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Whitepaper **Virtual Spaces** 3D. Spatial. Immersive. Metaverse.

**The home for
better spaces.**

Guide for entering the new virtual 3D Internet world and take advantage of the versatile & innovative possibilities.

★ **Synonyms:**
immersive, spatial, Metaverse.

Virtual
Marketing

eCommerce
& Trade

Events
& Meetings

Employer
Branding

Real Estate &
Construction



Overview

What you will learn in this white paper

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What are Virtual Spaces



The next iteration of the Internet is 3D.

From 2D to 3D and much more

Virtual Spaces are virtual, three-dimensional spaces on the Internet. Instead of consuming text, images and videos like on a board, you visit 3D spaces like in the real world and get a virtual, holistic, audiovisual experience (VR virtual reality).

Visitors interact with others, go shopping, get information or simply let themselves be entertained.

Definition Virtual Reality (VR)

Computer-generated,
not in Reality existing, but partly appearing real
three-dimensional, spatial world.
Users immerse themselves in a different reality
and interact with and in this world.



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More than a room. More than a website.

Spaces always have a purpose

To do everyday things, such as get information, learn, be entertained, go shopping, communicate ... people use **websites and apps** or visit **physical spaces** such as stores, cafés, museums, universities, ...

Virtual Spaces represent the essence of **spatial computing**, where the digital and physical worlds merge seamlessly to create a holistic experience that enables information, learning, entertainment, shopping and communication in an innovative way.

Virtual Spaces merge web and space

Virtual spaces combine the advantages and functions of **websites, apps** and **physical spaces** to create a holistic virtual experience.

Virtual Spaces work simply with smartphone,

PC or tablet via the browser.

The high-end solution is with VR glasses.



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People experience spaces

People experience spaces emotionally, they interact with them. Rooms and their designs have a positive psychological effect. They impress, fascinate and are an experience for all the senses. Virtual spaces are a tool for organizations to make their spaces - whether they are virtual copies of existing real spaces or fictitious virtual spaces - a digital experience for their customers and partners and to interact with them.

These virtual spaces are **immersive**, meaning they create an engaging, all-encompassing experience that immerses users in another world, whether through visual, auditory or other sensory elements that give the feeling of really being 'there'.

Advantages of virtual spaces

24/7

worldwide

Cost-
effective

innovative



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Use cases & examples



Possibilities according to industries & applications

Industry	 All sectors	 Trade & Marketing	 Real Estate & Construction
Use Cases	Events & Human Resources Tools	Product Marketing, Brand Experience and Online Shop	Property Development & Marketing
	To interact with customers and employees in virtual spaces there are new, limitless possibilities for all sectors.	Virtual marketing a new marketing channel for the staging and marketing of brands and products, both for B2C and B2B.	Very special applications arise in the property sector in property development, planning and marketing.
	• Virtual conferences & meetings • Virtual trainings & infotainment • Virtual employee onboarding • Employer branding • Company tours	• Virtual shops (V-Commerce) • Virtual showrooms and trade fairs • Marketing campaigns, e.g. product launches • Brand interaction with gaming • Digital assets, e.g. clothing for avatars	• BIM 2 Metaverse • Stakeholder communication • Real estate development • Real estate documentation • Real estate marketing

Examples

Extend your customer journey into the virtual space

Virtual Online Shops

Online shops have almost all had roughly the same look and feel since the beginning. Virtual Spaces & V-Commerce now bring new possibilities.



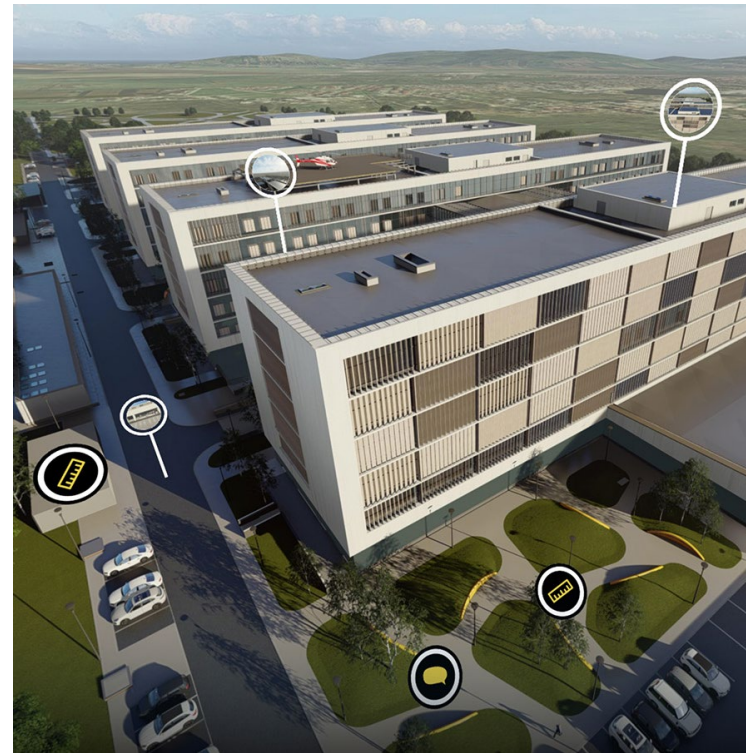
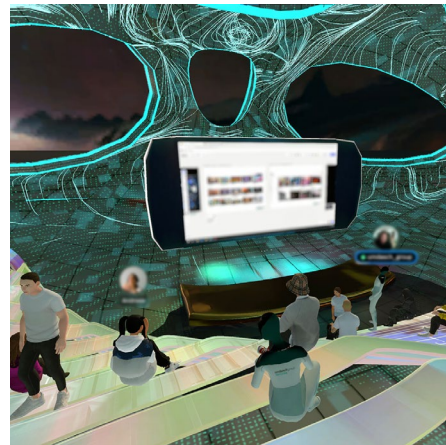
Virtual Showrooms & Fairs

Showrooms and trade fairs are perfect staged product presentations. As virtual spaces, they can be visited 24/7 worldwide.

See Case Study 1
Doka Showroom

Online Conferencing

Online meetings are part of everyday life. We are used to sitting in teams all in one box. With Virtual Spaces comes a new generation of online meetings.



Property Development & Marketing

3D rooms have long been part of real estate applications. With Virtual Spaces new possibilities and features are coming.

See Case Study 2
Sibiu Hospital Tour

Use Case – Retail

Virtual Online Shop

Online shops almost all have the same look and feel, namely the one invented by a major player over 25 years ago.

Virtual stores (Virtual eCommerce, V-Commerce) are an innovative way of shopping online. However, the entire product range is not presented. Experiences are created to present selected products and collections using multimedia and market them via eCommerce channels.

Retailers can let all customers worldwide experience virtual copies of their impressive flagship stores 24/7. But virtual knows no boundaries, stores can be designed in the most creative ways: a flying store, a shop on the moon or under water. Anything is possible.

Many brands such as Tommy Hilfiger, Ralph Lauren, P&G and Dior are already utilizing the possibilities of virtual stores.

Virtual
Online
Shops

Online
Conferencing

Virtual
Showrooms
& Fairs

Real Estate
Development
& Marketing



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Use Case - All Industries

Online Conferencing

Video calls and online conferences have been part of everyday working life since Covid-19 and have brought us a great boost in efficiency.

All the current tools offer many opportunities for virtual socializing and working, but there is still one major limitation: the user experience.

In Teams & Co, everyone sits in their own little box with an individual background and someone else shares their screen.

Virtual spaces take virtual socializing to a new dimension. By meeting in a 3D space mixed with the usual features of video meetings, the possibilities of online and physical meetings are merged:

- Text, voice & video chat
- Avatar with name and video
- Screen sharing
- Presentation

Virtual
Online
Shops

**Online
Conferencing**

Virtual
Showrooms
& Fairs

Real Estate
Development
& Marketing



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Use Case - Marketing

Virtual Showrooms & Fairs

Showrooms and trade fairs are spaces of excellent design where products are staged and presented in impressive surroundings at great expense. However, these spaces are only available to a limited extent in terms of time and location - customers have to be in the right place at the right time.

Virtual copies of showrooms and trade fairs, on the other hand, are accessible to all customers and employees worldwide, 24/7 - with or without a guide. This means that the investment in the virtual space is definitely worth the investment, as visitor frequency is significantly increased.

A major advantage of virtual product presentations is the integration with all digital channels: Information from the website, images, videos and social media feeds can be integrated.

Virtual showrooms & trade fairs are not only a marketing tool, but also a medium for product training for employees.

Virtual
Online
Shops

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Use Case - Real Estate

Real Estate Development & Marketing

The development and planning of large property projects is characterized by complexity. Many stakeholders and users are involved in the planning process.

The aim is to plan as precisely as possible to reduce subsequent costs and maximize satisfaction.

In order to optimize communication with all stakeholders, like the customers & users, investors, service providers & implementers or public decision-makers, the details of the building must be prepared realistically.

A virtual space, a virtually accessible 3D model of the future building, is used for this purpose. Communication is made significantly easier:

- Everyone has a clear idea of the building.
- Requirements can be tested.
- Processes can be simulated und tested.
- Feedback is collected effectively.

Virtual
Online
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Classification & Technologies

5 Technological Possibilities of Virtual Spaces

Social	
3D Webpage Virtual experience of space as a website	Metaverse Virtual world for interaction
1. Virtual copy of spaces Virtual, customizable 3D copy of physical room or space with 360° panorama photos. Integration of interactive functions, texts, images and videos.	3. Ecosystem One Ecosystem for many brands (land, NFTs) e.g. Decentraland, Sandbox
2. Webpage from 3D assets VR/3D webpage from 3D assets, publishing as panoramas or fully accessible 3D space. With interactive functions, texts, images, videos plus 3D animations.	4. Space Own three-dimensional world per user/brand. Creation and streaming via platform. e.g. Spatial
	5. Gaming Participation in multi-user games: sale of digital assets, design of sub-worlds in games. e.g. Roblox, Fortnite

Features of Social Virtual Spaces

3D Webpage		Metaverse
Single user. Interaction with host possible (Guided tour, peer-to-peer).	Social	Multi user. Communication between users (chat, voice, video).
No avatar. No user registration required.	User Identity	Avatar. Registration required.
Standalone webpage. Independent of other systems and platforms.	Platform	Integration into the provider's platform, e.g. Spatial. Examples: marketplace from the provider, community, gamification.
Own hosting, all data remains with the owner. No communication data is stored.	Data & Hosting	Data upload to the platform provider. Provider stores communication.
Integration of image, text, video and links/CTA. Integration of animations for 3D assets. space and assets (static).	Multimedia & Interaction	Integration of image, text, video, animation and links/CTA. Interaction with space and assets (dynamic). (Possibilities analogue to gaming, e.g. taking objects).
Customized features & API-integration: online shopping, augmented reality...	Customizing	Features and APIs on the part of the provider, limited customizing.
Multilingual UX.	Language	English / monolingual.
Responsive UI.	Responsive	Limited, depending on platform.

Definition Metaverse



Metaverse. Connected Virtual World

The Metaverse is a boundless, networked, virtual three-dimensional space.

Multi-User

It is a digital space in which many people are networked, can meet and interact with each other.

Avatars

People are represented by customizable virtual avatars that are used across platforms and thus form the digital, visual identity.

Interaction Human - Space

Users interact in real time with other people as well as the space itself and the environment in which they use and influence digital assets (clothes, tools, houses, etc.).



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Metaverse Ecosystem

One big world - one ecosystem –
for many brands and organizations.

Ecosystems are a virtual world or city with neighborhoods. As in the real world, **land** (parcels) can be bought or rented. A space or building is constructed (or uploaded) there, which users visit as an avatar.

The possibilities are endless: Exhibitions, events & meetings such as concerts or fashion weeks, buying and selling digital assets (NFTs), gaming, shopping, chatting, advertising, etc. or simply networking with others.

An own **cryptocurrency** and marketplace are usually the economic basis.

Well-known ecosystems are Sandbox, Decentraland and Upland.

Companies such as Samsung, UPS, Sotheby's, Adidas, Atari, Louis Vuitton, Burberry and the Austrian postal service have already bought land or set up presences in Decentraland.



Metaverse Spaces

Many worlds - each brand creates its own space - its own world.

Each organization can create and operate its **own space**. A dedicated space - a world that is designed solely by the owner and is separated from the other worlds.

Each user can visit the world with an avatar and communicate with other avatars there as well as experience spaces, get information and interact with others. Gaming elements ensure that visitors get engaged and spend more time there.

Examples are **Spatial** and **Odyssey**. They provide the necessary tools for creation and publishing.

Well-known brands that are already on Spatial include BOSS, Tommy Hilfiger, Rolls Royce, Nike and BMW Motorrad.



Case Studies

3D Webpage

3D Webpage - Features



Multilingual

Choose multiple languages to appeal to a more international audience.



Analytics

Gain more detailed and specific insights into user behavior.



Responsive UI

Is optimally displayed on various devices and screen sizes.



Virtual Walk

experience the tour entirely in 3D using movements



Interactive

Add clickable & animated elements to make the scene move more



Independent

The spaces can run on any web server & are not tied to our platform

3D Webpage
with
360° Photos

3D Webpage
with
360° Assets

Metaverse
Ecosystem

Metaverse
Space

Gaming

Case Studies (1)

Virtual Doka Showroom

- Creation of 360° photos of the Doka Forum showroom (2,500 m²).
- Combining them into a virtual tour.
- Adding points of interest: images, links, videos, online shopping, etc.
- Integration of texts from the website (efficient as no additional content maintenance is required).
- Easy access via web browser desktop and mobile, no additional device required.
- Linking on the doka.com website.
- Option for guide tours by employees.
- Showroom can be visited 24/7 by employees and customers worldwide.

3D Webpage
with
360° Photos

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Metaverse
Ecosystem

Metaverse
Space

Gaming



Case Studies (2)

Virtual Building Presentation Sibiu Hospital

- Creation of virtual tours based on the 3D model of the planning.
- Enables virtual tours of buildings in planning and construction as well as any room.
- Add points of interest for additional explanations: Images, links, videos, etc.
- Easy access via web browser desktop and mobile, no additional device required.
- Example Sibiu Hospital Tour: Planning of a 110,000 m² hospital, communication with all stakeholders about the project via virtual 3D tour.

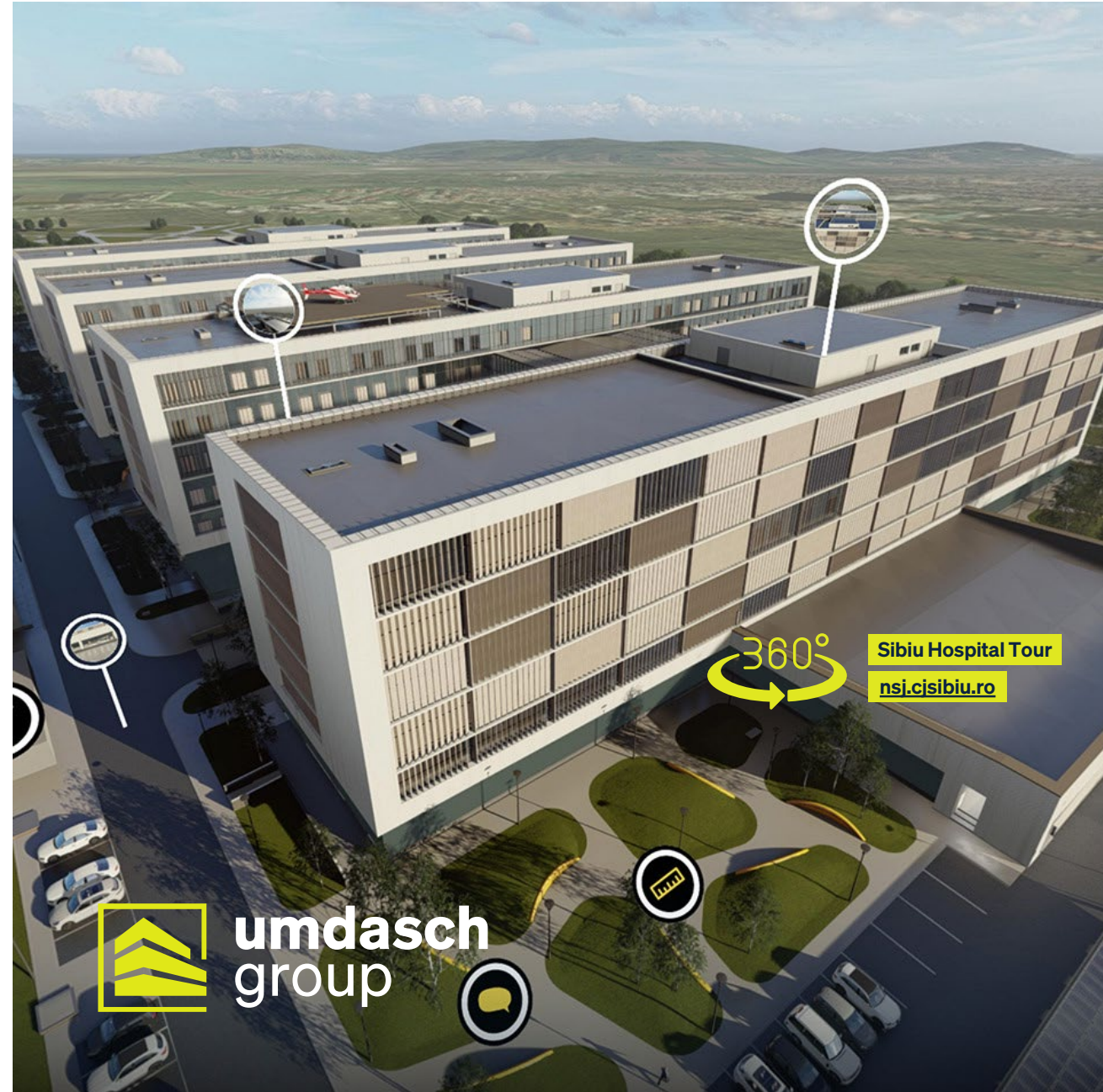
3D Webpage
with
360° Photos

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Metaverse
Ecosystem

Metaverse
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Gaming



Case Studies Metaverse

Case Studies (3)

Decentraland

As the Umdasch Group, we have established a presence to gain experience (decentraland.org).

1. Firstly, the ecosystems were evaluated. The decision was made in favour of Decentraland, as it has more of a business than a gaming character and is a decentralised system.
2. Clarification of legal issues: data protection & security, compliance regarding cryptocurrencies.
3. Purchase of 4 plots of land as NFT (Non-Fungible Token): Creation of a wallet to acquire the necessary cryptocurrencies MANA (decentralised currency) and Ethereum and to process the transactions, e.g. purchase, upload of the building.
4. Development and realisation of the building: Architecture and 3D design, special focus on the user journey (UX) when visiting the digital building.
5. Necessary software development for customising, uploading, testing and optimising our building.
6. Successful resale of the property and evaluation of letting opportunities.

Summary: The idea behind Decentraland is ingenious - a virtual world with many possibilities. Unfortunately, the technical performance, the visual experience and therefore user acceptance are still limited.

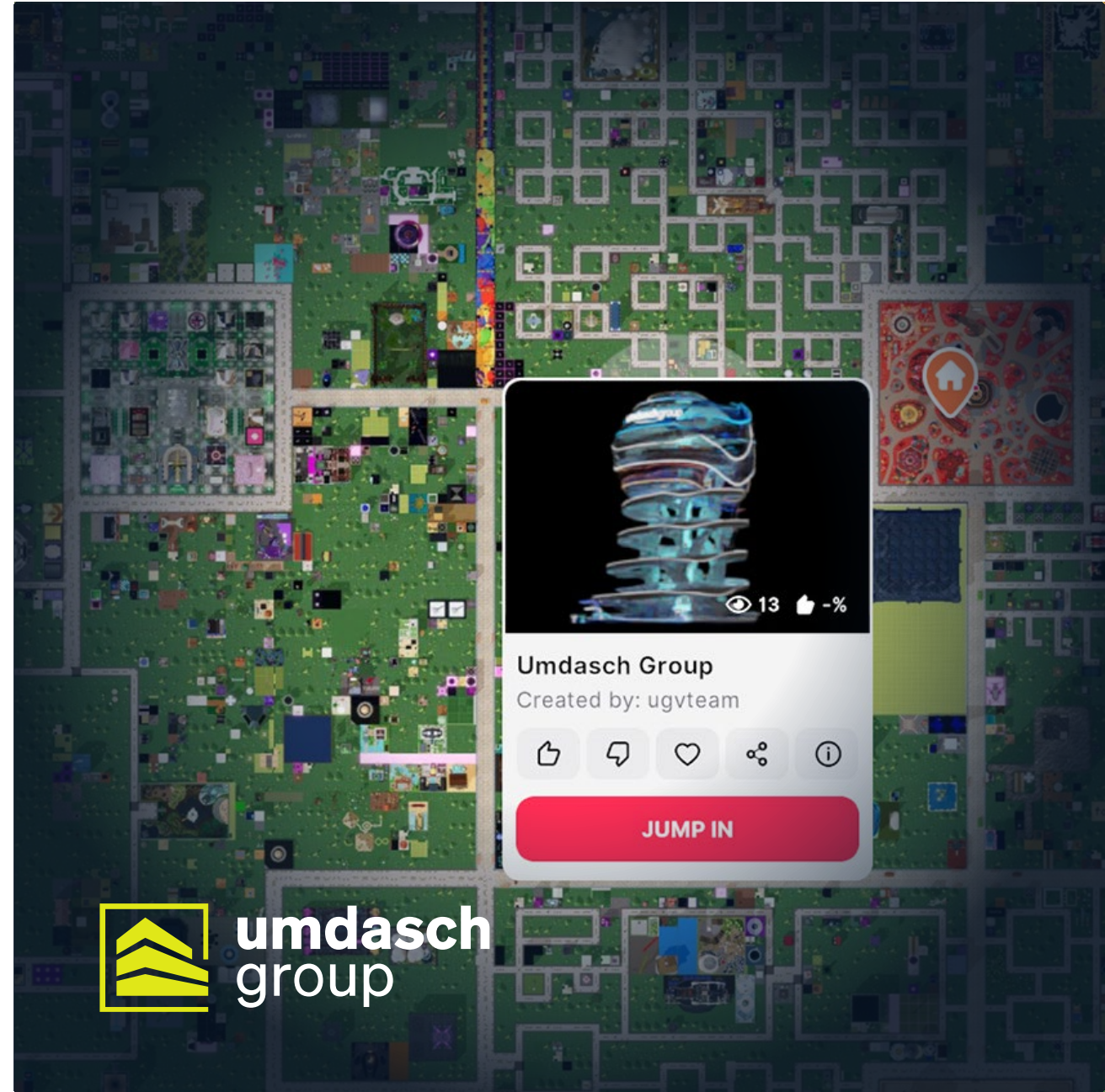
3D Webpage
with
360° Photos

3D Webpage
with
360° Assets

**Metaverse
Ecosystem**

Metaverse
Space

Gaming



Case Studies (4)

Spatial.io

Development of an Umdasch Group presence on www.spatial.io.

Optimization of the 3D building with Unity. Upload of the building and integration of features such as collecting coins, jump & run, videos, links, teleportation, video wall for screen sharing etc.

Planning as an event location (event with Ghezzo, ghezzo.at) with networking, presentations and panel discussion.

Advantages:

- Teleporting participants into the plenum at the start of the presentations. Save time.
- Easy chatting among the participants.
- Anything is possible: Creative location - a boat as a plenum.

Summary: Spatial.io is very simple for users to use and runs easily in the browser on PC and mobile. The platform offers many possibilities and is inexpensive.

3D Webpage
with
360° photos

3D Webpage
with
360° assets

Metaverse
Ecosystem

**Metaverse
Space**

Gaming



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Case Studies (5)

Fortnite

Multiplayer games such as Roblox or Fortnite are in principle like a Metaverse. Users visit a 3D world with their avatars with (only) one purpose: to play and win. This is a clear incentive, which is why gaming platforms are much more successful than other metaverse platforms. A lot of time is spent on them, making these tools attractive for brands and advertisers.

Fortnite has around **250 million users** and was opened up to creatives in early 2023 with the "Unreal Editor for Fortnite". Anyone can now create their own game islands, which enables customized marketing in Fortnite.

Nike was one of the first to create a Fortnite world with "Airphoria", in which users can hunt for unique sneakers as virtual collectibles (NFT). You can also buy Nike accessories for your avatar in the Fortnite.

3D Webpage
with
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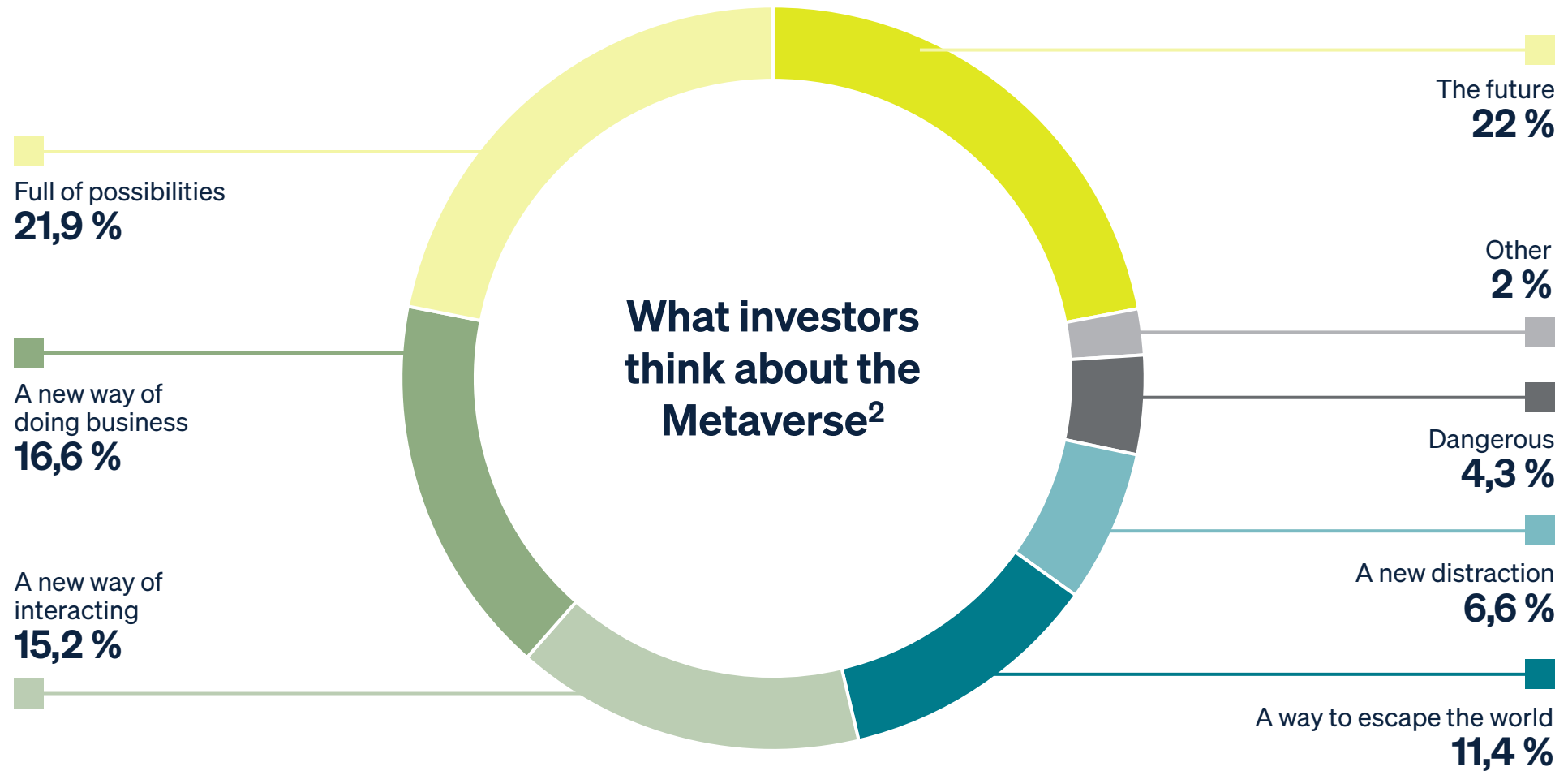
Potentials & Benefits



POTENTIAL IN FUTURE

GLOBAL MARKET REVENUE OF
5 BILLION DOLLARS forecast for 2030¹

¹Source: "Value creation in the metaverse. The real business of the virtual world" by McKinsey & Company, Juni 2022
²Source: Metaverse for Business, Sortlist 27.09.2022



Advantages of Virtual Spaces



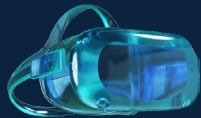
Limitless

As a virtual 3D world, Virtual Spaces eliminate all physical and digital restrictions. Available 24/7 worldwide.



Environmental impact

By reducing physical travel and thus the resource consumption, Virtual Spaces have a positive impact on the environment.



Immersive

A deeper involvement of the senses and higher participation, regardless of the technology used (VR/AR glasses or smartphone).



Economic opportunities

Virtual Spaces and the Metaverse are creating new jobs and revenue streams through virtual real estate, digital art, fashion, shopping and more.

**Your entry into
the virtual world**

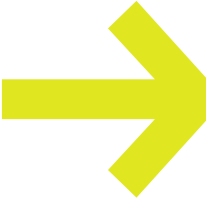


Enter the virtual world

Start with a small presence - with a big impact!

It's easier than you think. Start with a small virtual space, simply created using 360° photos or 3D models. Invite customers, employees and stakeholders and interact with your target group.

We support you!

 **Book Your Free
Intro & Initial
Consultation
>> here**



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YOUR OPPORTUNITIES & BENEFITS



Extend your **CUSTOMER JOURNEY** into the virtual space and take advantage of the new opportunities.



Be a **PIONEER** in marketing and communication. Position your brand and organization as innovative.



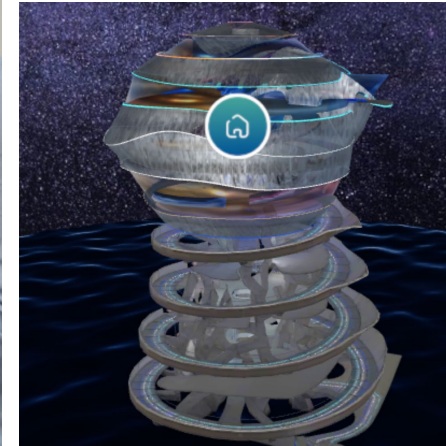
Reach existing and new **TARGET GROUPS** with innovative use cases for new sales channels.

Let's dive in together

Where we can support you with our
services and competences

Consultation:

- Workshops to collect potentials and ideas.
 - Advice on platforms.
- Development and evaluation of concepts.

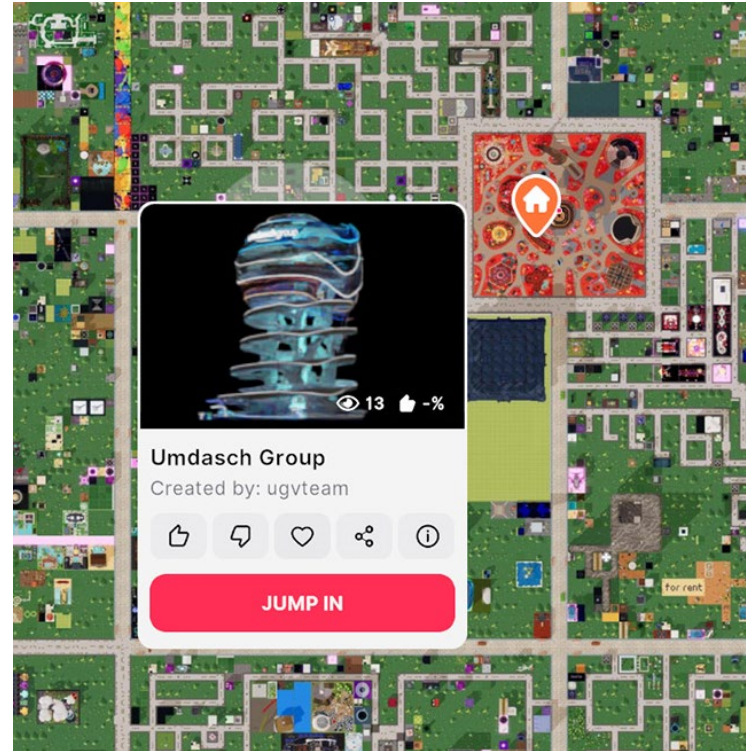


Management of the Virtual Building Lifecycle:

- Land purchase/rental processing.
- Building development: user journey and architecture.
- Implementation: 360 & 3D.
- Operation: features, analytics.
- Maintenance and optimization

Information:

- Training courses on Virtual Spaces & Metaverse.
- Workshops to explore technologies and use cases.
 - Keynote presentations.



Virtual Space Marketing:

- Marketing use case definition.
- Concept for user engagement and interaction.
- Integration into the communication strategy.
- Implementation.

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Intro & Initial Consultation
>> here**

About Us & Imprint



Umdasch Group Ventures

About us

Umdasch Group Ventures is the innovation hub of the Umdasch Group and is dedicated to researching forward-looking trends and technologies in construction and retail. Our focus is on identifying growth opportunities and developing new business areas for our divisions.

Our divisions include Doka, with innovative formwork and scaffolding solutions, and umdasch The Store Makers, which realizes exceptional store concepts, shop fittings and digital solutions in retail.

Our mission is to create and design spaces. In addition to physical spaces, we also focus on the possibilities of virtual spaces. We combine our group-wide expertise in architecture, 3D design and digitalization to bring virtual worlds to life for people.



**Trend & Technology Spectrum
Virtual Spaces**

Imprint

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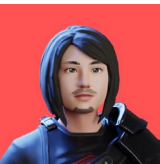
We support you in discovering
the virtual worlds

For further information please visit
our website at:
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