DIDYMOS-XR Newsletter: 6th Edition

Welcome to the DIDYMOS-XR newsletter, a guide to our latest work and news!

DIDYMOS- XR (DIgital, DYnaMic and respOnsible twinS for XR) is a three-year EU funded project that focuses on advancing the state of the art of enabling technologies that will allow the creation of large-scale digital twins, synchronised in real time with the real world.

DIDYMOS-XR has researched and developed robust and scalable methods for 3D scene reconstruction from heterogeneous cameras and sensor data (e.g. lidar), integrating data captured at different times and under different environmental conditions to create accurate maps of varied industrial, urban and cultural scenes.

Read more about the project here, and read on for updates from the DIDYMOS-XR consortium.

LinkedIn YouTube

Latest News

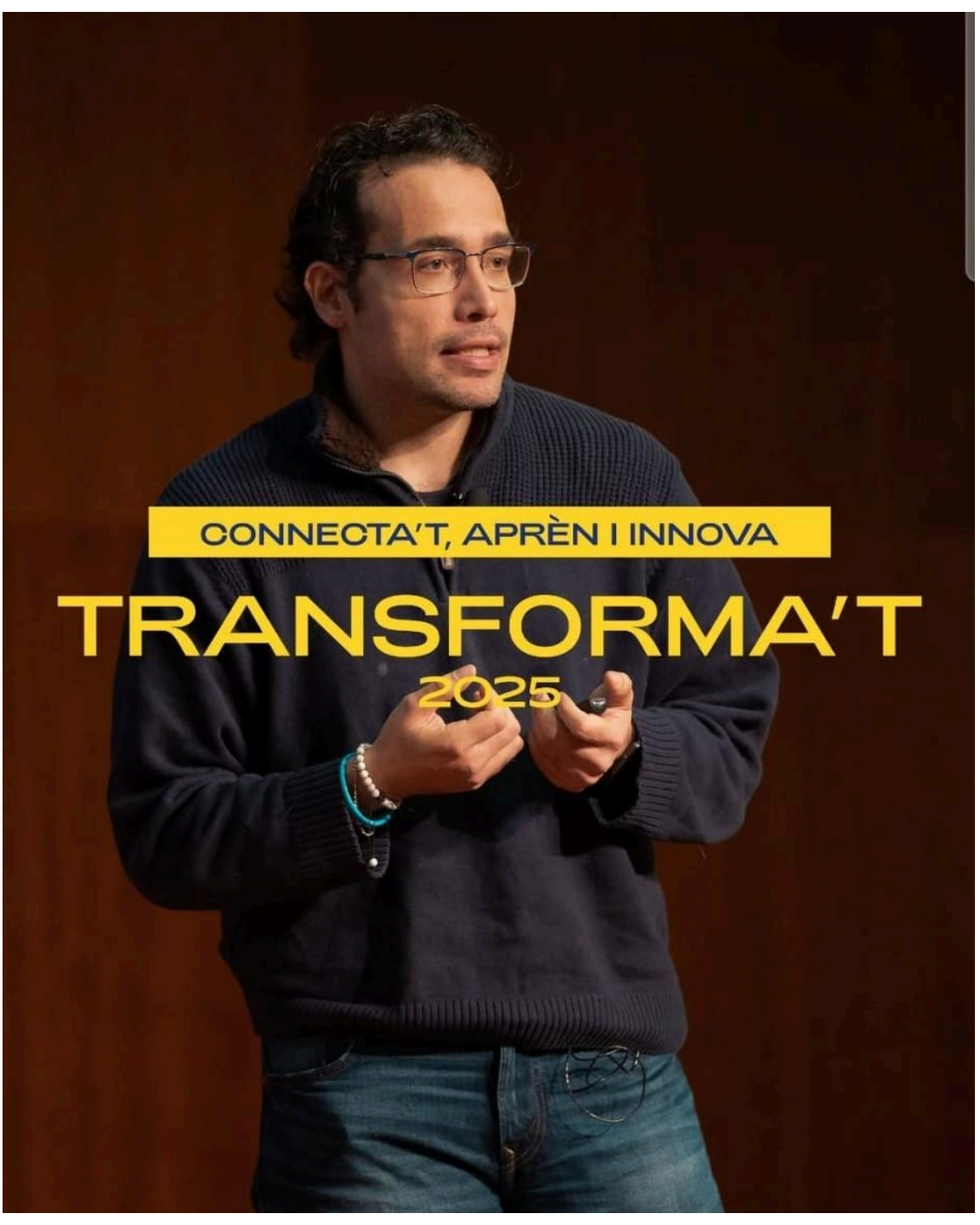
DIDYMOS-XR at UNITE 2025

The annual conference organised by Unity was held in Barcelona in November and our project partners I2CAT and DTT were both in attendance, sharing our technical achievements towards bridging the gap between physical and digital worlds through continuously updated, sensor-driven digital twins. The key challenge here has been managing data from heterogenous sensors and keeping updates synchronised to real time. The DIDYMOS-XR applications run in Unity with WebGL deployment, so it was fantastic to share with participants our experience of managing real-time data streams in the discussions at the event. Read more about the technological advances for accurately recreating a scene digitally in our most recent blog post.

Read More

Connecting Industry at Transforma't 2025

Our partners Neàpolis brought together entrepreneurs, startups, and SMEs on the 27th November at this years Transforma't event. Professionals from a variety of industries were brought together to connect and learn from one another about digital innovation and the ecosystem that exists in Catalonia to support their endeavours. Participants were introduced to the technologies in DIDYMOS-XR as examples of innovation taking place in Vilanova i la Geltrú and could test the applications in immersive devices. Neàpolis has also recently organised multiple Living Labs in the city where participants can get first hand experience of the DIDYMOS-XR applications and help improve them through their feedback. Read more about it in the recent blog post below.



Read More

Speed-networking at UNITED XR 2025

DIDYMOS-XR was invited to participate at the United XR event in Brussels at the start of December to connect with other projects and players in the European extended reality landscape. Participants had the opportunity to learn about one another's work, test various applications, and discuss future collaboration opportunities. We are grateful for the opportunity to share our work and make new connections.

Publications

DIDYMOS-XR Recommendations

As the project nears its end, we have been working on putting together recommendations for the development, use and maintenance of digital twins based on the findings and learnings from

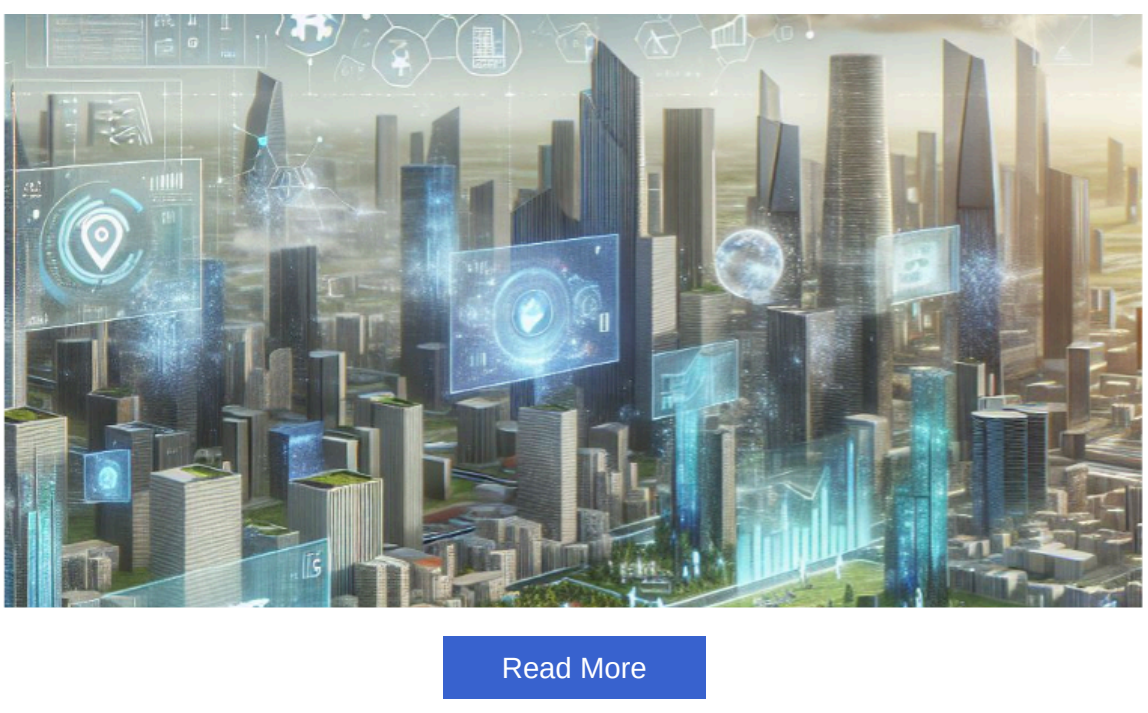
DIDYMOS-XR. The recommendations have been collated in briefs directed at different audiences: smart city managers, manufacturing industry professionals, local governments, digital twin developers and owners, data protection managers, and other digital twin industry professionals. We make recommendations for how to assess the impact of adopting digital twins, how to manage the change within the organisation, what digital twins can be used for in urban environments, and how to ensure data quality and manage data protection risks.

Recommendations

Read More

The method: how do we make the digital twin?

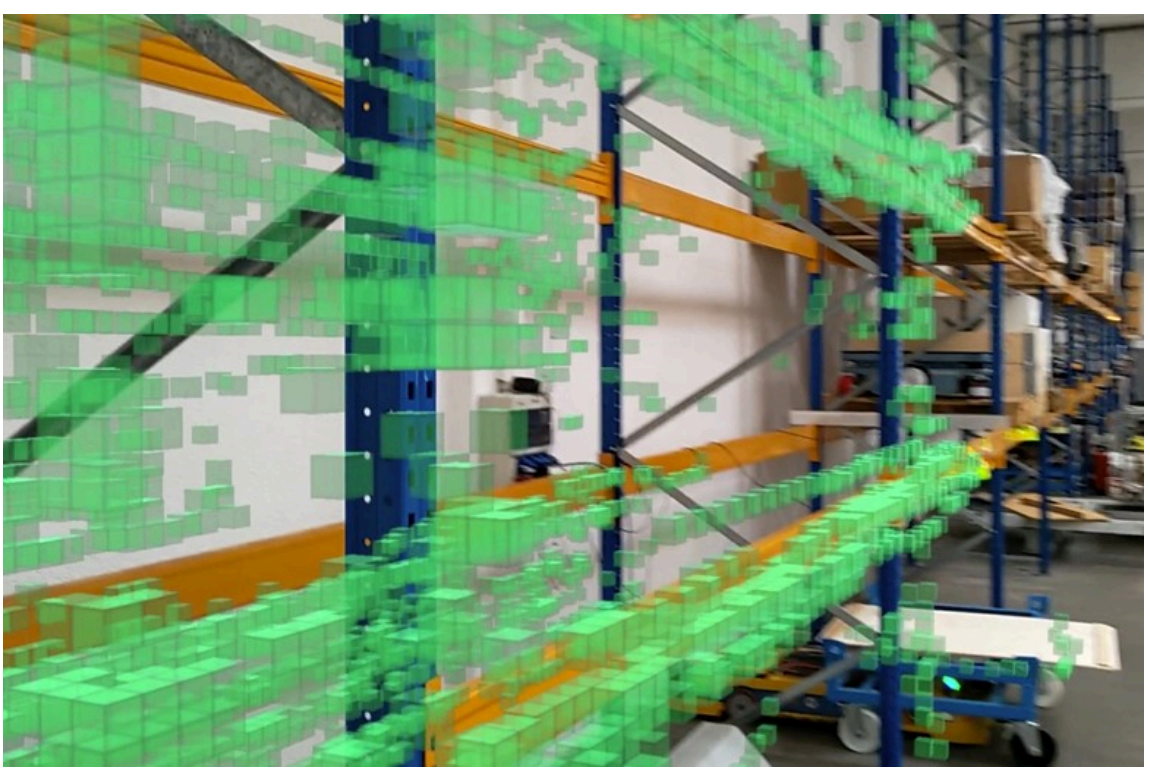
For our more technical audience who is interested in learning about the models and methods we've developed to recreate real life scenes digitally as well as the localisation and rendering required to create accurate XR applications: we have recently published two deliverables on exactly that! Take a deep dive into the technical side using the link below, where you will find D3.2 Capture, Reconstruction, Synchronisation and Scene Understanding Methods v2 and D4.2 Localisation, Mapping and Rendering Methods v2.



Read More

Interactive digital twins enabling responsible extended reality applications

The DIDYMOS-XR consortium recently published a paper detailing the process of how to responsibly develop and deploy XR applications that are based in digital twins. The paper introduces cutting-edge solutions in the creation, simulation, and manipulation of DTs, including advancements in 3D scene reconstruction, data enhancement, data compression, sensor fusion, localisation, rendering, and scene understanding. Additionally, we address the ethical and privacy challenges of digital twin systems and propose strategies for mitigating these issues. This work offers a comprehensive framework for creating semantically rich, scalable, and interactive digital twins, providing valuable insights for diverse applications in urban planning, maintenance, tourism, and industrial optimisation.



Read More

For more information on the DIDYMOS-XR project please visit our website: https://didymos-xr.eu

Our mailing address is:

Email: didymos-xr-office@joanneum.at

Funded by the European Union

Funded by the European Union. UK participants in Horizon Europe Project DIDYMOS-XR are supported by UKRI grant number 10069394 (Trilateral Research Limited). Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or European Commission-EU or UKRI. Neither the European Union nor the granting authority nor UKRI can be held responsible for them.