



WILOS360 - IMMERSIVE REALITY IN EDUCATION

# BEST PRACTICE REPORT

## Immersive Reality (IR) applications in Portugal

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### Introduction

Immersive Reality (IR) technologies have been gaining prominence in Portugal, driving innovation in various sectors such as education, tourism, health and entertainment. These technologies, which include Virtual Reality (VR), Augmented Reality (AR) and Mixed Reality (MR), enable highly interactive and immersive digital experiences, providing new forms of interaction and learning. Portuguese companies, universities and research centres are exploring the potential of these technologies, creating innovative solutions that transform the way people connect with the digital world. Projects in areas such as virtual museums, educational simulations and virtual therapies are gaining momentum in the country.

### Best Practices Immersive Reality (IR) applications in Portugal

In Portugal, several innovative applications of Immersive Reality (IR) technologies are gaining traction across various fields. Here are a few notable examples:

**Museu Virtual de Arte:** Portugal is leveraging AR and VR to create virtual art museums and exhibitions. One example is the *Museu Nacional de Arte Antiga* in Lisbon, which offers immersive virtual tours where visitors can explore historical art pieces through VR headsets or AR on their smartphones.

**Sonae's Virtual Shopping Experience:** Sonae, a Portuguese multinational company, is developing immersive retail experiences, allowing customers to engage in virtual shopping through VR and AR. This initiative blends e-commerce and physical store experiences, offering an enhanced and personalized shopping journey.

**University of Lisbon - Virtual Reality in Education:** The University of Lisbon uses VR applications for educational purposes, creating immersive simulations for students in fields

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like medicine, engineering, and architecture. This allows learners to interact with complex 3D models and scenarios, enhancing the learning experience.

**INESC TEC's Healthcare Projects:** INESC TEC, a research institute, has been using immersive technologies like AR and VR for healthcare applications, particularly in rehabilitation. For example, they use VR to create therapeutic exercises for patients recovering from strokes or surgeries.

**"The Portuguese Virtual Tourism" Project:** This tourism initiative uses VR to offer immersive tours of Portugal's famous landmarks, including Lisbon's historic neighborhoods and the scenic Douro Valley. It allows potential visitors to explore the country remotely and plan their trips with a more interactive approach.

**RTP's Virtual Reality News:** The Portuguese national broadcaster RTP has developed VR news applications where users can immerse themselves in live news reports or documentaries, providing an innovative way to experience news content.

These applications showcase Portugal's growing interest in Immersive Reality, which is revolutionizing how people engage with culture, commerce, education, healthcare, and media.

The 'Immersive Education' platform is another important project that aims to train educators to use these technologies in the classroom. Ongoing training programmes are offered to ensure that teachers are prepared to implement and adapt IR tools, aligning them with school curricula. These projects demonstrate Portugal's growing interest in adopting innovative teaching practices, integrating technology as a key element in creating a more inclusive and stimulating learning environment.

In addition to projects in schools, collaboration between universities, research centres and technology companies has been essential for the development and implementation of these practices.

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The creation of partnerships between different sectors has allowed for the continuous improvement of tools and the expansion of the use of Immersive Reality in educational contexts, making it an accessible and effective tool for the Portuguese education system.

### **Best Practices in School Education**

Immersive Reality (IR) technologies within Portuguese schools are getting stronger and stronger, highlighting their transformative impact on education. Immersive Reality, encompassing tools such as Virtual Reality (VR) and Augmented Reality (AR), has proven to be a valuable asset in enhancing the learning experience by providing interactive and engaging environments. Through an analysis of successful implementations across various institutions, this report identifies effective methodologies, challenges faced, and the benefits reaped. Additionally, it offers recommendations for further expanding and refining the use of these technologies in Portuguese schools to maximize educational outcomes.

In Portugal, several projects and actions have been implemented to explore best practices in the use of Immersive Reality (IR) in schools, with the aim of transforming the teaching-learning process. Educational institutions have adopted technologies such as Virtual Reality (VR) and Augmented Reality (AR) to create more interactive and dynamic experiences, allowing students to explore content in a more immersive way. One notable example is the 'Augmented Reality in Schools' project, which seeks to integrate AR into various subjects, providing students with more practical and engaging learning. In addition, several schools have invested in VR laboratories where students can simulate complex environments, such as historical journeys or scientific experiments.

### **Bibliography**

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