

ASHVIN's Newsletter #6

June 2023

We are happy to get back to you with fresh ASHVIN news!

ASHVIN's engagement in developing digital twin technologies for smarter and safer construction sites continues stronger than ever 🤖

At the start, the projects fixed ambitious goals for technical development, research and innovation - now, we share with you their status!

ASHVIN NEWS

6TH CONSORTIUM MEETING IN SWEDEN



The ASHVIN project is extended by 6 months, until March 2023, confirmed the European Commission. With this good news in mind, our partner [Plan B](#) hosted the 6th ASHVIN consortium meeting in Stockholm to discuss the next steps towards the final project months. The focus is to communicate, disseminate, and set a plan for the future exploitation of the ASHVIN Digital Twin solution.

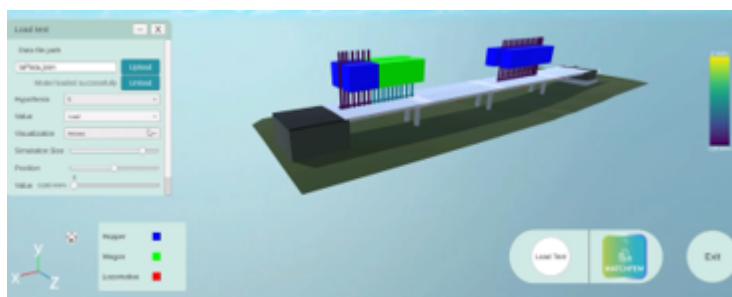
DIGITAL TWIN IN THE EUROPEAN MANNER



ASHVIN has ambitious goals not only in terms of technology development but also in terms of **developing a digital twin solution that respects the privacy and safety requirements of its end-users, i.e., construction site workers**. Our academic partner **EUR** interviews workers to understand their concerns and needs related to the usage of digital twin technology in their daily practice; the collected feedback is analysed to create best practices for digital twin-based monitoring. During the last project months, we will continue discussing the research outcomes of creating a Digital Twin solution that responds to European values, policies, and regulations!

OUR DEMONSTRATORS

NEW CONSTRUCTION PROJECTS ONBOARD ASHVIN DEMONSTRATORS



The ASHVIN digital twin toolkit, comprising 10 smart building solutions, is demonstrated at 10 European demonstration sites, covering the design, construction, and maintenance phases of construction sector projects. One of ASHVIN's ambitions is to open its digital twin platform to 50+ external construction projects enabling the collection and analysing of their data with the developed Digital Twin technologies. **Now, we have around 10 new projects to potentially join the ASHVIN's digital twin experiments.** We continue sharing more updates on our demonstration sites and use cases!

Airport Runway in Croatia

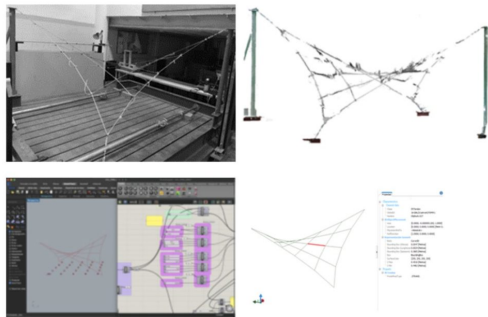
Data collection, condition assessment and maintenance planning model with the GISI and RISA tools are finalised!

Implementing ASHVIN digital tools for the airport focuses on digitalising airport infrastructure to optimize maintenance and operational planning. A digital twin containing information about the runway structure and embedded materials are developed in this demo.



[Find out more!](#)

ASHVIN Demo Site #9 Stadium Roof Structure



Laboratory mock-up test developed at UPC

Sports Stadium roof structure in Germany

A conundrum approached using remote sensing and reverse engineering!

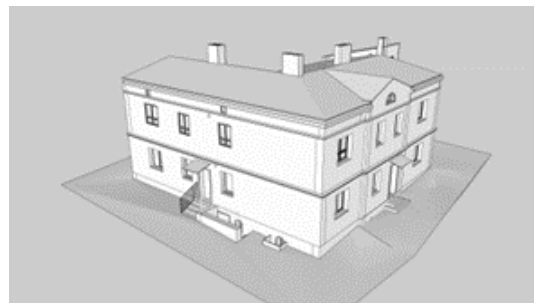
A complete static model of the cable net construction was done for the first time since the roof's existence. The core task was to determine the existing internal force or pre-stressing state in the cable net structure using novel calculation techniques in combination with cable force measurements. Generating a structurally meaningful Digital Twin of such a complex asset has represented a major challenge for the ASHVIN team.

[Find out why!](#)

Building renovation in Poland

Supporting renovation activities by providing existing building conditions!

This demo site showcases the renovation of a multi-family house built before WW2 to improve its energy efficiency. We are demonstrating how to develop a digital twin that accurately describes the building's energy behaviour. Ultimately, our solution will provide precise digital twin information of existing buildings as a baseline for better planning of the renovation process.



TECHNOLOGY

INNOVATION RADAR



The final project months are especially important for finalising the business plan of the ASHVIN solution lighting the way for exploiting the research results, including developed technologies and methodologies. **ASHVIN partners work on defining the exploitable innovation results and share them notably on the EU Innovation Radar Platform.**

[Learn more!](#)

THE AFTERMATH OF ASHVIN WEBINAR #3: MAINTENANCE OF CIVIL ENGINEERING ASSETS



The ASHVIN project hosted its second technical webinar presenting its innovation and results in deploying digital twin tools **for the maintenance of civil engineering assets during their entire life cycle**. This topic attracted much attention from our stakeholders' community, as over 130 participants registered, and 86 persons participated in this webinar. After this successful event, the ASHVIN team is preparing a #3 Technical Webinar, stay tuned to our communication channels!

Check it out!

Watch it!

FEATURED EUROPEAN AND INTERNATIONAL EVENTS

This year, our partners have spread ASHVIN's innovation at **over 10 scientific conferences and other related** events with keynote presentations, publications and academic lectures. Here are some insights from the recent participations:

NASCC The steel construction, Charlotte, USA



Last April, Rolando Chacon, associate professor at [UPC](#) and partner in ASHVIN, presented their research on demo site #7 Bridges in highway network in Spain” in a conference proceeding at NASCC - the Steel Conference in the US. This publication was entitled “**Seasonal Analysis of an 846-long steel box girder bridge using Terrestrial Laser Scanners (TLS) and FE-models**”.

[Discover more!](#)

The 3rd building digital twin international congress (BDTIC), Antwerp, Belgium



Last May, Lucian Ungureanu, Managing Director from partner [DigitAEC Matters](#), gave a presentation about the digital twin technologies of ASHVIN at BDTIC2023, which is a European event dedicated to Building Digital Twins and attracting numerous related EU-projects

[Check this experience out!](#)



This June, Joan Evelyn Ongoadia, a research assistant at [TUB](#), took part in the EPO Conference 2023 giving a presentation entitled “**Construction Knowledge: Emergent Insights from tacit knowledge experiences**”.

Find out the outcomes!

RESEARCH



RELEASED SCIENTIFIC PUBLICATIONS/CONFERENCES

This year, already **five scientific articles** related to **ASHVIN's research** have been submitted to scientific journals, and **two have already been approved for publication**. We will share these publications in our channels!



With [BIMprove](#), [COGITO](#) and [BIM2TWIN](#), ASHVIN has contributed to Open Research Letter entitled “**Ontologies in digital twin: Methodology, lessons learned and practical approach**”.

[Learn more!](#)

COMING UP NEXT!

Along with the technical development and running demonstration sites in the coming months, we will work on new scientific publications in varied academic conferences and peer-reviewed journals. Also, technical webinar #3 will be announced. As well as you will meet the ASHVIN team through our [#ImpactStories](#) - [#InnovationStories](#) campaigns and learn why our project is called ASHVIN.

Stay tuned!



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