

The Virtus Platform at the USC

Virtual Research at the University of Santiago de Compostela

With its centenary history, USC exhibits its innovative background, with projects such as Virtus, which bridges the gap between academic innovation and the professional audiovisual sector, by researching in high quality virtual production technologies.

Founded more than 500 years ago (September 4th, 1459), The University of Santiago de Compostela (USC) has always been at the forefront of innovation, and its Faculty of Communication Sciences is no stranger with such tradition. In 2024, the Faculty introduced Virtus, a virtual research platform for providing advanced solutions for teaching, research, and technology transfer for audiovisual and ICT industries.

Supported by the EU Next Generation fund, Virtus was developed in collaboration with Brainstorm, as technology partner, and Broad Services, as systems integrator. Since its launch in October 2024, when they used hyper-realistic virtual sets created by Argonauts XR, a company specialized in creating scenes for virtual production, Virtus has demonstrated its ability to generate high quality, live virtual content.

The platform builds on the over 15-year collaboration between Brainstorm and USC. According to Enrique Castelló, full-time professor at the Faculty and scientific director of Virtus “we have gone from being customers to technology partners of Brainstorm solutions, which stand out for their ergonomics, versatility, creativity and

constant evolution”. This relationship has been formalized in a new cooperation framework to develop technologies applied to R&D projects led by the university, bringing students closer to tools and workflows that mirror those used by the industry. In doing so, they gain hands-on experience in virtual production, boosting



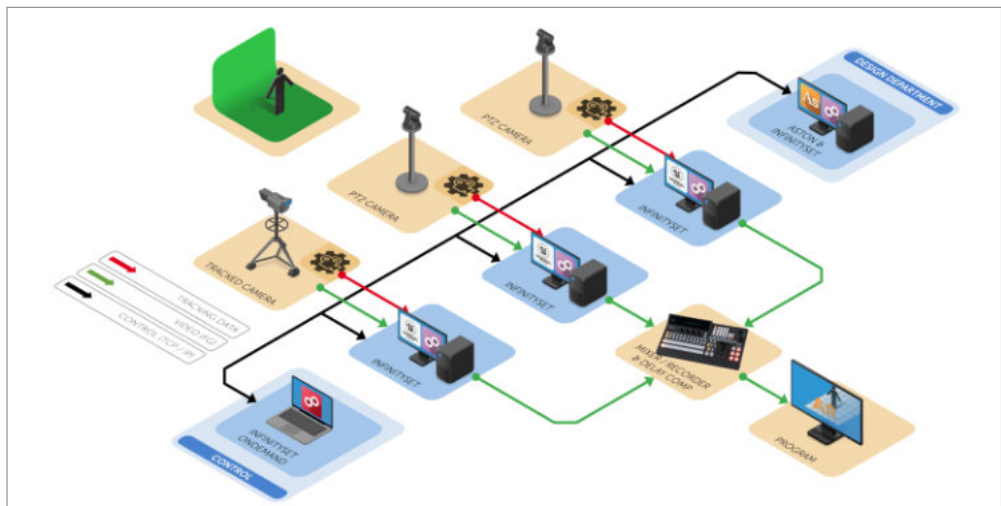
their preparation for an increasingly digital and interconnected work environment.

Virtus is a strategic project that integrates teaching, research and innovation, with the aim of connecting academic work with the needs of the audiovisual and creative sector, promoting the transfer of knowledge and technology between university, industry and the public sector. It fosters a transdisciplinary environment where students, teachers and professionals collaborate on innovative projects. It has also facilitated remote participation in international conferences, supporting academic collaboration between regions and institutions.

Virtus' technological infrastructure at the Faculty of Communication Sciences includes a virtual set with a cyclorama, two

Panasonic PTZ cameras and a Sony studio camera with RedSpy tracking. It takes advantage of the full Brainstorm suite, including InfinitySet and Aston, along with Unreal Engine to integrate 3D CGI elements and perform real-time production and rendering. The studio is connected to other university facilities and allows live broadcasts from multiple locations via NDI and DANTE protocols.

This is in addition to four self-sufficient Edison-based portable sets, including cyclorama and lighting. These setups allow for professional-grade live virtual productions both inside and outside the university, even in remote environments. The platform is already being used in a variety of scenarios, including educational, scientific, and institutional contexts, and supports both fully virtual and hybrid



“The collaboration with Brainstorm has been a constant in my research career since the completion of my doctoral thesis starting 15 years ago until the last joint research project that we completed in April 2024. The support, the quality and versatility of their solutions and the proximity are the keys to our long relationship. That is why we had no doubt that they were the ideal partners for Virtus”.

Roi Méndez
CTO of Virtus,
USC

events, providing solutions tailored for each project. By enabling remote production and participation, Virtus helps to overcome logistical barriers and facilitates greater accessibility for researchers, educators, and public institutions alike.

With all of this, Virtus strengthens USC's ability to produce virtual content and drive research, while providing students with access to professional-grade technologies that enhance scientific and scholarly communication. This strengthens both the internal research ecosystem and the university's role in knowledge transfer and social engagement.