) is one of the most hyped topics at the moment. It can be found in all kinds of media and channels, and almost everyone feels called to make their own personal statement about it. However, only a few of the discussants, futurologists or authors have actually been able to gather practical experience. From a certain level of abstraction, the metaverse is so wonderfully undefined that almost anyone can express an opinion about it without it being questioned on the basis of facts.

But therein lies the problem. The metaverse is already much more concrete than it appears in public perception. And it needs practical application scenarios in a variety of areas to actually become a successful concept. Together with my colleagues and external partners, I was very lucky to be able to work out exactly these scenarios, implement them in the metaverse and test them in our daily work. This was facilitated by the pandemic and the associated reduction in personal contacts.

The practical work in the different formats and industries has always whetted the appetite for more and encouraged creativity. It quickly became clear that the metaverse can be a superficial reflection of reality, but it doesn't have to be. It follows its own laws and rules. These must be taken into account if it is to become an integral part of our daily work. This starts

with the interfaces between the real and the virtual world, continues with the working techniques and tools used in the metaverse, and ends with the specifics of social interaction, such as the question of the existence of empathy in virtual worlds.

I don't pretend to have found a final answer to all these questions, but after three years of daily practice with many positive and painful experiences, it's time to share the knowledge and experience I've accumulated. I am not specifically addressing IT specialists or other experts in the field of virtual reality. Quite the contrary. This book is for anyone who has an inkling of the potential of the metaverse, but doesn't yet know how to apply it to their daily work or business.

Reading this book will not necessarily make you a metaverse expert, but it should help you avoid first mistakes and be an inspiration for your own activities. I can only advise you, no matter what industry you are in, to not only deal with the topic theoretically, but to take your first steps quite pragmatically. This book should motivate you to do just that. And these first steps definitely don't require huge development budgets.

What you need is creativity and the courage to try something completely new. In our projects, we worked a lot with so-called on-board tools, and very little of what we did followed professional software development methods. Some of the tools and utilities we used are also presented in this book. Therefore,

please do not take the procedures shown here as best practices, but at best as fast-forward practices under the premise of "just do it".

Part II: What is already possible today?

The question is relatively simple to answer. A lot is already possible today. I was very skeptical when I started to get involved with the metaverse more than three years ago, in a way that was inevitable. I had concerns about the acceptance of potential users, not because I lacked faith in the available technology. It should be noted that Meta made a significant impact with the introduction of the Oculus Quest device, which put pressure on the market. However, the use of VR goggles, despite their low cost and simplicity, does not provide a viable use case. The gaming industry presents a distinct perspective on the world. In this context, NFTs have a long history of trading, and brand manufacturers have already identified the metaverse as an emerging channel for digital marketing. However, this is a business-to-consumer (B2C) industry.

Even perfect VR glasses
do not make a viable use case.

The focus of this discussion is on effective collaboration in the metaverse. The targeted audience possesses all the relevant characteristics. While there are some working individuals who are gamers, they make up an insignificant minority. The global health crisis has

brought about a significant transformation in the working world. Remote work has become widespread, and online collaboration tools have gained wide adoption. However, for their serious clientele, navigating virtual worlds with an avatar, interacting with other avatars in virtual environments, or even flying around the room in a game-like manner has a distinct quality. Such a serious clientele warranted skepticism, requiring greater value than mere entertainment and distraction from the monotonous home office routine. Although the platforms and technologies we used for our metaverse activities have their origins in the gaming industry, they already provide almost everything that is needed for the initial B2B steps into the metaverse. Most participants experienced the "wow effect" even after the initial tests with friendly users.

The use cases presented in the following chapters do not reflect the complete potential. They represent only the domains where I have gained my own direct or indirect experience in recent years.

Digital Marketing and Content

Digital marketing thrives on fresh content and audience focus. Especially the continuous production of content can be a financial and organizational challenge for many companies. My topic here is deliberately not "direct to avatar" commerce. This topic is currently developing into a billion dollar market, but at the moment it mainly serves the consumer market. No, this is primarily about corporate branding on social networks, and specifically on LinkedIn. I'm not saying that the metaverse can solve all budget problems and that content will generate itself. But within certain limits, content can be generated more easily, more cheaply, and more quickly in the metaverse. All it takes is a little technology and creativity. If I show you some hardware and software in the following, this is not to be understood as an advertisement for a certain manufacturer, but only as an exemplary suggestion. Basically, the entire content production can be done on a PC or laptop. It is recommended to use a gaming computer with a suitable graphics card. For example, I use an MSI Katana GF66 with an integrated Nvidia graphics card. The recording software I use is OBS-Studio. This is a free open source software and offers a lot of professional features via plugins. As additional hardware I used a Behringer audio interface (U-PHORIA UMC404HD), which has four inputs and outputs. So any audio sources like microphones etc. can be mixed into the recording.
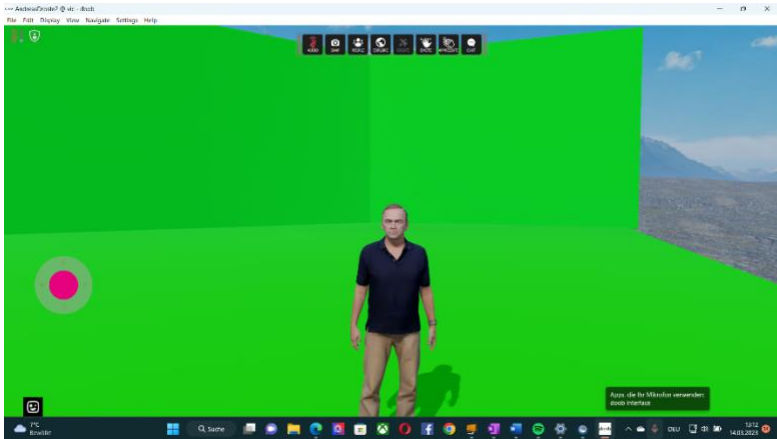
Avatar in "Metaverse Studio" in front of a green wall
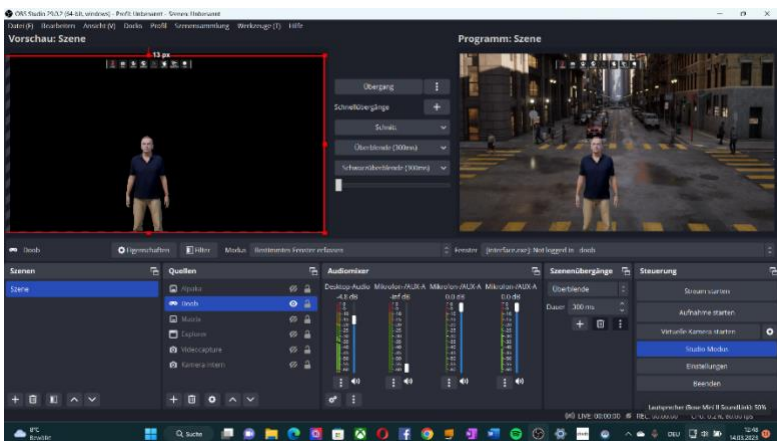
Avatar (optional) in OBS against different background

Training for complex products

The commissioning costs for large plants in industry, but also in other sectors, account for a very large proportion of the investment costs. In process engineering alone, this represents approximately eight to 15 percent of the calculated total cost. (Weber, 2019) Simulation and training account for a large portion of these costs.

Another example is healthcare. Training on large medical equipment such as MRI or CT scanners is absolutely necessary, but also very costly due to the resulting downtime. The use of digital twins of such devices in the metaverse can provide a remedy. On the one hand, processes can be simulated and optimized before commissioning, and on the other hand, a large part of the staff training can be carried out as an avatar on the digital twin.

Modern real estate can also be considered a special form of large facilities. In so-called Building Information Management (BIM) systems, buildings are mapped from the planning stage through construction to the operating phase. If you like, the space for the metaverse is designed as a waste product. For example, future users and design offices can take tours and hold meetings in a building before ground is broken. Corrections and adjustments can be made at a very early stage. This saves immense costs for later corrections.