



VIRTUAL COMMERCE: ENHANCING CUSTOMER EXPERIENCES IN THE ERA OF 3D

HOW 3D IMAGERY & AR CAN DRIVE
SHOPPING CONVERSIONS ONLINE



TABLE OF CONTENTS

<i>Introduction: The new shopping experience is 3D</i>	4
<i>Who should read this whitepaper?</i> <i>What you'll learn</i>	5
1. Why 3D content enhances shopping experiences	6
2. How to make 3D your virtual commerce future	8
2.1 Fast to find, fast to load	
2.2 Greater usability for both retailers and consumers	
2.3 Integrate into your web shop, integrate into your world	
3. Augment your online shopping experience	12
3.1 The missing "AR"spect of shopping	
3.2 Benefits of AR for online shoppers	
3.3 AR in your e-commerce store	
4. Online shopping in the metaverse: our mixed reality future	16

THE NEW SHOPPING EXPERIENCE IS 3D

Shopping online is a routine task for everybody, just part of everyday life. How did it become so normal? Because over time, certain collective expectations developed when it comes to e-commerce experience. The product page that illustrates and demonstrates your product is – with few variations – standardized across the board: product and brand name, category, product description, specifications, customer reviews, and most importantly the **product image**.

ENTER THE METAVERSE.

We're now at the start of another shopping revolution: 3D sensory experiences in the **metaverse**, where people can walk around actual-size representations of a product, in full colour and high resolution, and experience their planned purchase as if it were already in their home. The ways they do it will vary: exotic headsets, everyday laptops, or mobile phones as a "lens" that overlays the real world with virtual extras. But as this new world goes mainstream, the importance of the **product shot** will remain.

This whitepaper deals with that key success factor: engaging visual imagery. Over the years, there has been a lot of development in this area,

including innovative features like 360° viewing, image sharing, and product customization. But true immersion and engagement with the product is still hard to get across in a 2D paradigm.

Metaverse-ready 3D and Augmented Reality (AR) can change that. They offer a new chance to drive sales upward and strengthen brand loyalty. But most shop providers still have reservations towards these technologies.

Do you? Then you're who this whitepaper is for. And our message from rooom is: **don't worry**.

ROOOM CAN TAKE YOU THERE.

Thanks to sophisticated new 3D and AR platforms, utilizing these technologies is easier than ever before. With this whitepaper we demonstrate how you can use 3D and AR technology to bind customers to your brand and increase conversions in your store. And the technical implementation? As easy as embedding a video.

Enjoy reading,

Hans Elstner, CEO rooom.com

WHO SHOULD READ THIS WHITEPAPER?

E-commerce marketers and web shop managers looking to increase conversion and customer loyalty through better 3D customer experiences, as we move towards a metaverse world.



WHAT YOU'LL LEARN

- How e-commerce is expanding, becoming Virtual Commerce
- How and why 3D and AR features can increase conversions
- Tips for implementing 3D and AR in your online shop
- How 3D and AR can work in concert to increase customer engagement
- Why going 3D now makes you ready for the metaverse





1. WHY 3D CONTENT ENHANCES SHOPPING EXPERIENCES

A PICTURE TELLS A THOUSAND WORDS ...

Traditional e-commerce is a 2D experience. But countless empirical studies and best practice use cases all over the world have shown one factor matters more than any other when consumers are browsing your catalog: how deeply your product imagery grabs the customer's attention. There's no online experience more sensual and immersive than 3D – and success awaits any retailer who embraces the new world of **virtual commerce**.

Large, detailed, colorful visual content just works better than plain text and tables, no matter how informative. And if that content is "real", three-dimensional and solid-looking, the effect's even greater. Because buying, after all, is an emotional process – and decisions are made more quickly the more attractive the sensory experience is.

The question: **how can online shops improve their imagery even further?** In the last decade, we saw improvements like 360° views, video integration, image customization options for users (like changing the color of clothing) or the option for customers to upload pictures of themselves, to get a better impression of how a piece of clothing or accessory might fit.

These features aim to recreate the physical brick-and-mortar store experience online – and how it helps to look at a product from all angles. Many work well. But there's now a way for them to reach their full potential, as the **metaverse** starts to become a normal way of interacting with merchants. It's not a simulation of a 3D world ... it is a 3D world. A world where you can share space with customers, show them around, let them browse in an immersive environment branded by You.

63% of consumers believe brands and retailers belong in the metaverse.[1]

It's time for e-commerce retailers to embrace virtual commerce, in attention-grabbing 3D ... and ready themselves for a **metaverse-centric future**. In the pages ahead, you'll see the benefits it brings.

However, there is one chance to increase immersion most web shops are still missing out on: **realistic, interactive 3D environments, where visual design and product models can be experienced as one**. There are several studies outlining the positive effect of 3D for virtual shopping experiences [2] – but hardly any online shop is implementing it. Why?

... *BUT A 3D MODEL SELLS A THOUSAND PRODUCTS.*

It might have to do with technical aspects. 3D images were once technically demanding features, requiring lots of server space and dedicated software to run. User experiences would have been negatively impacted by long loading times, or incompatibility of hardware and software.

But 3D platforms have evolved. Today, high-speed web-based 3D with short loading times is not an impossible dream. Modern, **metaverse-ready 3D platforms** like rooom work with small data packages. Delivery is ultrafast, and every desktop, notebook, smartphone, or tablet can handle them – and without the need to download dedicated software; the new 3D platforms utilize web standards that run on any device.

At the same time, they provide 3D model quality that surpasses anything that came before – realistic, true to scale, quality 3D products. And the best part: integration into your online shop is super easy.

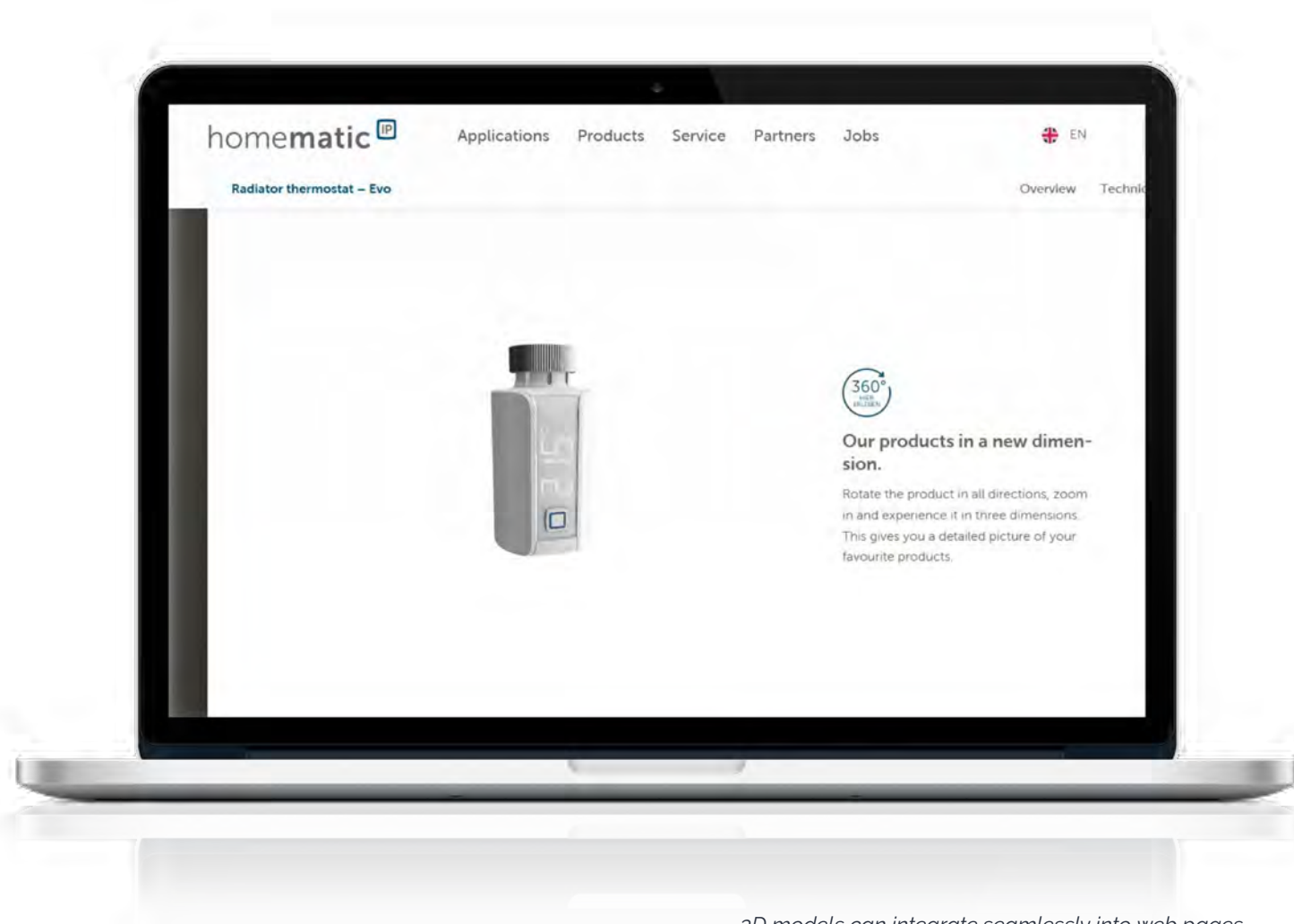


WHAT IS VIRTUAL COMMERCE?

Virtual commerce is the evolution of e-commerce: the same product range, the same easy transactions, but with the browsing experience taking place in the metaverse – an immersive, all-encompassing 3D world, showcasing not just your product range but your ideal retail space, including architectural elements, customer journeys, and visual merchandising. It lets you offer your products in context with the brand values of your company – leading to longer dwell time, deeper engagement, and optimized success metrics.

2.

HOW TO MAKE 3D YOUR VIRTUAL COMMERCE FUTURE



3D models can integrate seamlessly into web pages

2.1 FAST TO FIND, FAST TO LOAD

Whatever today's consumers are, they aren't patient – and the same will be true of the upcoming Generations Z and Alpha who will be your future customers. They want search to lead them to the best retailers reliably and easily; they don't want to wait around while your product information loads.

Page load times have long been a key factor for **user satisfaction and search engine optimization (SEO)** – and it works both ways; if content is optimized but page load times aren't, this can also negatively impact search rankings as users give up and "bounce". And historically, load times that involved a 3D viewer were bad. That's why loading times were one of the key issues for not integrating 3D product images so far. **This is now a thing of the past.**

3D done right can deliver a 5x improvement in search ranking.

Internet speeds are constantly increasing, and metaverse-enabled web-based 3D technology has made huge leaps. A 3D model created with **roomProducts**, for example, takes up no more megabytes than a regular smartphone photo – a vast improvement over the hundreds of megabytes a low-quality 3D image took up just a few years ago.

3D content delivers 3x longer dwell times on your site.

With room, **loading times start fast and stay fast** – so users get more time to enjoy the additional benefit of immersive, explorable 3D models of what they're interested in buying. In fact, these "dwell times" send a positive signal to the search engine, implying that users show interest in your content. In turn, this accelerates the purchasing decision and benefits the shop providers.

2.2 GREATER USABILITY FOR BOTH RETAILERS AND CONSUMERS

Usability is not just about customer experiences. It also concerns store managers. They must be able to **add, switch, adjust, or edit** 3D product files easily in their backend interface, "editing" their virtual commerce environment as easily as they'd clear and restock their shelves in the real world. That's how the metaverse will work – in fact, it's a key ingredient in its success.

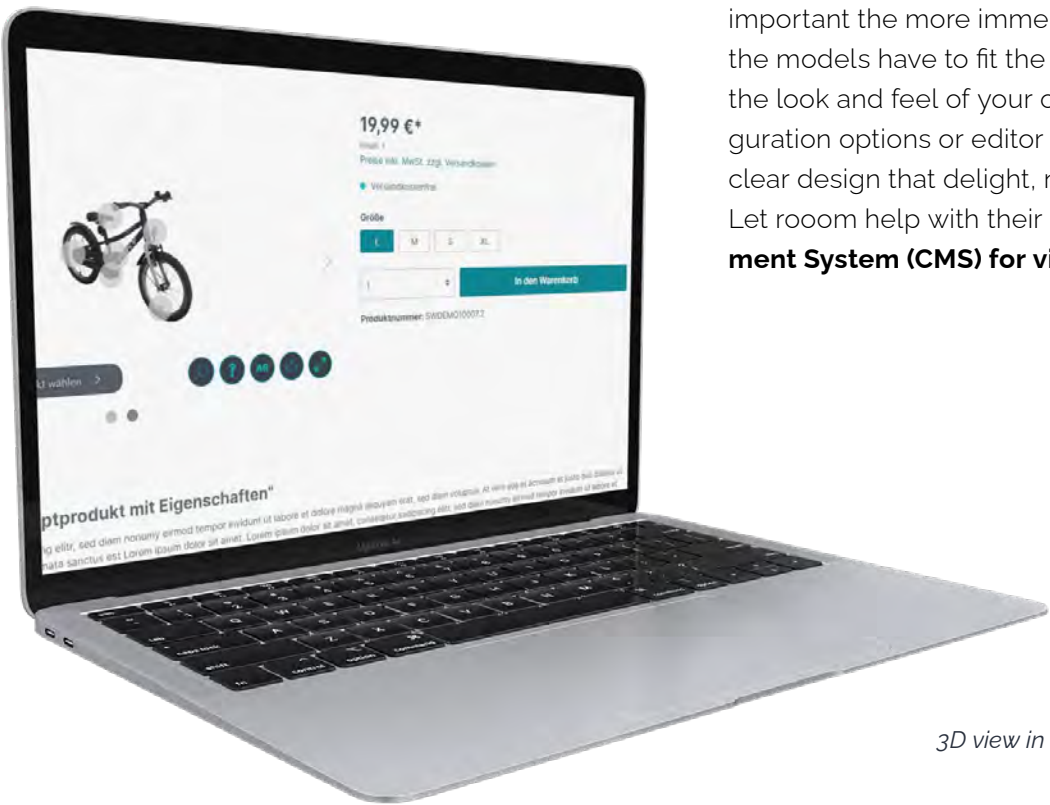
The 3D platform of choice should therefore not be a hassle to operate and must offer a fluid workflow. It should follow the same modern UI/UX rules as store frontends. Because workflow efficiency is important. Platforms like roomPro-ducts allow you to easily edit 3D models and create multiple 3D variants of a product – **no special programming knowledge or apps required**.

VIRTUAL COMMERCE, E-COMMERCE:
EASY EDITING, EITHER WAY

At the same time, these configurators can be provided on the store frontend to the customers themselves – with multiple possibilities for greater engagement. Changing colors, textures, or material composition of the 3D model allows users to explore all aspects of a product, guiding them towards a choice.

Virtual showrooms and walkable 3D brand worlds build the next level of immersion. Imagine your customers exploring a 3D furniture shop and projecting the pieces of furniture into their own apartments. And also on the supplier side, managing a 3D store with roomSpaces is as easy as playing a computer game. Products and campaigns can be updated with a few clicks and the portfolio can easily be customized.

This can be a crucial differentiator and success factor for your store. It's important that customers are able to **interact with 3D product models naturally** – and this becomes even more important the more immersive the environment; the models have to fit the interface as well as the look and feel of your online shop. The configuration options or editor tools need to follow a clear design that delight, not irritate customers. Let room help with their **Content Management System (CMS) for virtual commerce**.



3D view in the product image gallery

2.3 INTEGRATE INTO YOUR WEB SHOP, INTEGRATE INTO YOUR WORLD

Today, flexible APIs and plugins enable you to integrate 3D content easily into your web shop without programming effort, meaning you can embed 3D models of your products as easy as YouTube videos. And it gets even better with room, thanks to tools designed for total integration with your shop backend that **integrate seamlessly into the infrastructure of any e-commerce system**.

The possibilities are endless. Let customers share your 3D content with others via social media, email or messenger. Let them configure the 3D products to their preferences with a **powerful, user-friendly editing tool**. And that's not all you can edit: room lets you extend your ideas into the entire virtual space.

REAL PRODUCTS, VIRTUAL SHOWROOMS

Beautiful, immersive product imagery needs a beautiful space to experience it in – which is why showrooms are another core part of the room platform. Create and decorate a space, place your products in it, manage your product mix as a natural **extension of your 2D shop** interface. Server loads and loading times are kept at

a minimum thanks to sophisticated compression algorithms and systems architecture.

So where do the 3D product models come from? You can either use a database with pre-built models or create the 3D models yourself. This is usually quite easy since the 3D platforms provide you with multiple tools to do so. room enables you to simply scan the product via an app or **generate 3D models out of the pool of product images you already have**.

SIMPLE INVENTORY AND
STORE INTEGRATIONS

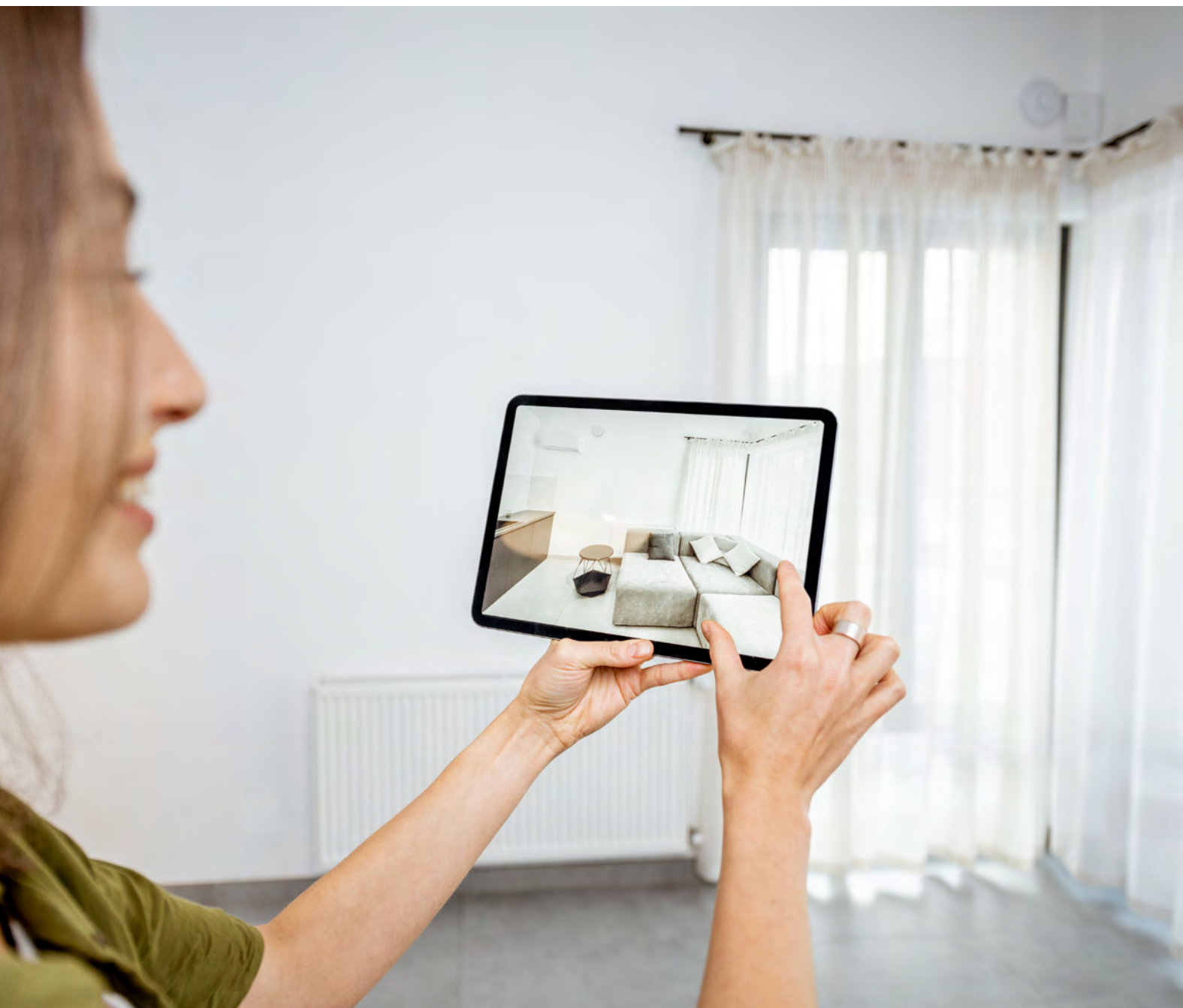
Platforms like roomProducts already have plugins **available for many major shop systems** including Shopware, WooCommerce, Shopify, SAP Hybris, Magento, and Intershop, with many more on the way. But that's only half the story.

Equally important is their ease of use – just download the plugin, create your 3D model from photographs or scan, and integrate it into your store by entering the model ID into your shop backend, no different in concept to adding a product photo to a web page.



Walkable virtual fashion store with integrated 3D products

3. AUGMENT YOUR ONLINE SHOPPING EXPERIENCE



3.1 THE MISSING “AR”SPECT OF SHOPPING

3D and Augmented Reality (or short: AR) are natural partners and work brilliantly in concert. Combine them, and you can allow users to experience 3D models in your store then take them (virtually) home via AR.

AR, also known as Mixed Reality, is a powerful, yet under-utilized tool for driving sales. AR **projects a virtual image into the physical world**, with mobile devices like smartphones or tablets, or special AR headsets. This view merges the digital and physical worlds, creating an immersive experience for the user.

AN AR VIEW, FROM A QR CODE

Providing AR models of the products in your online shop can have a major impact on your sales. According to major shop software providers and industry experts, offering 3D models **can increase time spent on your site** by up to 360%; implementing AR features on an online store can **increase conversions** 25% [3] and more [4]. All your customer has to do to experience your product is scan a QR code.

So why are shop owners so reluctant to implement AR? The reasons might be long site loading times, expensive implementations, large file sizes as well as hardware and software incompatibilities on the user side. Fortunately, these are no longer issues. Powerful new 3D platforms like rooom make integration **cost-efficient and easy**. They deliver immersive 3D and AR experiences in small data packages to every user – regardless of the device they are using.

Now is a great time for you to jump on the bandwagon to differentiate from the competition. It's never been easier to implement AR.

3.2 BENEFITS OF AR FOR ONLINE SHOPPERS

AR offers a variety of benefits to your customers that a simple product page with 2D images cannot. Thanks to AR your customers are able to literally **take the product home**. This can either be done with special AR glasses or - more user-friendly, as with rooomProducts - by using a common mobile device. The 3D model of the product is projected into the physical world to create a so-called Mixed Reality experience.

Platforms like rooom are web-based and do not require special hardware or apps. This is

especially helpful for selling things like furniture, decorative accessories, electronic devices, or kitchen utensils: **the shopper simply "places" the product into their home environment via smartphone** to see what it might look like. The 3D AR models are also true-to-scale, empowering and emboldening your customers to actively plan with them as they remodel or redecorate - with countless opportunities for cross-selling and up-selling.

3.3 AR IN YOUR E-COMMERCE STORE

This is the ultimate promise of the emerging metaverse: not to be a world of its own, sealed off from reality, but to be connected to - **and seamlessly interfacing with - the real world of business and commerce**. Virtual products, virtual displays, virtual surroundings - but with the same sense of space as in the real world, viewable and walkable as easily as a bricks-and-mortar shop.

If you choose to implement AR in your store - both as a differentiator today and to prepare for the emerging metaverse - it's vital to make sure it's **easy to access**. So choose a platform that works on every device and is not restricted by special hardware or software requirements. Today, your choice for building this exciting new world is rooom.



AUGMENTED REALITY IN BRICKS-AND-MORTAR STORES - THE PORTAL TO THE METAVERSE

With the **rooomPortal** we offer a gadget for real-life experiences that connect virtual and real stores. Looking and walking through a gateway, customers get an impression of your branded Metaverse via AR and don't leave your store without remembering this experience.



4. ONLINE SHOPPING IN THE METAVERSE: OUR MIXED REALITY FUTURE



There are certain customer experience standards most web shops adhere to. Look and feel may differ, as may content offerings, but some basic principles are present everywhere. Customers come to expect things like fast visual navigation, product categories, search bars and well-structured product pages with images, product descriptions, customer reviews, and so on.

Considering the **customer-centric orientation** of most online shops, it is just a question of time before 3D and AR become standard as well. With easy to access and implement 3D and AR technologies, as with rooom, online shop owners can build **truly engaging** Mixed Reality product worlds for their customers. It's your shop ... later your virtual world ... and one day your territory in the metaverse.

The customer will become an active part of the experience thanks to these technologies, which is a revolutionary change. It will **increase conversions significantly and achieve ROIs** most online shops can only dream of today. Imagine a world where purchase probabilities can rise by 30%. Return rates drop by 70%. Visitor dwell times sending your search ranking skyrocketing 5x. This is not only imagination. It is already reality for retailers that work with 3D tools and metaverse platforms.

Companies that already use AR and 3D models in their shops, spaces, and virtual worlds are benefiting immensely. They see **stronger customer loyalty, higher conversion rates, and ultimately, higher sales**. Now is the time for all online shop managers to implement 3D and AR product visualizations and virtual showrooms with rooom, building your business today and preparing for the 3D metaverse tomorrow. Today it's an innovation. But in the near future, every customer will expect it.

[1] Research by ECC Club Cologne: <https://rooom.ms/y0z4l>

[2] For example: <https://journals.sagepub.com/doi/abs/10.2501/IJMR-2016-027>

[3] <https://www.shopify.com/partners/blog/shopify-3d>

[4] <https://www.retailcustomerexperience.com/blogs/how-3d-technologies-are-changing-the-online-shopping-experience/>



rooom.com



@rooom_com



@rooomcom



@rooom_com



rooom AG
Löbstedter Str. 47a
07743 Jena, Germany



+49 3641 5549440



sales@rooom.com



www.rooom.com