interTwin

D2.5 Final Communication, Dissemination and Engagement Activity Report

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Abstract

Key Words	Communication, dissemination, engagement, target users, measures, impact

This document summarizes T2.2's (Dissemination, Communication, and Engagement) activities in the interTwin project from M1 to M36. Led by EGI.eu under WP2, T2.2 focuses on disseminating Key Exploitable Results (KERs) to diverse audiences, aiming to boost project visibility, user engagement, and stakeholder collaborations. Through refined stakeholder targeting and strategic partnerships, the interTwin DCE activities enhanced project impact by effectively communicating outcomes and fostering valuable connections within the research and industry domains.

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Author(s)	• Gwen Franck (EGI)		
Reviewers	• Charis Chatzikyriakou (EODC) • Mariana Velho (CERN) • Diego Ciangottini (INFN)		
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When the terminology/acronyms are available via the link below, please remove this table.

Terminology / Acronyms	
Term/Acronym	Definition
AMB	Activity Management Board
DCE	Dissemination, Communication and Engagement
DT	Digital Twin
DTE	Digital Twin Engine
EAB	Ethics Advisory Board
EEAB	External Expert Advisory Board
KER	Key Exploitable Result
WP	Work Package

https://confluence.egi.eu/display/EGIG

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Executive summary

The interTwin project, co-funded under Horizon Europe, aims to co-design and implement a prototype for an interdisciplinary Digital Twin Engine (DTE). This **D2.5 Final Communication, Dissemination and Engagement Activity Report** summarizes the progress and outcomes of T2.2 (Dissemination, Communication, and Engagement) from M1 to M36, led by EGI.eu under WP2.

The project focused on disseminating the project's Key Exploitable Results (KERs) to diverse audiences. A structured Dissemination, Communication, and Engagement (DCE) strategy (D2.1) was implemented, leveraging branding, digital platforms, events, and strategic partnerships to maximize visibility and stakeholder engagement.

Key T2.2 activities included:

- Branding and website development
- Audiovisual materials
- Social media campaigns
- Event participation
- Promotion of Publications and Deliverables
- Collaborations

1 Introduction

interTwin is a project to co-design and implement the prototype of an interdisciplinary Digital Twin Engine (DTE), that offers the capability to integrate with application-specific Digital Twins (DTs).

As part of WP2 (Innovation Management and Communications), T2.2 (led by EGI.eu) deals with interTwin Communication, Dissemination and Engagement activities.

This deliverable reports on the entire project period, updating the numbers and activities mentioned in D2.1[1] and D2.3[2]. The main objectives of WP2 have been to ensure that project results are captured, disseminated, and exploited for maximum impact, to manage both internal and external communication and dissemination, to liaise with stakeholders from both research and industry, and to organise project events and support participation at external events. T2.2 aligned closely with the activities in T2.1 (Innovation Management and Exploitation) as outlined in the Innovation Management Plan (D2.2[3]) and Innovation Management Progress report D2.4[4].

The project has identified 6 Key Exploitable Results[5], which are also the core of the project DCE strategy:

1. Interdisciplinary Digital Twin Engine
2. Interoperability Framework: Guidelines, Specifications, and Blueprint Architecture
3. Toolkit for AI workflow and method lifecycle management
4. Quality Framework
5. DTE federated infrastructure integrated with EOSC and EU Data Spaces
6. interTwin Open Source Community

The core activities of T2.2 have focused on the dissemination of these KERs to the various target audiences. For this purpose, the activities are mapped to the stakeholder analysis (see **section 4**).

[1] interTwin D2.1 Dissemination, Communication and Engagement Plan, https://www.intertwin.eu/intertwin-key-exploitable-results-kers/

[2] interTwin D2.3 Communication, Dissemination and Engagement Activity Report and Updated Plan, https://doi.org/10.5281/zenodo.14973942

[3] interTwin D2.2 Innovation Management and Exploitation Plan, https://doi.org/10.5281/zenodo.10721988

[4] interTwin D 2.4 Innovation Management and Exploitation Progress Report, https://doi.org/10.5281/zenodo.14974012

[5] interTwin Key Exploitable Results, https://www.intertwin.eu/intertwin-key-exploitable-results-kers/

This interTwin DCE report intends to give an overview of all activities that have been conducted to increase awareness, engagement and collaborations.

2 Overview of activities

It is not the intention of this deliverable to describe again in detail the activities conducted between M1 and M18, to which we refer in D2.3. The report will focus on M19-36, complemented by a project-wide overview of activities.

The project ending on August 31st, 2025, provided a less-than-ideal timing with regard to the promotion of the final results. With regard to some activities, such as the final project brochure (online), updates of the website, success stories, social media campaigns, and animated clips, the numbers provided will therefore be as up to date as possible, but not final. If this is the case, this will be mentioned in the description.

2.1 Branding

At the start of the project, a large part of the interTwin visual identity, such as the logo, branding elements and document/presentation templates, was developed quickly and distributed amongst partners via the Communications Toolkit and the Project Brandguide[6]. For extended documentation about the interTwin branding, see Deliverable 2.1[7].

A key element of the branding has been developed in the second half of the project: every DTE software module has received a dedicated branding (See **annex 4**).

2.2 Website

2.2.1 Home

The project website **intertwin.eu** was set up by the end of M1, allowing for quick communication of the project's essential information, such as contact details, team and governance, and overall project goals.

2.2.2 News and Events

The News, Events (and Webinar) section offers a chronological overview of all articles published on the website. These include event announcements and reports, deliverable fact sheets, and blog posts about partner activities and project developments.

[6] Project Brandguide.

[7] https://zenodo.org/records/10417116

2.2.3 Digital Twin Engine

40+ **DTE software modules**, matching the work done in the technical work packages, were published on the website, organised in 4 different categories: '**Core Modules**', '**Infrastructure Modules**', '**Environment Modules**' and '**Physics Modules**'. As part of the project branding, each of these modules has received a logo in line with the interTwin branding for communication and dissemination purposes (with some of the more mature products, the owners were allowed to use the existing logo).

Each module page includes a description, including Release Notes and Future Plans, links to related publications and deliverables, user and developer information (such as links to github environment, license and source code, and contact information).

Linked Use Cases and Success Stories are also shown, if applicable.

While most of the module information pages have received an update based on the final deliverables, it is expected that updating this information will continue after the project ends.

2.2.4 Results

The results section lists the overview of all Key Exploitable Results, linking to an overview page including detailed information about target audiences, exploitation and dissemination activities, and related deliverables, success stories and use cases. While most of KER pages have received an update by August 31, it is expected that updating this information will continue after the project ends.

2.2.5 Impact

The impact section contains both the use cases and success stories.

Use Cases

Throughout the project, 10 use cases have been developed in collaboration with the relevant partners. These use cases are focused on the two main research domains interTwin is targeting: environment and physics. Every use case has a description detailing challenge and solution, associated workflows and modules, background information, and a detailed diagram, developed by interTwin, to show where the interTwin DTE and the interTwin modules are part of the solution.

Success Stories

The success stories section lists examples and stories on how interTwin modules have played a role in the workflow of external challenges. Updating this section with new emerging success stories will continue after the project ends.

2.2.6 Deliverables and Publications

The outputs section lists and links to all publicly available deliverables, as well as to publicly available presentations, articles, and visuals created by project partners, standardly archived on the **Zenodo interTwin community**.

2.2.7 Magazine

The interTwin final brochure (see **Annex 6**) will also be added to the website.

2.2.8 Statistics

At the end of M36, the website had a total of 16,460 visits (of which 5221 were returning visits) and 33,626 page views.

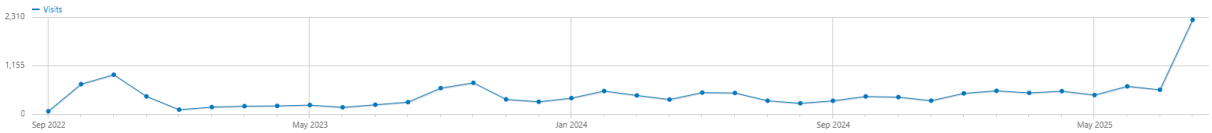


Figure 1 Overall website visits (22 -09-2022 / 31-08-2025)

The most visited pages were 'Home' (8538 visits), 'About interTwin' (1696), 'Use Cases' (1726) and the 'interTwin Digital Twin Engine' landing page (2841).

As discussed under section **2.4.1**, the net impact on the visitor statistics of a LinkedIn advertising campaign, run during the last weeks of the project, has been quite remarkable. During these weeks, almost 700 visitors were directed to the website from LinkedIn.

2.3 Audiovisual Materials

For images illustrating these materials, see Deliverable 2.3[8].

2.3.1 Printables

While it is often tempting to produce mass printed materials for dissemination purposes, as a project we have decided that this is not the right approach for us. Not only because of the environmental impact (not only printing, but also shipping), but also because the project information was updated so regularly that this would require frequent reprints and redesigns. We have therefore chosen to limit the number of printed materials to moo cards and flyers, redirecting the receiver to our website, and to host our final brochure online only.

2.3.1.1 Moo cards and Stickers

At the very beginning, a small square formatted card with a QR code and a set of stickers was printed and distributed among partners for quick handouts at events.

2.3.1.2 Flyers

A set of flyers, linking to the various modules overview pages, was produced for targeted distribution at events.

[8] https://zenodo.org/records/14973942

2.3.1.3 Final Brochure

An online brochure, highlighting the main project results, is under preparation and will be published at the end of M36 (after the publication of this deliverable). It will be accessible via the following URL: **http://intertwin.eu/finalbrochure**

See **annex 6** for the mock-up brochure.

2.3.2 Podcast series: interTwin talks

As a result of the Final Event Dissemination Workshop, it turned out that a project partner is an experienced podcast maker. As we had an opportunity to have most partners present during the project closing at EGI2025, we produced a series of podcasts focused on specific partner activities. These podcast episodes are published as part of the SciGeeks podcast series (available on YouTube and other platforms) and are shared via the project's social media platforms and website.

Figure 2 Diego Ciangottini (INFN) and interTwin Technical Coordinator Andrea Manzi (EGI) recording the first podcast in the 'interTwin Talks' series

All podcasts will appear on the SciGeeks YouTube channel and will be added to our **interTwin Talks playlist.**

2.3.3 Gadgets

During the project, a couple of high-quality gadgets were produced to act as "aide-mémoire" for partners and interested audiences. A power bank was distributed among partners and used for targeted distribution at event booths at the start of the project, and a series of branded water bottles was used to promote the project amongst attendees of the interTwin coffee breaks at EGU 2025 and two policy workshops organised in summer 2025.

2.3.4 Videoclips

While a very basic video clip, developed internally, introduced the project on the website and in event booths for the first two years of the project, a significant improvement was

made with the production of two new video clips, produced externally, around M30: one generic and one focused on the environment modules.

- General Video
- Environmental Modules
- interTwin Results

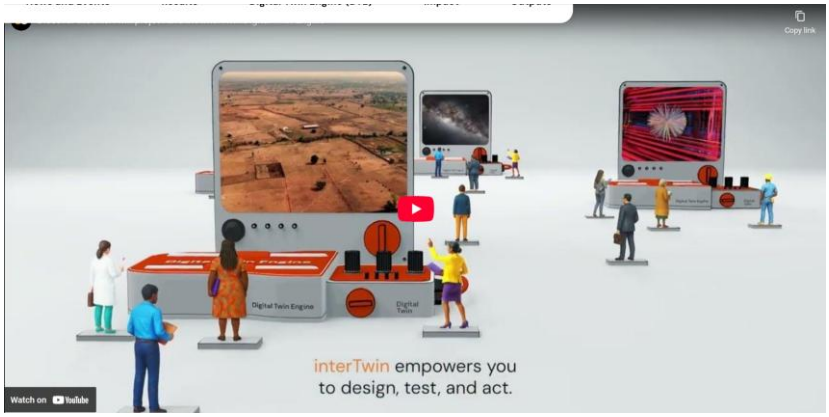


Figure 3 interTwin video

2.3.5 Demonstrations

As the project is ending, some stand-alone **demonstration videos** have been produced and published on YouTube. They are added to the website as illustrations of the modules.

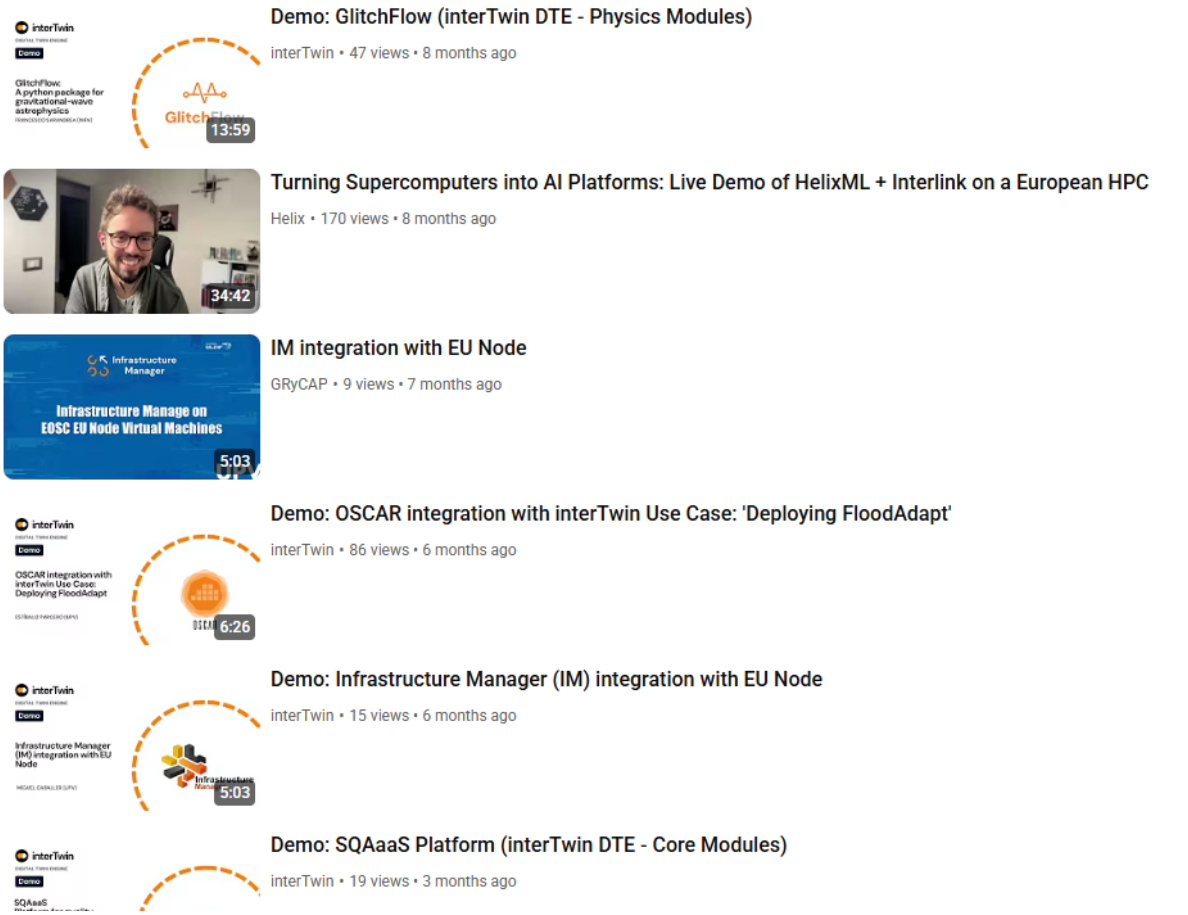


Figure 4 interTwin demo's on YouTube

2.3.6 Module logo's

As part of the project branding, each of these modules has received a logo in line with the interTwin branding for communication and dissemination purposes (with some of the more mature products, the owners were allowed to use the existing logo). See **Annex 4**.

2.3.7 Diagrams

At the request of project partners, a set of diagrams illustrating the **use cases** (making use of the module logo designs) was created.

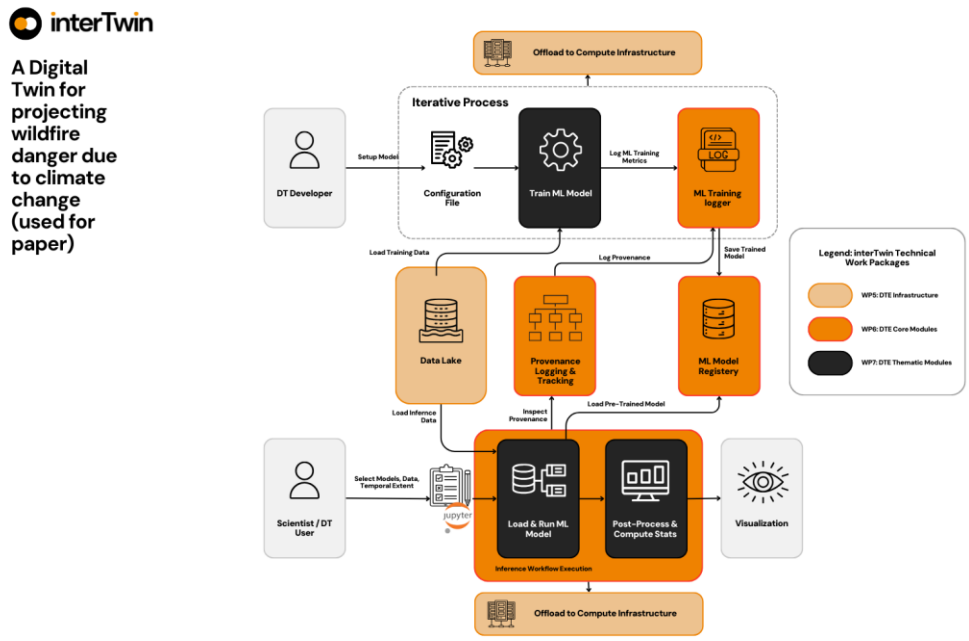


Figure 5 Example of a diagram illustrating the use cases

2.4 Social Media

2.4.1 LinkedIn

With the demise of Twitter, LinkedIn has become the main social media channel for the project. The project's strategic approach to amplify the LinkedIn reach focused on leveraging partner engagement: by consequently tagging partner organisations, and actively encouraging partners to post about interTwin (and tag the project while doing it), we managed to increase the page reach to more than 600 followers, with a consistent engagement rate between 6 and 6.5% (this rate having decreased slightly with the audience growth). In addition, during the final weeks of the project we ran several advertising campaigns to make the project and its final outputs more visible.

One of the key actions during the last week of the project was to increase the reach of the LinkedIn page to lay the groundwork for further dissemination of the final project results. With this in mind, we ran a paid campaign in the last week of the project (22-31 August 2025), with some impressive results. We promoted one of the clips and the Digital

Twin Engine page to a selected audience of (European Union and national) policy makers, SMEs, and technical profiles across Europe.

Overall, the campaign 'ads' received 723,487 (!) impressions and 95 reactions. While it is hard to analyse the 'quality' of these interactions (LinkedIn target audiences are a bit of a black box), there are some positive spill-over effects that can be logged:

- In two weeks, the interTwin page gained 100+ followers to 708
- This increase in activity has resulted in a spike in 'members' (followers) engagement (see **Figure 6**)
- While the campaign ran on LinkedIn, the website saw an increase in traffic coming from LinkedIn (see **Figure 7**)

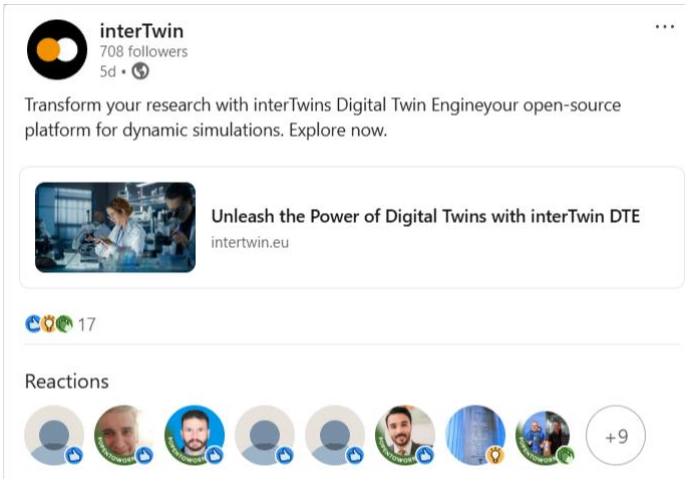


Figure 6 LinkedIn advertisement example

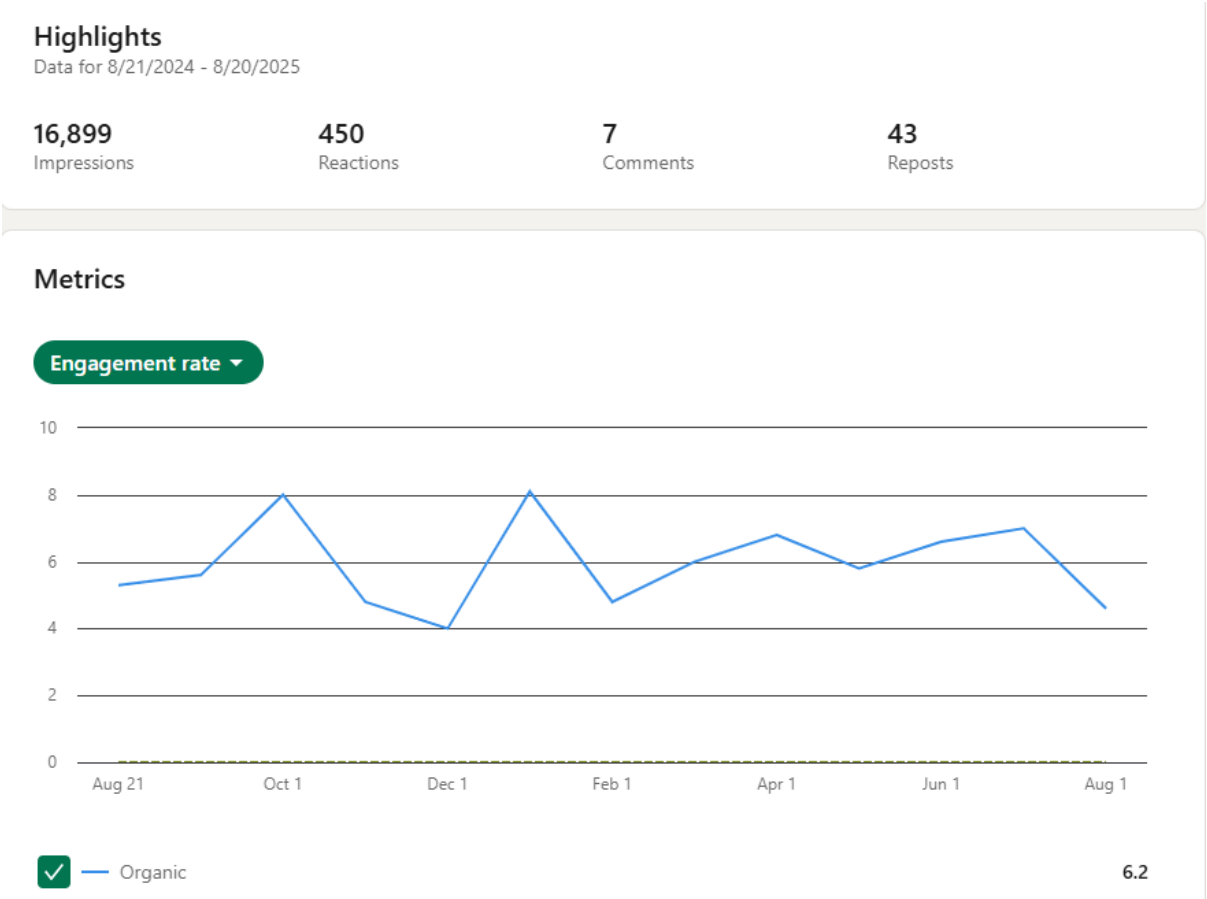


Figure 7 Image: engagement rate last 12 months and effects of advertising campaign on impressions of the page

2.4.2 YouTube

At the recommendation of the project reviewers after the end of RP1, the project has, in M16, launched its own YouTube channel. Currently, the channel has 35 subscribers and 1.4K views

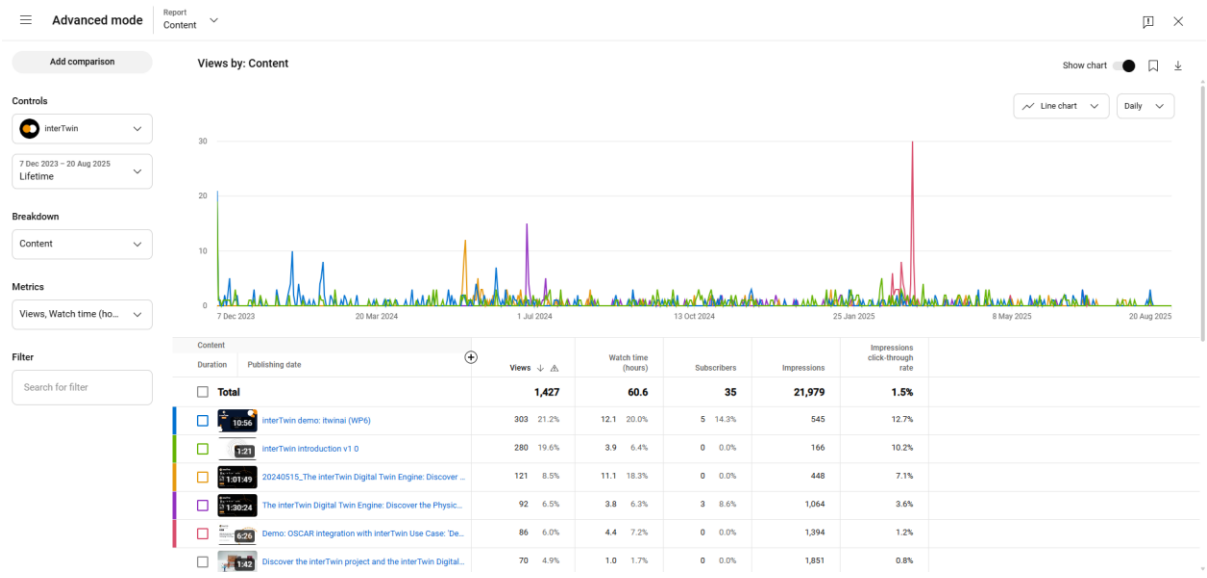


Figure 8 YouTube Analytics

2.4.3 Other channels

2.4.3.1 Newsletter

The project did not intend to release a public newsletter, but as the first outputs started to be released the need for an **internal newsletter** became clear - if only as an overarching communication channel towards all partners outside of WP meetings.

2.4.3.2 Github

Although the **interTwin Github community** is not managed by T2.2, it is an important dissemination channel for project software development.

2.4.3.3 X (Twitter)

With the transformation of Twitter into X (and the accompanying policy changes), interTwin has decided halfway through the project not to actively engage on the platform anymore. We decided however (in line with project coordinator EGI Foundation social media policy) not to remove the account, to remove any opportunity for scammers to usurp the profile.

2.4.3.4 Bluesky

As an alternative to Twitter, a Bluesky account was created. However, activity on the platform remained very little and the focus remained on LinkedIn as the best value-for-effort when it comes to project social media.

2.5 Events

2.5.1 Booths

From the start, interTwin has been present at every event booth hosted by project coordinator EGI, for example at the EGI202x conferences. During the second half of the project, interTwin has had a (shared) booth presence at more domain-specific events, for example **EGU** and **Living Planet Symposium 2025** (environment), **Teratec** and **HiPEAC** 2025 (HPC and business) and **CHEP** (physics). At the end of the project, 15 booth presences have been recorded.

Figure 9 Event booths at EGU 2025 and HiPEAC 2026

2.5.2 Partner Presentations

Overall, partners have reported 75+ in-person events where interTwin was presented one or multiple times, either in a talk, through a poster, or in a workshop/interactive session. Based on self-reporting, an estimated reach of these presentations for M1-M36 exceeds 10,000 persons (number corrected for exhibition booths at mass events such as EGU and ISC - we asked people to report people in the room or passing by the booth only).

Partners have been requested to both inform the AMB when they plan to attend an event through an **event list**[9] on Confluence, and to report afterwards through a **reporting form**. Using this dual approach, the project intended to catch all - including events that are signalled beforehand but not reported on afterwards and vice versa.

Example of events where interTwin has been presented include: **EGI Conference**, **Ibergrid**, **EOSC Symposium**, **EBDVF**, **Data Spaces Symposium**, **CHEP**, **ISGC**, **EGU**, **EODC Forum**, **IEEE eScience** and **ISC High Performance**. A full overview of events where partners have presented is provided in **annex 2-5**.

2.5.3 Internal workshops and meetings

T2.2 has supported the organisation (including technical support and catering) for 8 internal workshops (including pre-kick off meeting).

[9] Access to the confluence is restricted to the project consortium.

Table 1 internal project workshops

Date	Name	Description	Who	Link
9-sep-2022	9-sep-2022	9-sep-2022	9-sep-2022	https://indico.egi.eu/event/5923/
19-sep-2022 - 20-sep-2022	EGI Conference	Kick-Off	All work packages	https://indico.egi.eu/event/5924/
25-jan-2023 - 26-jan-2023	interTwin F2F meeting	Technical meeting + IEG	All technical WPs	https://indico.egi.eu/event/6004/
22-jun-2023 - 23-jun-2023	interTwin F2F meeting (EGI 2023)	Technical meeting + EEAB	All technical WPs	https://indico.egi.eu/event/6095/
24-jan-2024 - 25-jan-2024	interTwin 3rd tech meeting (online)	Technical meeting + IEG	All technical WPs	https://indico.egi.eu/event/6350/
12-jun-2024	interTwin 4th Technical meeting	Technical meeting	All technical WPs	https://indico.egi.eu/event/6436/
18-feb-2025 - 19-feb-2025	interTwin 5th Plenary meeting (online)	Plenary meeting	All work packages	https://indico.egi.eu/event/6606/
06-jun-2025	interTwin 6th Plenary meeting	Plenary meeting	All work packages	https://indico.egi.eu/event/6722/

2.5.4 Spotlight: Thematic Events in PY3

2.5.4.1 Final Event Dissemination Workshop (internal)

In M28, T2.2 organised an in-person meeting hosted by Deltares in Delft, Netherlands. Selected partners from organisations with an active interest in the project communication and dissemination activities (CERN, INFN, CMCC, EGI, EODC and Deltares) came together for a day-long brainstorm focusing on the dissemination of the final project results. Although the main outcomes were a finetuning of the planned project dissemination plan (final brochure was decided to host online, diagrams for use cases have been developed, ...), some new ideas came forward that have been executed since (mainly the SciGeeks podcast series with interTwin project partners). interTwin would recommend attaching a D&C update meeting to every Horizon Europe project, halfway in. In the current landscape, where communication channels and the available tools are evolving so quickly, the plans as laid out in the first CDEE plan delivered at the start of the project, require frequent updates - including changes in effort and budget allocation.

2.5.4.2 Policy Workshops

With the project results in their final phases (suitable for dissemination among policy makers), the project organised several workshops focused on policy makers at the European and national/local level.

- EOSC Symposium Workshop: EOSC and the Digital Twins co-located workshop about DT initiatives in Europe during EOSC Symposium 2024
- In M35, two workshops oriented at policy makers have been organised by project partners. One took place in Ghent, Belgium at the request of the VVSG (Flemish organisation for cities and communities). EGI and Deltares gave a workshop on how Digital Twins can help to tackle climate emergencies (in the case of Belgium, mainly flooding).

Figure 10 interTwin Policy Workshop in Ghent (June 8 2025)

- EODC organised a workshop targeted at policy makers at their office in Vienna. The event brought together EODC partners and stakeholders to align on key concepts, share project insights, and explore how they could collectively shape the future of Digital Twin infrastructure and applications in Austria and beyond.

2.5.4.3 Industry Workshop

At HiPEAC 2025 in January 2025, interTwin **organised a workshop** aimed at industry and SMEs. HiPEAC is the community of Advanced Computing experts accounting for over 2000 members in the areas of HPC, Embedded, Cloud and Compute Continuum in general performing academic and industrial research. HiPEAC conference brings together over 500 participants every year and it is an outstanding opportunity to present interTwin developed modules and technologies to experts.

2.5.4.4 Business Model Workshops

T2.2 logistically supported the organisation of 6 Business Model Workshops organised by T2.1 (see Deliverable 2.6[10] for details).

- 1st Internal Business Model Webinar - interTwin Innovation Management System (Webinar)
- 2nd Business Model Webinar - Introduction to IPR and SW Open-source licensing (Webinar)
- 3rd Business Model Workshop - F2F Hands-on session on SW Open-source licensing (in person)
- 4th Business Model Webinar - How the interTwin Innovation Management System is used to foster projects' Exploitation and Sustainability (webinar)
- 5th Business Model Workshop - Closing the gap on SW Open-source licensing (in person)
- 6th Business Model Workshop - Impact Driven Workshop - Assessment of impact across projects (in person)

2.5.4.5 interTwin at EGU 2025

A major dissemination opportunity for the environmental modules happened at EGU 2025 in Vienna, Austria (April 2025). As part of a shared booth, interTwin made use of the opportunity of the many partners presenting the work on the environmental modules at this conference. We hosted a series of 'interTwin coffee breaks. Every day, an interTwin partner presented their work to an audience passing by the booth. Overall, more than 50 people stayed and watched a presentation.

[10] https://zenodo.org/records/17086699

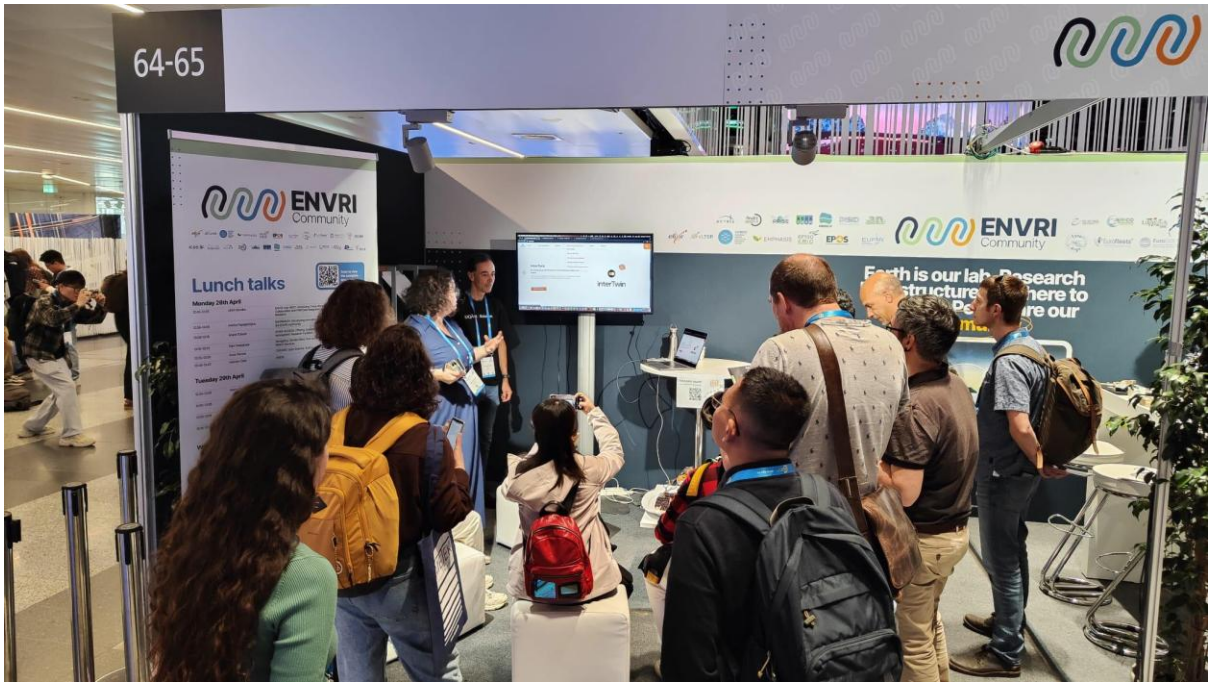


Figure 11 interTwin coffee breaks at EGU 2025

2.5.4.6 interTwin at EGI2025

EGI2025 was the official closing event of the project. As a major contributor to the conference, interTwin branding was omnipresent. Not only did we host a plenary session focused on Digital Twins, but we also hosted one of the breakout sessions. As most partners were present, we also had our last (closed) technical meeting. And finally, we made use of the presence of project partners to record 12 episodes of the interTwin Talks podcast series, as well as a video clip where project coordinator Andrea Manzi discusses the project.

Figure 12 interTwin last in-person Technical Meeting during EGI2025 in Santander, Spain

Together with the iMagine project (also coordinated by EGI), EGI innovation management organised an interactive workshop 'Assessment of impact across projects (interTwin Impact Driven Workshop) at EGI2025. See Deliverable 2.6[11] for details.

2.5.5 Webinars

2.5.5.1 Organised by interTwin

WP2 organised 6 public webinars (overview see annex), focusing on the project results (modules, Use Cases and DTE), 1 public webinar on exploitation and sustainability in Horizon Europe (with interTwin as example project) and 2 internal webinars (one about Business Modelling and one about the Horizon Europe ethics appraisal procedure). The total number of attendees was 280. All (public) webinars are available on YouTube, with more than 400 views in total at the time of reporting.

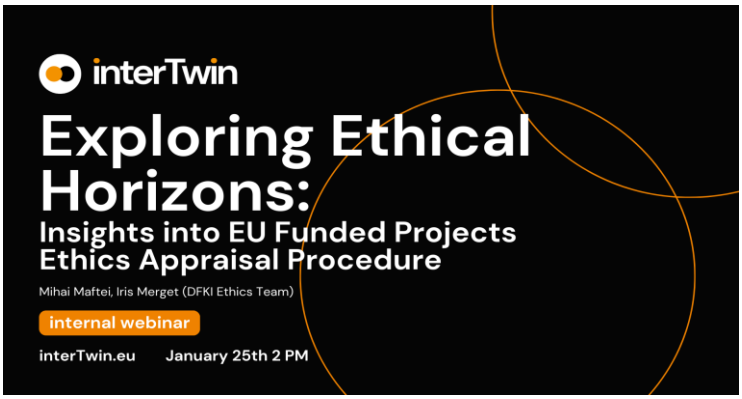


Figure 13 interTwin webinar branding

2.5.5.2 Hosted by others

- 23rd October 2023 Artificial Intelligence for Sustainability: What is the Role of AI in Advancing Targets for Sustainability (hosted by TEMA)[12]
- 25th October 2024 Interoperability architectures for Digital Twins of the Ocean (TURTLE Project)[13]
- 13ht February 2025 AI in Action: How Researchers Leverage AI (itwinai) (hosted by Research Data Alliance)[14]

[11] https://zenodo.org/records/17086699

[12] https://tema-project.eu/articles/artificial-intelligence-sustainability-what-role-ai-advancing-targets-sustainability

[13] https://www.eventbrite.de/e/interoperability-architectures-for-digital-twins-of-the-ocean-tickets-732174171657?aff=oddtdtcreator

[14] https://www.intertwin.eu/article/ai-in-action-how-researchers-leverage-ai

- 27th February 2025 BioDT Webinar: How can cross-use digital modelling tools help in nature protection? (hosted by BIODT)[15]

2.6 Publications

From the start, the project policy has been to archive all project outputs, such as deliverables, presentations and peer-reviewed publications on the **interTwin community page on Zenodo**. With more than 7000 downloads and 8000 views, the importance of Zenodo in dissemination is not to be underestimated. See **Figure 15** Zenodo statistics

.

On our website and social media, each deliverable is accompanied by a 'fact sheet' highlighting the key elements of each deliverable, a reference to the partner and to the location of the deliverable on Zenodo.

Figure 14 Deliverable fact sheet for D5.2

[15] https://www.intertwin.eu/article/biodt-webinar-how-can-cross-use-digital-modelling-tools-help-in-nature-protection

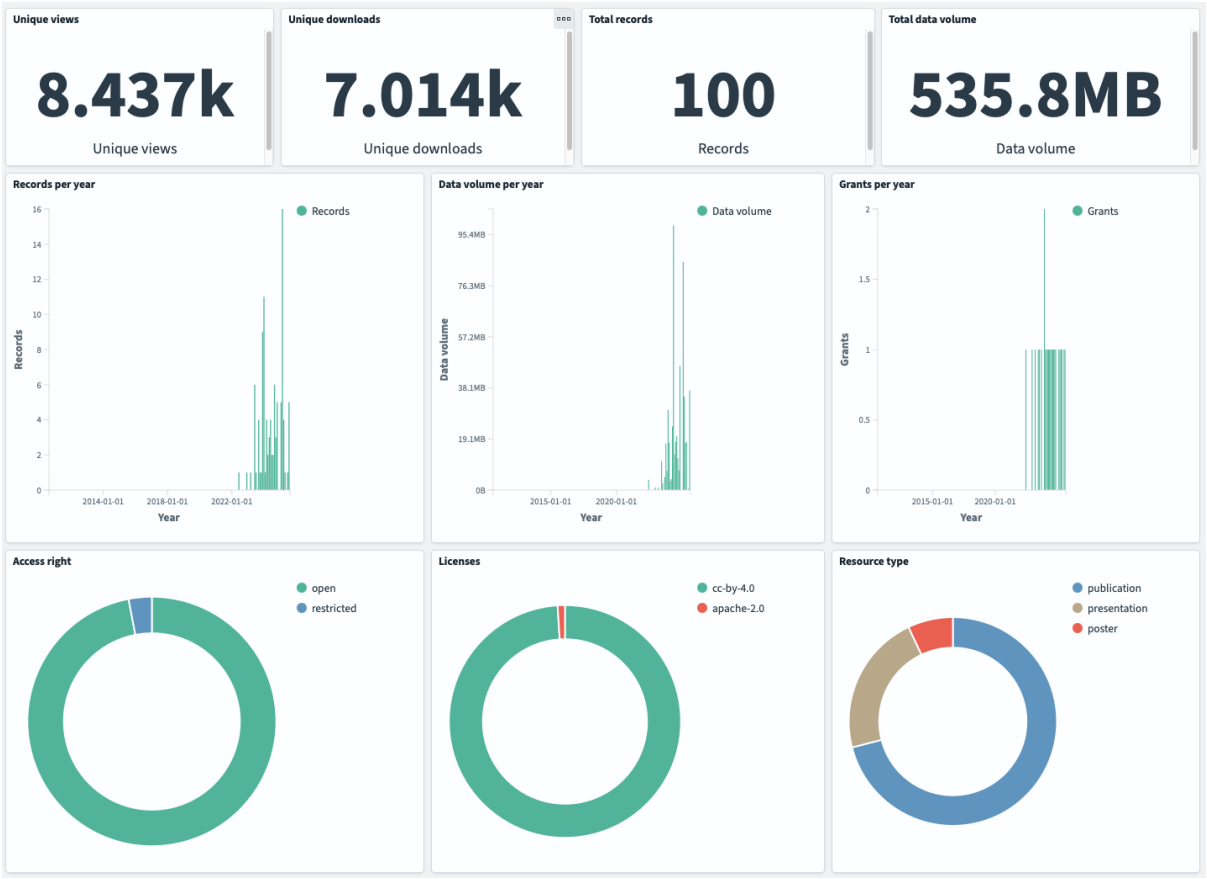


Figure 15 Zenodo statistics

2.6.1 Scientific Publications

- Accarino, G., Donno, D., Immorlano, F., Elia, D., & Aloisio, G. (2023). An Ensemble Machine Learning Approach for Tropical Cyclone Localization and Tracking from ERA5 Reanalysis Data. Earth and Space Science, 10. https://doi.org/10.1029/2023EA003106
- Pondi, B., Appel, M., & Pebesma, E. (2024). OpenEOcubes: an open-source and lightweight R-based RESTful web service for analyzing earth observation data cubes. https://doi.org/10.1007/s12145-024-01249-y
- S. Fiore, M. Rampazzo, D. Elia, L. Sacco, F. Antonio and P. Nassisi, "A Graph Data Model-based Micro-Provenance Approach for Multi-level Provenance Exploration in End-to-End Climate Workflows," *2023 IEEE International Conference on Big Data (BigData)*, Sorrento, Italy, 2023, pp. 3332-3339, doi: 10.1109/BigData59044.2023.10386983.
- Nica, R., Götz, S. & Moltó, G. CMK: Enhancing Resource Usage Monitoring across Diverse Bioinformatics Workflow Management Systems. *J Grid Computing* 22, 62 (2024). https://doi.org/10.1007/s10723-024-09777-z
- CMCC publication Preprint: https://doi.org/10.5194/egusphere-2025-461

2.6.2 Press and non-scientific publications

- FACILITATING THE DEVELOPMENT OF DIGITAL TWIN APPLICATIONS ACROSS THE COMPUTE CONTINUUM WITH INTERTWIN, HiPEAC info 74 p44 (January 2025) **https://www.hipeac.net/magazine/7170.pdf**
- interTwin: An Engine for Scientific Digital Twins, ERCIM News (January 2025) **https://ercim-news.ercim.eu/en140/special/intertwin-an-engine-for-scientific-digital-twins** (919 views)
- Connecting Continents: Dynamic Deployment of Transatlantic Computational Testbeds via the Infrastructure Manager, Chameleon Blog (July 28) **https://chameleoncloud.org/blog/2025/07/28/connecting-continents-dynamic-deployment-of-transatlantic-computational-testbeds-via-the-infrastructure-manager/**
- ETP4HPC Association Handbook of HPC-related projects **https://etp4hpc-handbook.online/intertwin/**

2.7 Deliverables and Milestones achieved

Halfway through the project, at the end of M18, T2.2 has achieved the following milestones:

- Organisation of a kick-off event (MS2.1)
- Website launched (M2.2)
- Communication package available (M2.2)
- (First) Business Model workshop held (M2.3)

The first deliverable, D2.1[16], has been submitted in M5.

The second deliverable, D2.3[17], has been submitted in M20.

2.8 Budget

The working budget for dissemination and communication activities, including the organisation of internal meetings, was set at 95,000 EUR.

With these funds, the following activities were funded:

- Organisation of opening and closing events, as well as interTwin-themed workshops and meetings, as part of the EGI2023, EGI2024 and EGI2025 conferences

[16] https://zenodo.org/records/10417116

[17] https://zenodo.org/records/14973942

- Participation in external event booths at events such as EGU 2024 and EGU 2025, CHEP 2024, Teratec Forum and HiPEAC 2025. In most cases, these booth costs have been shared with other projects.
- Various materials for events such as goodies (power bank, water bottles), printables such as stickers, flyers and 'Moo cards', posters, and shipping costs.
- Support for online activities such as the project website building and maintenance, the online final project brochure, the event platform for EGI2024 and EGI2025, LinkedIn advertising, small publication costs and contribution to design tools used for the project such as Figma.
- Hosting technical workshops: catering and technical/venue support (when needed)
- Hosting policy and business model workshops: catering and technical/venue support

Overall, the budget requested turned out to be sufficient for the project activities, if not slightly overestimated. However, given the volatility of the international political and economic climate, the aftermath of the pandemic, and a growing sensitivity in the ecosystem of our European projects to not overproduce printed materials (such as brochures and flyers), the leftover funds should rather be considered as proof of prudence and caution, rather than actual underspending.

3 Summary of Dissemination Outputs

3.1 Status Review

Table 3 offers a final status review of T2.2 activities

Table 2 Status review of planned T2.2 activities

Description	Target	M36 Status	Comments
Website	Monthly unique visit rate of 250+☑	Website pageviews M1-M35 = 30,051 Website visits M1-M35 = 14,226	Website published and regularly updated
Social media	LinkedIn engagement rate 3% ☑ Post regularity ☑	Linkedin: • 604 followers • 16,355 impressions • 6.2% engagement • 75 posts YouTube • 35 followers • 1.4K views (Twitter deprecated)	LinkedIn is published and regularly updated YouTube: started up in M20 Bluesky: accounts exist but are not actively used Results listed before the final advertising campaign (see **Chapter 2.6**)
Technical Workshops		6 internal meetings (online or in person) 6 Business Model Workshops (online or in person) 3 Policy Workshops (EOSC Symposium 2024, Ghent, Vienna)	Refer to Table 1
Kick-off		☑	Organised at EGI2022 (see **section 2.4.3**)

Event participation		~75 in-person events 15 event booths (shared)	
Consultations and Surveys			consultations were run at WP4 level to identify needs and requirements for the use cases
Repository for publications	☑	8000+ views 7000+ downloads	**Zenodo**
Repository for Software	50 active members	18 repositories 48 followers	**Github**
Project Partners and Boards		☑	Team, EEAB, EAB added to **website**
Project branding		☑	Branding guide delivered
Press and non-scientific news outlets			HiPEAC ERCIM Chameleoncloud blog [more to come: Horizon Magazine, ...]
Scientific Publications			4 peer-reviewed publications added to Zenodo, one preprint in pipeline for publication
News items and Blog Posts	One news item per result/deliverable	47	More to come after project end date
Visual materials[18]	Each result is presented at least once	☑	Guides, Factsheets, Web Pages Use Cases Diagrams Goodies: bottles, powerbanks

[18] See D2.3: https://zenodo.org/records/14973942

			Moo Card, stickers Roll-Ups Posters and Roll-ups Clips

3.2 Collaborations and partnerships

For an overview of existing and ongoing collaborations, see Deliverable 2.3[19]. Below we list some success stories achieved in the last year of the project.

3.2.1 Integration of Helix @ ML and interLink[20]

Both Interlink and HelixML are available for organizations looking to explore running GenAI workloads on their HPC infrastructure. The integration requires minimal changes to existing supercomputer setups, primarily needing just a container runtime like Apptainer or Enroot on the compute nodes.

This integration represents a significant step forward in making advanced AI capabilities accessible to organizations with existing HPC investments, potentially accelerating scientific discovery through the combination of traditional supercomputing and modern AI techniques. The ability to add proper multi-tenant isolation on top of traditional HPC infrastructure is particularly valuable for organizations looking to provide AI services across multiple teams or departments.

3.2.2 interLink Entered the CNCF Sandbox - Cloud-Native HPC Integration[21]

The challenge of bridging cloud-native technologies with high-performance computing infrastructure has long been a barrier for organizations seeking to leverage their existing HPC investments for modern containerized workloads. Traditional HPC systems, optimized for batch processing through schedulers like Slurm, operate fundamentally differently from the dynamic, orchestrated environments that modern cloud-native applications expect. This architectural divide has prevented many research institutions and organizations from fully utilizing their substantial supercomputing resources for contemporary AI and cloud-native workflows.

[19] https://zenodo.org/records/14973942

[20] https://www.intertwin.eu/case-study/success-story-running-genai-on-supercomputers-thanks-to-interlink

[21] https://www.intertwin.eu/case-study/success-story-interlink-entered-the-cncf-sandbox-cloud-native-hpc-integration#looking-forward

The interLink project has successfully addressed this challenge, as confirmed by the recent milestone. It joined Cloud Native Computing Foundation (CNCF) Sandbox, marking a significant step toward democratizing access to HPC resources through cloud-native interfaces.

3.2.3 OSCAR and DT Flood in the DISCOVER-US project[22]

By integrating the interTwin DTE core module Infrastructure Manager (IM) with Chameleon, a transatlantic testbed composed of OSCAR clusters in Europe and the USA was deployed. Using Common Workflow Language (CWL), we achieved seamless execution of scientific workflows for flood assessment.

3.2.4 Collaboration between interTwin and AI4EOSC[23]

interTwin collaborated with the Horizon Europe project AI4EOSC to demonstrate how AI inference, a core step in many scientific workflows, can be seamlessly offloaded to High Performance Computing (HPC) clusters, paving the way for scalable, data-driven Digital Twin applications.

3.2.5 Digital Twin Factory Project

The Digital Twin Factory project led by CNES[24] In France, the initiative started in June 2024 with the aim of building a platform to develop Digital Twins of the Earth. After a first discussion during the Destination Earth 3rd User Forum, the project coordinator organized a meeting with interTwin technical partners in December 2024 to discuss synergies and the reuse of interTwin components in their implementation.

The discussions held on the project reusing and adapting the component for computing offloading (interLink) into their architecture with already some contribution from CNES engineers being included in the interTwin repositories. The project by design was also planning to reuse the openEO component in some of the data pipelines as interTwin is doing.

[22] https://www.intertwin.eu/case-study/success-story-transatlantic-computational-testbeds-enabling-seamless-workflow-executions-of-flood-simulations
[23] https://www.intertwin.eu/case-study/success-story-collaboration-between-intertwin-and-ai4eosc-for-ai-inference-offloading-from-the-cloud-to-hpc
[24] https://cnes.fr/en

4 Stakeholder engagement

As described in D2.1 and D 2.3, all interTwin stakeholders have been categorised in three broad Target Groups, each to be reached in different ways:

- **DT Users:** Scientific Collaborations, SMEs and Industry, Individual Researchers from the long tail of science, Policy Makers (and funders)
- **DT Developers:** Scientific Collaborations, Research Infrastructures, e-Infrastructures and Data Space Providers, SMEs and Industry, (individual researchers)
- **DT Providers:** Scientific Collaborations, Research Infrastructures, e-Infrastructures and Data Space Providers, (SMEs and Industry)

Below, we list the main activities conducted by the project to reach these different stakeholder groups. Of course, in practice, most activities have served multiple purposes and reached different target audiences.

4.1 DT Users

*The (potential) users of the specific DTs will need to be **aware** of their existence (KER1) and **use** them and the supporting materials such as the Toolkit for AI Workflow (KER3) and the Quality Framework (KER4). As **co-designers**, they will have an interest in using the Toolkit and the Quality Framework, and they are expected to **verify** it. Some DT users will **liaise** with the Open-Source Community (KER6) as interactions & technical support may be needed for the definition and deployment and use of DT in use cases.*

To reach this target group, interTwin conducted the following activities:

Increase awareness and drive uptake:

- Public Webinars,
- Participation (talks, posters, booths, workshops) at dedicated events
- Podcast interTwin Talks
- Social Media (LinkedIn, Youtube,...)
- Animated clips
- Demonstrations
- Deliverable Factsheets
- Non-Scientific articles (ERCIM, HiPEAC, ...)
- Module Webpages with practical information

Facilitate verification and input

- Policy Workshops
- Business Model Workshops
- Industry Workshop
- Consultations and Surveys run by WPs

Foster a liaison/contact channel

- Personal contacts at via events and workshops
- Published Use Cases and Success Stories
- Github/DTE Testbed

- Module Webpages with technical information

In addition, the project attempted to reach evidence-based policy makers through:

- Policy Workshops
- One-on-one meetings and conversations at targeted events (e.g. EGU, EOSC Symposium)
- Targeted LinkedIn advertising (see **Section 2.4.1**)

4.2 DT Developers and Providers

*The developers of the DT modules **co-design** and **co-create** the DTE modules (KER1), they are **using** the supporting tools and Quality Framework, interoperability framework (KER2).*

*The providers will **add** applications and services to the specific DTs and to the DTE (KER1) and to the Toolkit for AI workflow and method lifecycle management (KER3). They will **integrate** them with EOSC and EU Data Spaces (KER5). As the software will be open source, these providers/operators will be part of our open-source community (KER6).*

To reach this target group, interTwin conducted the following activities:

Facilitate co-design and verification

- Business Model Workshops
- Internal Technical Workshops
- Industry Workshop
- Demonstrations on YouTube
- Webinars

Foster a liaison/contact channel - add applications and services

- Published Use Cases and Success Stories
- Demonstrations on YouTube
- Github/DTE Testbed
- Module Webpages with technical information

Integrate the DTE with EOSC and EU Data Spaces

- Published Use Cases and Success Stories
- Collaborations with other projects and initiatives (DT-GEO, BIODT, DestinE, ...)
- Participation (talks, posters, booths, workshops) at dedicated events
- Webinars

From the self-reporting of dissemination activities, we can see that our key stakeholders have been reached extensively through the project activities (Scientific Collaborations, Researchers, RIs and e-infras, SMEs/Industry, and Policy Makers).

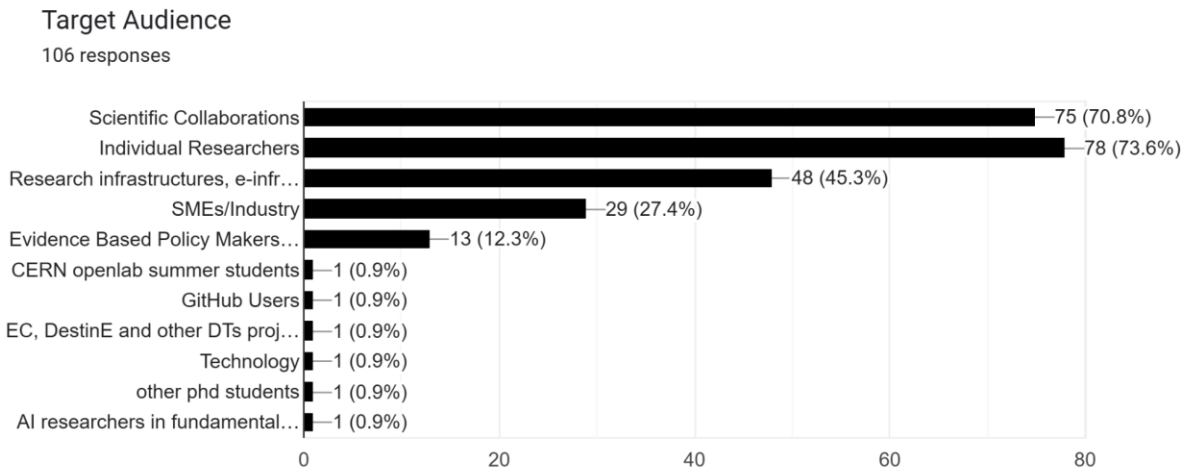


Figure 16 Self-reporting: target audiences reached through interTwin attended external events

5 Final conclusions

The interTwin project's Dissemination, Communication, and Engagement (DCE) activities, led by EGI.eu under T2.2, successfully established a structured approach to promoting the project's Key Exploitable Results (KERs) and fostering engagement across diverse stakeholder groups. Over the course of M1 to M36, the project developed a comprehensive DCE strategy that aligned with the Innovation Management Plan and leveraged both digital and in-person channels to maximize visibility and impact. The creation of a cohesive visual identity, a dynamic project website, and targeted audiovisual materials provided a solid foundation for communication, while strategic partnerships and collaborations such as those with DT-GEO, BIODT, DestinE, and HiPEAC, expanded the project's reach within research and industry domains.

The project's dissemination outputs, including 40+ software module pages, 10 use cases, and a series of webinars, workshops, and policy events, ensured that interTwin's technical advancements and use cases were accessible to a broad audience. The decision to prioritize digital dissemination over printed materials reflected both environmental considerations and the need for agility in updating project information. Social media, particularly LinkedIn, emerged as the primary platform for engagement, with consistent activity and targeted advertising campaigns amplifying the project's presence. The use of Zenodo for archiving deliverables and publications further supported transparency and accessibility, resulting in over 7,000 downloads and 8,000 views.

While the project achieved or even surpassed its overall targets for website traffic, social media engagement, and event participation, the reliance on self-reporting for event and dissemination data led to potential inconsistencies in tracking and measuring impact, particularly for in-person events where attendance numbers were estimated.

Stakeholder engagement was systematically addressed through tailored activities for DT Users, Developers, and Providers, with self-reported data indicating strong participation in events, webinars, and collaborative workshops. The mapping of interTwin stakeholders to the Horizon Results platform facilitated tracking and measurement of dissemination efforts, ensuring alignment with project objectives and external expectations.

The project demonstrated several strengths in its DCE activities. The early development of branding and communication tools, such as the interTwin logo, module icons, and document templates, ensured a unified and professional presentation across all materials. The project website, with over 15,000 unique visits and 33,000 pageviews, served as a central hub for information, while the production of high-quality audiovisual content—including video clips, podcasts,

and animated clips—enhanced engagement and accessibility. The decision to host the final brochure online, rather than in print, aligned with sustainability goals and allowed for real-time updates.

Collaborations with external initiatives and projects, such as the Digital Twin of the Oceans and national Digital Twin efforts, not only broadened interTwin's network but also positioned the project as a key player in the evolving Digital Twin landscape. The organization of policy workshops and business model sessions provided valuable opportunities for knowledge exchange and alignment with broader European priorities, such as the Green Deal and EOSC integration.

The project's adaptability was evident in its response to changing social media landscapes, notably the shift from Twitter to LinkedIn and the exploration of Bluesky, though the latter saw limited uptake. The use of LinkedIn advertising and the production of short, engaging content for final outputs demonstrated a proactive approach to promoting results in the project's closing phase.

Despite its successes, the project faced challenges that impacted the effectiveness of some DCE activities. The timing of the project's ending in late August created logistical difficulties in promoting final results, as some planned campaigns and updates—such as the LinkedIn advertising for the final brochure and video clips—could not be fully captured in this report. The decision to de-emphasize Twitter/X and the limited traction on Bluesky highlighted the difficulty of maintaining a presence on emerging platforms.

6 Annexes

Annex – Webinars

23-nov-2023	Business Model Workshops - The Innovation Management System at interTwin	Internal consortium	This webinar aimed to refresh interTwin partners on the innovation management processes established within the project, providing examples on how the project is addressing the collection of Results, Key Exploitable Results, and emerging Innovations, and how it is expected to interact with the related exploitation and sustainability plans.	23-nov-2023
24-jan-2024	Exploring Ethical Horizons: Insights into EU Funded Projects Ethics Appraisal Procedure	Internal consortium	Webinar hosted by DFKI Ethics Team	24-jan-2024

Funded by the European Union

15-may-2024	The interTwin Digital Twin Engine: Discover the Environment Use Cases	Public	Introduction: Charis Chatzykyriakou (EODC) Use Case Leads: Donatello Elia (CMCC) Christian Pagé (CERFACS) Björn Backeberg (Deltares) Iacopo Ferrario (EURAC)	(32 participants/121 views on YT) **https://www.intertwin.eu/article/webinar-the-intertwin-digital-twin-engine-discover-the-environment-modules**
25-jun-2024	The interTwin Digital Twin Engine: Discover the Physics Use Cases	Public	Introduction to the project and the Digital Twin Engine: Andrea Manzi (EGI) - 15' Use Cases: A Digital Twin for Fast Particle Detector Simulation, speaker: Kalliopi Tsolaki, CERN - 15' including questions GlitchFLow: a Digital Twin for the Virgo Gravitational Wave Interferometer, speaker: Lorenzo Asprea, INFN - 15' including questions ML-PPA: a Digital Twin for Pulsar Studies in Radio Astronomy, speaker: Yurii Pidopryhora, MPG - 15' including questions A Digital Twin for Lattice QCD Simulations, speaker: Javad Komijani ETHZ, 15' including question	(27 participants/92 views on YT) **https://www.intertwin.eu/article/webinar-the-intertwin-digital-twin-engine-discover-the-physics-use-cases**
12-dec-2024	Foster Exploitation and Sustainability in your Horizon	Public	Xavier Salazar (EGI), interTwin Innovation Manager	45 **https://www.intertwin.eu/articl**

	Europe Project. The case of interTwin			e/foster-exploitation-and-sustainability-in-your-horizon-europe-project-the-case-of-intertwin
10-apr-2025	Webinar: Discover the DTE Infrastructure Modules	Public	Intro to the interTwin project and the DTE infrastructure – Daniele Spiga (INFN) Federated Computing with interLink – Diego Ciangottini (INFN) Federated Data Management components – Dijana Vrbanec (DESY) Q/A – 10 min	(25 attendees/53 views on YT) https://www.intertwin.eu/event/webinar-discover-the-dte-infrastructure-modules
07-may-2025	Webinar: Discover the DTE Core Modules	Public	Intro to project/DTE Core subsystem: Isabel Campos (CSIC), 10 min Itwinai: AI on Cloud and HPC for Science: Matteo Bunino (CERN) and Rakesh Sarma (FZJ) 20 min IM, OSCAR, and DCNiOS: Event Driven serverless computing and data processing flows: Estibaliz Parcero (UPV) and Miguel Caballer (UPV) 20 min Data fusion with OpenEO: Alexander Jacob (EURAC) 15 min SQAasS: Platform for quality assessment and awarding of multiple digital objects: Ivan Palomo (CSIC) 15 min QA – 10	(22 attendees/61 views on YT) https://www.intertwin.eu/event/webinar-discover-the-dte-core-modules

25-jun-2025	Webinar: The interTwin Digital Twin Engine: Discover the Physics DT Applications and their thematic modules	Public	Introduction to the project and the Digital Twin Engine: Andrea Cristofori, EGI Physics DT Applications: Digital Twins for Fast Calorimeter Simulation, speaker: Vera Maiboroda, CNRS GlitchFLow: a Digital Twin for the Virgo Gravitational Wave Interferometer, speaker: Lorenzo Asprea, INFN ML-PPA: a Digital Twin for Pulsar Studies in Radio Astronomy, speaker: Yurii Pidopryhora, MPG A Digital Twin for Lattice QCD Simulations, speaker: Gaurav Sinha Ray, CSIC	(18 attendees/12 views on YT) **https://www.intertwin.eu/event/webinar-discover-the-dte-physics-dt-applications-and-their-thematic-modules**
01-jul-2025	Webinar: The interTwin Digital Twin Engine: Discover the Environment DT Applications and their thematic modules	Public	Introduction to the project and the Digital Twin Engine: Charis Chatzikyriakou, EODC Environment DT Applications: Digital Twins for projecting the occurrence of tropical cyclones and wildfire dangers due to climate change, speaker: Donatello Elia, CMCC, and Extreme rainfall, temperature and wind weather event changes in response to climate change, speaker: Christian Pagé, CERFACS Integrated Modules for Post-Flood Assessment and Future Planning, speakers: Willem Tromp, DELTARES and Martin Schobben, TUW Digital Twin for Drought Early Warning in the Alps, speaker: Iacopo Ferrario EURAC	(39 attendees/31 views on YT) **https://www.intertwin.eu/event/webinar-discover-the-environment-dt-applications-and-their-thematic-modules**

Annex 1 – 2022 events

Event Name	Link	(start) Date	Partner	Reach[25]
IBERGRID 2022	https://www.ibergrid.eu/2022-ibergrid-faro/	10-okt-2022	EGI	100
EGI2022		19-sep-2022	EGI, all	250
5th RUCIO community workshop	https://indico.cern.ch/event/1185600/	7-nov-2022	DESY	60
AGU Fall Meeting 2022	https://agu.confex.com/agu/fm22/meetingapp.cgi/Session/170965	16-dec-2022	CMCC	50
EOSC Symposium 2022	https://events.eoscfuture.eu/symposium2022/programme	14-nov-2022	EGI	30 (+ 250 booth visitors)

[25] Please note that 'Reach' is self-reported. In some cases, presentations take place at large events - in that case only an estimate of the participants in the session(s) where interTwin was presented and/or the event booth reached at the exhibition is given.

Annex 2 – 2023 events

Event Name	Link	(start) Date	Partner	Reach[26]
2023 CERN openlab Technical Workshop	https://indico.cern.ch/event/1225408/	16-mrt-2023	CERN	100
Data Spaces Symposium	https://internationaldataspaces.org/data-spaces-symposium/	21-mrt-2023	EGI	150
ISGC 2023	https://indico4.twgrid.org/event/25/	23-mrt-2023	DESY	25
XRootD and FTS workshop	https://indico.cern.ch/event/875381/	27-mrt-2023	EGI	40
DIH World	https://dihworld.eu/event/digital-twins-what-how-why/	19-apr-2023	EGI	50
EGU2023	https://meetingorganizer.copernicus.org/EGU23/session/45429	23-apr-2023	CMCC	50
ASFPM Conference 2023	https://www.floods.org/conference/2023-asfpm-conference/	7-mei-2023	Deltares	30
CHEP2023	https://www.jlab.org/conference/CHEP2023	8-mei-2023	EGI	100
EODC Forum 2023	https://events.eodc.eu/event/9/overview	9-mei-2023	EGI, CMCC, EODC, EURAC, DELTARES	60

[26] Please note that 'Reach' is self-reported. In some cases, presentations take place at large events - in that case only an estimate of the participants in the session(s) where interTwin was presented and/or the event booth reached at the exhibition is given.

L International Meeting on Fundamental Physics and XV CPAN days	https://indico.cern.ch/event/1283224/	2-jun-2023	CSIC	
EGI2023	https://whova.com/portal/webapp/egi_202305/	21-jun-2023	EGI, CMCC	25 (+ 250 booth visitors)
EOSC Symposium 2023	https://symposium23.eoscfuture.eu/	20-sep-2023	EGI, EODC	250
IBERGRID 2023	https://www.ibergrid.eu/ibergrid-2023-benasque/	25-sep-2023	CERN, EGI, CSIC, UPV	186
EuroGEO Workshop 2023	https://egw2023.eurac.edu/	2-okt-2023	EGI	70
IEEE eScience 2023	https://www.escience-conference.org/2023/	9-okt-2023	CERFACS	150
Interoperability architectures for Digital Twins of the Ocean	https://www.eventbrite.de/e/interoperability-architectures-for-digital-twins-of-the-ocean-tickets-732174171657?aff=oddtdtcreator	25-okt-2023	EGI	15
Big Data in Space 2023	https://bigdatafromspace2023.org/	6-nov-2023	EURAC	300
2nd Destination Earth User eXchange	https://destination-earth.eu/event/2nd-destination-earth-user-exchange/	13-nov-2023	EGI, Deltares	200
Radio 23	https://events.mpifr-bonn.mpg.de/indico/event/324/overview	14-nov-2023	MPG	30
AI 4 Sustainability: TEMA webinar	https://tema-project.eu/articles/artificial-intelligence-sustainability-what-role-ai-advancing-targets-sustainability	14-nov-2023	EGI	35
AGU23, San Francisco, US	https://www.agu.org/fall-meeting-2023	11-dec-2023	CERFACS	100

Annex 3 – 2024 events

Event Name	Link	(start) Date	Partner	Reach[27]	
EGU24	https://www.egu24.eu/	14-apr-2024	Vienna, Austria	EODC, EGI, INFN, CMCC, CERFACS,	+ talks + booth
Workshop on Open-Source key areas for Digital Autonomy	https://digital-strategy.ec.europa.eu/en/events/workshop-open-source-key-areas-digital-autonomy	1-feb-2024	Brussels, Belgium	CSIC	talk
TERATEC Forum	https://www.forumteratec.com/	29-may-2024	Paris, France	EGI, CERFACS	booth Francophone audience - HPC and AI
ACAT2024	https://indico.cern.ch/event/1330797/abstracts/	11-mar-2024			
EuroHPC 2024	https://www.eurohpcsummit.eu/	18-mar-2024	Antwerp, Belgium	EGI	networking

[27] Please note that 'Reach' is self-reported. In some cases, presentations take place at large events - in that case only an estimate of the participants in the session(s) where interTwin was presented and/or the event booth reach at the exhibition are given.

Kubecon/CloudNative cohosted AI day	https://events.linuxfoundation.org/kubecon-cloudnativecon-europe/co-located-events/cncf-hosted-co-located-schedule/	19-mar-2024	Paris	INFN	talk
ISGC 2024	https://indico4.twgrid.org/event/33/	24-mar-2024	Taipei	DESY	
ACAT	https://indico.cern.ch/event/1330797/	11-mar-2024		CERN, INFN	Posters
NVIDIA GTC 24	Enabling Digital Twins for Science: A Perspective from CERN openlab [S62354]	20-mar-2024	San Jose, CA	CERN	Talk
EuCAIFCon 24	https://indico.nikhef.nl/event/4875/ https://www.aanmelder.nl/eucaifcon24	30-apr-2024	Amsterdam	CERN, INFN	Poster+Flashtalks
ISC High Performance 2024	https://www.isc-hpc.com/	12-may-2024	Hamburg, Germany	EGI (presenting), CMCC. UNITN CERN	Poster Presentation

BONN neutron star workshop	https://events.mpifr-bonn.mpg.de/indico/event/389/	16-may-2024	Bonn, Germany	MPG	Presentation
IX Meeting of Doctoral Students of the UPV	https://www.upv.es/contenidos/ENCDOC/	23-may-2024	Valencia, Spain	UPV	Presentation
Workshop sul Calcolo nell'I.N.F.N.	https://agenda.infn.it/event/40160/	20-may-2024	Palau, Italy	INFN	Poster
8th ENES HPC workshop - High Performance Computing for Climate and Weather	https://www.esiwace.eu/events/8th-enes-hpc-workshop	22-may-2024	Lecce, Italy	CMCC	Presentation
DTO-INTEROP 2024	https://imdis.seadatanet.org/Registration	30-may-2024	Bergen, Norway	Deltares	
PASC24	https://pasc24.pasc-conference.org/	3-jun-2024		CERN	
15th International Meeting on Statistical Climatology	http://www.meteo.fr/cic/meetings/2024/IMSC/	24-jun-2024	Toulouse, France	CERFACS	Presentation
Institut für Energie- und Klimaforschung Seminar (internal)	10.5281/zenodo.13253918	08-jul-2024	Juelich	FZJ	Presentation

EOSC Symposium 2024	https://eosc.eu/events/eosc-symposium-2024/	21-oct-2024	Berlin, Germany	EGI	Conference Session, Booth
IBERGRID 2024	https://www.ibergrid.eu/2024-ibergrid-porto/	28-oct-2024	Porto, Portugal	EGI, CSIC, DESY, UPV	Talks
EGI2024	https://www.egi.eu/event/egi2024/	30-sep-2024	Lecce, Italy		F2F, booth, session
ICHEP	https://indico.cern.ch/category/11404/	18-jul-2024	Prague, Czech Republic		
BDVBF	https://european-big-data-value-forum.eu/	2-oct-2024	Budapest, Hungary		
CHEP24	https://indico.cern.ch/event/1338689/	16-oct-2024	Krakow, Poland		talks
Data Spaces Symposium	https://www.data-spaces-symposium.eu/	12-mrt-2024	Frankfurt, Germany		booth (federico)
EODC Forum	https://eodc.eu/5636-2/	10-jun-2024	Vienna, Austria	EGI, CERFACS, DELTARES, EODC, EURAC	F2F, Talks
TNC24	https://tnc24.geant.org/	10-jun-2024	Rennes, France		booth
ICOS	https://www.icos-cp.eu/news-and-events/science-conference/icos2024sc	10-sep-2024	Versailles, France		

3rd Destination Earth User eXchange	https://destination-earth.eu/event/3rd-destination-earth-user-exchange/	15-oct-2024	Darmstadt, Germany	Deltares, TU Wien, EGI	Session, Panel discussion, Poster, Presentation
Hydrology Software Days (Day 1) - User Day wflow and HydroMT	https://softwaredays.deltares.nl/-/hydrology-suite-user-days-day-1-2024	19-nov-24	Delft, Netherlands	Deltares	Presentation
SOSC 2024 Sixth International School on Open Science Cloud	https://agenda.infn.it/event/40829/	2-dec-2024	Bologna, Italy	INFN	Presentations, Hands-on-sessions

Annex 4 - 2025 Events

Event Name	Link	(start) Date	Partner	Reach[28]	
HIPEAC 2025	https://www.hipeac.net/2025/barcelona/#/	20-jan-2025	Barcelona	EGI, INFN, CSIC, UPV	Posters, Technical Workshops, Booth
ESA Digital Twin Earth Components: Open Science Meeting	https://nikal.eventsair.com/esa-digital-twin/#introduction	3-feb-2025	Frascati, Italy	EURAC	talk

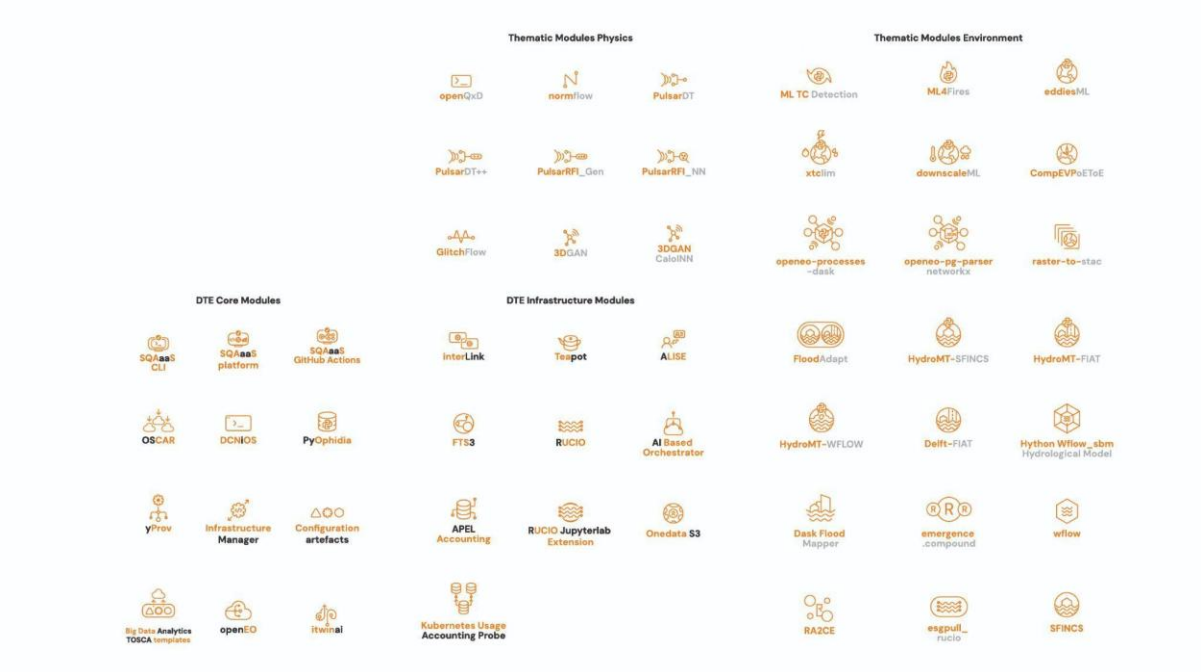
[28] Please note that 'Reach' is self-reported. In some cases, presentations take place at large events - in that case only an estimate of the participants in the session(s) where interTwin was presented and/or the event booth reached at the exhibition is given.

2025 CLIVAR Annual Workshop	https://www.clivar.org/news/clivar-climate-dynamics-panel-5th-annual-workshop	24-feb-2025	Lorne, Victoria, Australia	CERFACS	Poster
CERN Openlab Technical Workshop 2025	https://indico.cern.ch/event/1440389/	4-mar-2025	Geneva, Switzerland & Online	CERN, EURAC	**Presentation**
Data Spaces Symposium		12-mar-2025		EGI	Shared booth
KubeCon	https://kccnceu2025.sched.com/event/1tx7o/testing-ai-containers-for-digital-twins-in-science-a-cloud-hpc-workflow-matteo-bunino-cern-diego-ciangottini-infn	4-april-2025	London, UK	CERN, INFN	Presentation
EGU25	https://www.egu25.eu	27-apr-2025	Vienna, Austria	CERFACS, CMCC, EURAC, DELTARES, TU Wien	Sessions, posters, talks, short course, booth
X Meeting of Doctoral Students of the UPV	https://www.upv.es/contenidos/ENCDOC/index-en.html	22-may-2025	Valencia, Spain	UPV	presentation
EGI2025		2-jun-2025	Santander, Spain	all	booth

					sessions
ISC 2025	https://isc-hpc.com	10-jun-2025	Hamburg, Germany	CERFACS, CERN	BoF session
ESA Living planet 2025	https://lps25.esa.int/	23-jun-2025	Vienna, Austria	EODC, TU Wien, EURAC (pending abstract acceptance)	booth from EODC, talk, poster
PASC Conference	https://pasc25.pasc-conference.org/	16-jun-2025	Brugg, Switzerland	CERN, CSIC, Juelich	poster
EuCAIFCon 2025	https://agenda.infn.it/event/43565/overview	16-jun-2025	Cagliari, Sardinia, Italy	CERN	Poster
PASC25	https://pasc25.pasc-conference.org/	16-jun-2025	Geneva, Switzerland	CERN	Presentations
Big Data From Space 2025	https://www.bigdatafromspace2025.org/	22-jun-2025	Riga, Latvia	TU Wien	Workshop before conference
Living Planet Symposium				EURAC, CERN, UPV	
CERN OpenLab	https://indico.cern.ch/event/1545046/	28-jun-2025	Geneva, Switzerland	CERN	Lecture

#IGARSS2025			Brisbane, Australia	EURAC	

Annex 5 - Module Icons



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Annex 6 - Online Brochure (mock-up)