



svarmony

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# Future-Forward Wayfinding

How Augmented Reality Transforms Indoor Navigation

# Welcome to a new era

Reliable indoor navigation solutions are becoming more and more important and will soon be as much a part of everyday life as outdoor navigation. GPS has changed the way we move around the world, but the technology is unsuitable for indoor orientation and navigation. Too inaccurate, not stable enough, not expandable.

## The Technology Orientation is it

For a long time, the topic of indoor navigation has presented us with great challenges. Now we have arrived at the future: The integration of augmented reality (AR) makes it possible to give users visual cues for indoor navigation. But the advantages of this new technology go far beyond its use for mere orientation and the fields of application are numerous.



## The Product

### State of the art

Over the last two years, svarmony has been working on the development of a standalone AR-based indoor visual navigation technology. In this whitepaper, we will introduce you to the concept, benefits and concrete applications of arnye for your business.

## Background

### Bye-bye, GPS

The often complex structure of large buildings such as shopping centres, airports or even government offices requires a navigation aid to guide people on their way as efficiently and purposefully as possible. In most cases, however, there is no GPS reception indoors – the system is far too inaccurate for these purposes. Traditional indoor navigation methods such as maps, signs and other guidance systems often allow too much room for interpretation and may not provide the level of accuracy required for specific applications.



## The solution

### A new reality

Augmented reality (AR) literally means augmented reality. Our perception of the world, of our environment is enhanced by computer-based processes: we link the analogue world with virtual overlays. AR offers us the possibility of virtually extending our real existing world and supplementing it with digital information. For example, we can overlay visual cues such as arrows, signs or virtual wayfinding over the user's view of their real environment. This far more intuitive way of navigation creates a much better user experience.

## Endless application possibilities for the most diverse target groups

aryve combines the highest functionality with the greatest possible convenience. Airport? Museum? Shopping center? In addition to an intuitive and reliable orientation aid, aryve offers target group-specific added value that redefines the boundaries of any previous user experience. aryve sustainably increases customer satisfaction and simplifies customer loyalty.

1. aryve provides visitors and users with visual, easy-to-understand cues to help them find their way around an interior in the best possible way. It can often take several visits to become familiar with a building. aryve offers comfortable orientation from the first encounter.
2. aryve provides tourists with relevant information about their surroundings. Whether it's historical facts, exciting sights or cultural tips you're looking for: aryve will offer you sustainable added value that goes far beyond local orientation.
3. aryve can serve as a virtual guide in the shape of an animated avatar in museums or other cultural institutions, imparting knowledge and opening up new, interactive and even gamified levels of experience.
4. aryve simplifies the search for items for shoppers and also opens up the possibility of integrating additional information on prices, availability and product features in order to optimise your shopping experience and make purchasing decisions easier.
5. aryve not only shows visitors the quickest way to the airport gate, parking spaces or restrooms. With virtual showrooms and pop-up stores that can be placed along the walkways, aryve creates incentives to go shopping and improves the quality of stay.
6. More efficient maintenance routines? Enhanced order management? Simple localisation of defective components and bundled information provision for employees? Even in the area of

maintenance and logistics, where we often encounter complex working environments, processes can be significantly optimised with arylve.

## What boundaries does arylve overcome??

1. One of the biggest challenges of indoor navigation in AR is accurate positioning. Only accurate, perfectly pinpoint navigation guarantees the cues are relevant to the user's individual location. arylve provides split-second localisation and accuracy that is far superior to other technologies such as GPS, beacons, Wi-Fi triangulation, or other current positioning technologies.
2. Indoor spaces can have complex underlying architectures with a multitude of rooms, corridors and levels. Visual cues need to be maximally understandable. With AR-based visual navigation, you intuitively follow an arrow instead of abstractly navigating holding a map.
3. In terms of responsible and legally sound handling of all user data based on the new European data protection laws, arylve uses secure cloud systems and can also be run on local servers on site. Images taken by the device and sent to the server are automatically protected and pixelated to protect the privacy of all users.



# Secure indoor navigation, future-proof and simple: aryve

Increase sales, accelerate sales cycles, create spectacular customer experiences. There is no way around AR any more. The global AR market is forecast to reach nearly \$200 billion by 2025, with a CAGR of 44.8% over the forecast period. Within this future-relevant segment, the indoor navigation market is expected to grow from \$7.3 billion in 2020 to \$30.3 billion in 2025 (CAGR: 34.6%).

The increasing penetration of IoT-enabled devices and services is considered one of the main drivers for the growth of the indoor location market, the ever-changing requirements for products and services, and last but not least, the future competence of the market leaders allow future technologies to flourish. As a completely configurable, extremely stable and highly precise tool, aryve allows you and your company the perfect entry into the world of AR experiences. From implementation to roll-out to content creation: svarmony offers you all services around our product aryve from a single source.

svarmony is one of the leading companies for XR experiences in Europe. A specialist for creative tech solutions, svarmony covers the entire spectrum of immersive technology applications, conception to roll-out. Formed in 2021 through a merger of successful AR providers Augmentaio and innovation.rocks, svarmony combines decades of expertise, customer-oriented flexibility and progressive product focus. The internationally active company designs and develops innovative XR solutions and products for global brands such as Porsche, Konica Minolta, Carl Zeiss, Nokia, Media Markt, Siemens, and Vorwerk at its locations in Berlin, Munich, and Vienna. With aryve, the company is currently launching a completely independent, AR-based indoor navigation technology that will set a new benchmark for wayfinding solutions on the European market.

**Would you like to learn more about aryve and the latest news on indoor navigation? Send us a message or give us a call, we look forward to speaking to you.**

**Interested? Got a question?**

**Drop us a line!**



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