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DELIVERABLE 5.3

Final period dissemination, exploitation, and communication review

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VERSION MANAGEMENT

Revision table

Version	Name	Date	Description
1	Olga Ishchenko	15 September 2025	First version
2	Julien Sudre	20 September 2025	Updated version
3	Inna Dimova	26 September 2025	Addition of exploitation content
4	Julien Sudre	29 September 2025	Final version

EXECUTIVE SUMMARY

We report here the performances of our dissemination, exploitation, and communication (DEC) actions in the second half of the project (period 2 – 18 months). We conclude on the whole project DEC efforts and present the strategy for maintaining the momentum after project completion.

TABLE OF CONTENT

1. Introduction

WP5 acts as an integrative work package, bringing together the results from all other project activities. It plays a central role in ensuring the dissemination, communication, and exploitation of the project's achievements. By enhancing the visibility of outcomes and knowledge generated across the consortium, WP5 makes them accessible to wider audiences. Its purpose is to foster learning and support the adoption of these results at the European level.

2. Dissemination

2.1. Dissemination management and actions carried out in the second period

2.1.1 Reminder: objective of the dissemination strategy

The objective of the dissemination strategy was to provide SmartWins consortium partners with a guide on how to spread the results of the project to the right stakeholders.

2.1.2 Subjects of dissemination

The provisional and non-exhaustive list of deliverables disseminated included potential technology developed during the project; internal networking activities reports (research assignments / staff exchanges / scientific workshops / training sessions); public event reports (scientific conferences / brokerage events / summer and winter schools / citizen events); research performance review reports; policy reports; research management and administration unit set-up and review reports at faculty level; new curricula; scientific articles and patents. The dissemination subjects also included events organised within the SmartWins project, techniques, new technology ideas, or any other outputs of the project.

2.1.3 Target audiences

Depending on the deliverable disseminated, the target audience consisted of academic peers in fields relevant to the project; students at Master's and PhD levels in the relevant fields; industrial companies (start-ups, SMEs, large corporations); private investors or public funding providers; construction-related policy makers in Lithuania; citizens in Lithuania and in the EU; other R&I projects in relevant fields; and NGOs tackling sustainable use of energy issues.

2.1.4 Dissemination methods and tools

The project coordinator (KTU) implemented across the SmartWins a document management system, used to store and manage digitally dissemination-related documentation. This system also allowed SmartWins partners to locate and access necessary

documents while ensuring they remained secure at all times. The system used was NextCloud, an EU-based GDPR compliant file storage supplier.

The document management system made it possible to keep track of any knowledge generated or used in the project, which proved useful in terms of exploitation of results as well. It also enabled easy dissemination since the tools allowed the control of the level of diffusion of the information.

Other dissemination methods and tools were tailored to each audience and each deliverable:

- A project website was used both as a communication tool and as a support for disseminating all the document-based deliverables of the project.
- Open science deliverables, including publications, open datasets, or open-source algorithms, were shared through each partner's repository of choice.
- Reports were produced for documentation purposes (staff exchanges, trainings, events, research results, etc.) and were shared through the SmartWins website, open science repositories, or on the European Commission Horizon Results Platform.
- Events were organised for different purposes:
  - One international scientific conference organised in Lithuania (T2.2).
  - Two Scientific workshops organised at the leading partners' facilities (T2.2)
  - Two brokerage events to network investors, entrepreneurs, and researchers (T3.1).
  - Two citizen events to interact with society and bridge the gap between citizens and research (T3.3).
  - Training sessions for researchers on scientific topics and research management, or entrepreneurship (T4.1). Although the training sessions were organised for the consortium members, they were filmed and openly shared online.
  - Three summer/winter schools, open to PhD students or post-docs (T4.2).
  - Participation in scientific conferences for knowledge sharing acquired in the SmartWins project with academic peers (T2.2).
  - A policy report on the research status of SmartWins topics in Lithuania (T3.4), which was disseminated to the Minister for the Environment, Ministry of Environment of the Republic of Lithuania,

A dissemination log was maintained on the document management system, in which each partner reported any dissemination activities performed. This allowed for easy collection of dissemination data for periodic reporting.

2.1.5 Dissemination management

SmartWins partners contributed to dissemination according to their role and resources, using all available tools — for instance, by sharing knowledge, skills, and experiences through partnership; by participating and presenting at conferences; by providing training; publishing papers; etc. Dissemination actions were coordinated by

Innotrope, who organised meetings, collected information, and chaired decision-making discussions on all dissemination-related issues. Each SmartWins partner nominated an internal contact point responsible for dissemination issues and reporting within their organisation.

2.1.6 Dissemination policy and rules

Dissemination activities in the project were interconnected with the intellectual property protection of the results and the background knowledge owned by the partners. In the context of the planned dissemination activities, the main intellectual property aspects were the following:

- Although the key route for dissemination in the project was to share results in open access, dissemination remained compatible with potential IP protection of the results.
- Any data not disclosed was clearly labelled as confidential, and appropriate measures were taken by the partners to maintain confidentiality, even after the end of the project.
- Each partner was given prior written notice of any planned dissemination activity, together with sufficient information about the intended dissemination.
- No dissemination took place without obtaining the necessary permission from a partner or third parties for the use of their copyright-protected content.
- All draft articles were checked for compatibility with the dissemination requirements as well as for similarity with published work. Copyright infringement was avoided.

The dissemination actions were carried out during the implementation of the project and beyond.

2.2. Dissemination performance in second half of the project

2.1.1 Scientific events

a) International scientific conference organised in Lithuania

Building Digital Twin Scientific Conference 2025 (BDTSC2025) - *https://bdtsc.ktu.edu/*
The conference was organised in conjunction with the annual event of the BDTIC association and with the SmartWins brokerage event.

This was the first conference of this kind and size organised by KTU on the topic. It was a great opportunity to highlight KTU's and partner's scientific expertise while also welcoming academics from elsewhere. We expect this event to be renewed after the project completion, which constitutes a good impact of the SmartWins project.

The keynote speakers were:

- Ioannis Brilakis – Digital Twinning the Built Environment

- Paris A. Fokaides – Transforming Built Environment Research through Digital Twin Integration
- Farzad Pour Rahimian – Integrated BIM, Blockchain, and Multimodal Data-Driven Digital Twins for AEC Industry Digitalization

b) Scientific workshops organised at the leading partners' facilities:

Two scientific workshops were organised by two of our partners:

- **1st workshop**: Introduction to Digital Twin Technology and Sustainable Energy Management, organized by Contecht GmbH, Berlin, Germany. 5-6 December 2024
- **2nd workshop**: Deployment and application of digital twins for monitoring, control and optimisation of energy performance, organized at PoliMi, Milan, Italy. 20-21 March 2025

The total number of participants in both workshops was 43. Some were from the consortium, especially PhD students of post-docs, some were external.

2.1.2 Scientific publications and presentation to scientific conferences

The project team presented their work in 8 presentations (posters or oral presentations) in 6 scientific conferences. The KTU team produced 9 publications in highly esteemed scientific journals - majority of them are Q1 journals.

Publication efforts are resumed in table 1.

Table 1 – Scientific dissemination in second half of the SmartWins project

Title of publication	Publication date	Name of the authors	Link to the publication	Type of the publication	Title of the journal	Journal ISBN	Open access	Peer-reviewed
A Comparative Life Cycle Assessment of Building Sustainability Across Typical European Building Geometries	1 September 2024	Paulius Spudys, Iryna Osadcha, Lina Morkunaite, Manhanga Fallon Clare, Phoebe Zoe Georgali, Egle Klumbyte, Andrius Jurelionis, Agis Papadopoulos, Paris Fokaides	https://www.sciencedirect.com/science/article/pii/S03605442401466X?via%3Dihub	Publication	https://www.sciencedirect.com/journal/energy	ISSN 0360-5442	Yes	Yes
From Physics to AI: Modelling Buildings' Thermal Dynamics	20-21 March, 2024	Lina Morkunaite, Adil Rasheed, Darius Pupeikis	https://aiaec2024.exordo.com/programme/presentation/33	Conference	AI in AEC, Helsinki, Finland		Yes	Yes
Systematic Review of Factors Influencing Students' Performance in Educational Buildings: Focus on LCA, IoT, and BIM	2 July 2024	Paulius Vestfal, Lina Seduikyte	https://www.mdpi.com/2075-5309/14/7/2007	Publication	Buildings, MDPI	ISSN: 2075-5309	Yes	Yes
Addressing the Conceptual Challenges in the Process of Updating the Geometry of Digital Twins of Built Assets	14-17 July 2024	Iryna Osadcha, Andrius Jurelionis, Vishal Singh	https://ec-3.org/publications/conference/paper/?id=EC32024_157	Conference	2024 European Conference on Computing in Construction Chania, Crete,		Yes	Yes

					Greece July 14-17, 2024			
Requirements for Geometrical Data in Digital Twin for Building Energy Modelling and Interoperability	25-28 June 2024	Iryna Osadcha, Andrius Jurelionis, Paris Fokaides	https://ieeexplore.ieee.org/document/10612457	Conference	SpliTech 2024Split		Yes	Yes
Capturing building data for establishing digital twins of buildings for quick energy performance assessment	3 October 2024	Timo Hartmann, Deepti Desai	https://itc.scix.net/pdfs/w78-2024-paper_39.pdf	Conference	CIBW78202 4		Yes	Yes
Patterns and trends in the use of RFID within the construction industry and Digital Twin architecture: a Latent Semantic Analysis	1 November 2024	Osadcha, I., Jurelionis, A., & Fokaides, P	https://www.tandfonline.com/doi/full/10.1080/14786451.2024.2421281	Publication	International Journal of Sustainable Energy	Online ISSN: 1478-646X	Yes	Yes
Digitizing Buildings Sustainability Assessment: Integrating Energy Audits, Operational Energy Assessments, and Life Cycle Assessments for Enhanced Building Assessment	7 January 2025	Spudys P., Jurelionis A., Fokaides, P.	https://www.sciencedirect.com/science/article/pii/S0360544225000714?via%3Dihub	Publication	Energy		Yes	Yes

Efficiency in Building Energy Use: Pattern Discovery and Crisis Identification in Hot-Water Consumption data	1 June 2025	Lina Morkunaite, Darius Pupeikis, Nikolaos Tsalikidis, Marius Ivaskevicius, Fallon Clare Manhanga, Jurgita Cerneckiene, Paulius Spudys, Paraskevas Koukaras, Dimosthenis Ioannidis, Agis Papadopoulos, Paris Fokaides	https://www.sciencedirect.com/science/article/pii/S0378778825003093	Publication	Energy & Buildings		Yes	Yes
Towards Interoperable Building Energy Performance Simulation: A Digital Twin Perspective	31-mai-25	Iryna Osadcha, Egle Klumbyte, Andrius Jurelionis, Paulius Spudys, Timo Hartmann, Shayan Saket, Damian Harasymczuk, Paris Fokaides	https://www.sciencedirect.com/science/article/pii/S2352710225012963?via%3Dihub	Publication	Journal of Building Engineering		Yes	Yes
A Multi-Criteria Decision-Making Approach for Sustainable Building Renovation: Integrating Expert Evaluation and Optimization Methods	4-6 June 2025	Paulius Spudys, Egle Klumbyte, Lina Morkunaite, Andrius Jurelionis, Paris Fokaides	TBD	Conference	TBD	TBD	Yes	Yes
Challenges in Digializing Indoor Environmental Monitoring: Insights from the IEQ Monitoring Sys-	4-6 June 2025	Paulius Spudys, Rossano Scoccia, Darius Pupeikis, Andrius Jurelionis, Paris Fokaides, Livio Mazzarella	TBD	Conference	TBD	TBD	Yes	Yes

tems at Kaunas University of Technology								
Integrating IAQ and LCA for Enhanced Sustainability inEducational Buildings: Insights from Field Study in Schools	4-6 June 2025	Paulius Vestfal, Lina Seduikyte	TBD	Conference	TBD	TBD	Yes	Yes

2.1.3 Brokerage events

Two brokerage events were organized by KTU with a total of participants in both events of 87.

1st Brokerage Event - Technologies for digitising the built environment an event for the public, business and the public sector by Kaunas University of Technology at K29, Konstitucijos pr. 29, Vilnius, 20 February 2024

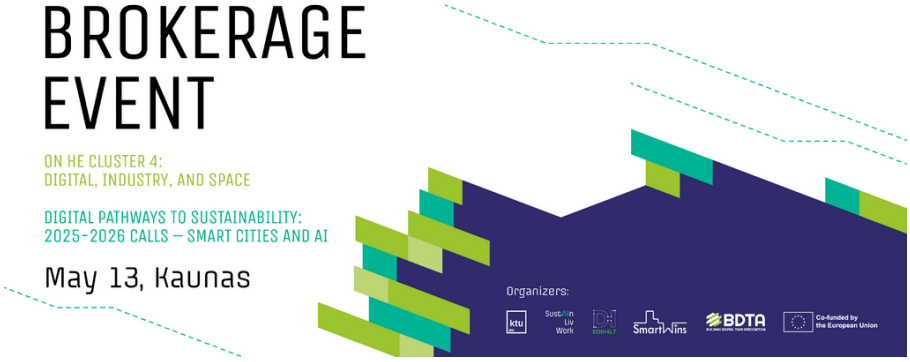
This first brokerage event was organised in Vilnius to attract more people than we could in Kaunas. We had the participation of a representative from the Lithuanian Research Ministry and several companies.

2nd International Brokerage Event - On HE Cluster 4: Digital, Industry, and Space. Digital Pathways to Sustainability: 2025 - 2026 Calls - Smart Cities and AI at Kaunas University of Technology, May 13 2025.

The second brokerage event was organized in Kaunas in collaboration with another Horizon Europe project where KTU is coordinator: the SustAInLivWork Teaming project. It was also organised in collaboration with the Building Digital Twin Association and a Lithuanian EDIH project.

The keynote speakers in this second brokerage event were:

- Anna Katrami, Health and Digital Executive Agency, European Commission: talk on the importance of European collaboration
- Deividas Petrulevičius, Lithuanian NCP (Digital technologies, industry and space). Talk on Navigating Horizon Europe 2025: Key Opportunities in Digital Technologies, Industry, and Space
- Dr. Paris Fokaides, Chief researcher at Faculty of Civil Engineering and Architecure, Kaunas University of Technology. Introduction to the SmartWins project.
- Prof. Dr. Agnė Paulauskaitė-Tarasevičienė, Head of Artificial Intelligence Excellence Centre, Kaunas University of Technology. Introduction to the SustAInLivWork.



2.1.4 Citizens events

Two citizens events were reported for the first reporting period. During the second reporting period a Policy report was handed over to the Minister for the Environment, Ministry of Environment of the Republic of Lithuania, as well as to representatives of the Kaunas and Vilnius city municipalities.

3. Exploitation

3.1. Initial exploitation strategy (as described in the description of actions)

Task 5.5 aimed to conduct a systematic and regular review of project mid-term and final results, options for intellectual property protection and potential exploitation paths. By involving dedicated committees and holding frequent meetings, the project team aimed to ensure a comprehensive understanding and effective utilization of the project results.

Facilitating knowledge transfer and leveraging project outcomes involved a series of steps, such as recognizing mechanisms and actions for exploitation. The emphasis was on pinpointing end users to guarantee the effectiveness and adoption of the results. SmartWins incorporated various activities throughout the project's duration to strengthen the dissemination and exploitation strategy, ensuring the highest impact and enhancing sustainability beyond EU funding. The project's wide geographic coverage established a solid groundwork for broader involvement, ultimately serving as the foundation for long-term sustainability of the project's discoveries.

As per the European Commission's official glossary, the results of an EU project encompass any tangible or intangible outputs, including data, knowledge, and information in various forms, irrespective of their IP protection. These outcomes can yield impact both during and after the EU funding phase. Exploitation, defined by the European Commission, involves utilizing these results in the development, creation, and marketing of products or processes, providing services, and participating in standardization activities. Exploiting research project results holds a dual significance, it not only offers society pathways for progress through the adoption of novel methodologies and tools but also contributes to the advancement of participating entities by disseminating their research and potentially gaining financial resources. In essence, society emerges as the ultimate recipient of research results and their exploitation from any standpoint.

3.2. Performance in second half of the project

Innotrope has synthesized the Dissemination, Exploitation, and Communication (DEC) plan (D5.1), which outlined strategic approaches for effective knowledge management in the context of exploitation planning. Collaborative tools and methodologies were employed to facilitate systematic gathering and organization of relevant data in a structured format. The primary objective was to enhance the achievement of project goals by optimizing the utilization of generated results.

The outcomes of SmartWins were dedicated for non-commercial exploitation, providing flexibility for partners or designated third parties to use licenses for such exploitation. A key principle guiding ownership and exploitation was that the default owners of the results are the producer(s). In cases where results are jointly generated by multiple partners, a joint ownership model was implemented. To proactively address potential

conflicts during the project, the consortium agreement explicitly specify the anticipated ownership for each result, establishing a clear framework for all involved parties. This approach ensured transparency and streamlines the responsible and fair utilization of SmartWins results.

3.3. Exploitable results

The primary objective of the project is to strengthen the capabilities of the project partners and especially those of the Kaunas University of Technology (KTU), particularly through its focus on the "Sustainable Energy in the Built Environment" Research Group (SEBERG). The key goal is to facilitate high-quality research in the realm of the next generation of digital twins. The fundamental concept driving SmartWins is the establishment of a collaborative network. This network seeks to foster strong connections between KTU and leading institutions that specialize in energy and sustainability assessments for buildings. The outcomes of the project encompasses research publications, research data, reports on research studies, and training materials from joint training activities.

The exploitable results developed until the end of the project and the exploitation paths are summarised hereafter:

- New scientific knowledge exploitable through direct knowledge transfer:
  - 10 peer-reviewed scientific publications, all published in Open access (see table 1).
  - New knowledge and training material resulting from the summer schools and training sessions, exploitable through direct knowledge transfer and in further research and educational activities.
  - Four summer schools have been done during the project – detailed description is included in Deliverable 4.1final educational report.
  - Eight single-day training sessions have been done during the staff exchanges in the framework of Task 4.1 “Training sessions”.
- Training and educational activities reported in Deliverable 4.1final educational report) are part of the project's broader dissemination, exploitation and communication strategy. Educational efforts contribute to the dissemination of knowledge and facilitate the exploitation of project results. In essence, the activities described in Deliverable 4.1 is a linchpin in the project's efforts to disseminate knowledge, build competence, and ensure the integration of research findings into educational programs as final exploitable result. It serves as a bridge between the generation of new knowledge (WP1), the management and enhancement of research competencies (WP2), the engagement with businesses and policymakers (WP3), and the broader goals of dissemination and exploitation (WP5).

These results are intended for non-commercial exploitation and were made accessible on Open Access. Thus, the project followed large diffusion and encouraged the use, distribution, of scientific knowledge, fostering a collaborations and further research.

3.4. IP protection of project results - patent applications / copyrights / trademarks / trade secrets / designs / databases

We have identified copyright as a main form of IP protection for the scientific publications, original content and databases (new knowledge structured and organised) that were developed. Authorship was fully respected in scientific publications and other results benefiting from copyright protection.

The SmartWins project does not include technological developments with industrial applicability, like web platform, module/online tool, or software framework, as results. Consequently, there are no patent applications related to such developments resulting from the project. The project partners do not intend to use training materials in commercial activities, consequently trademark protection is not applicable.

In terms of confidentiality, we have defined two distinct layers of protection: general rules in the Consortium Agreement and internal management best practices and *ad-hoc* confidentiality agreements only when deemed necessary.
The following non-disclosure agreement checklist is used in the project:

- Definition of what constitutes confidential information
- Confidentiality obligations scope precise definition of the permitted purpose of the disclosure
- List of the obligations of the party receiving the information
- List of any information considered as excluded
- Confidentiality obligations duration
- Determination of the entry into force of the NDA
- Determination of the period of the confidentiality obligation
- Liability clauses in case of breach of the contract
- Determination of the applicable law and jurisdiction.

3.5. Scientific/research data

To ensure the reproducibility of our research, where deemed possible, the raw research data were openly shared. Additionally, various research outputs, including code, hypotheses, research designs, drafts, samples, and any means to communicate and share research materials and results, will be made available on open platforms. This inclusive approach allows accessibility to anyone, including academic peers, citizens, and end-users.

- Efficiency in Building Energy Use: Pattern Discovery and Crisis Identification in Hot-Water Consumption data, https://www.sciencedirect.com/science/article/pii/S0378778825003093, data - https://data.mendeley.com/datasets/f22hz7hxbn/3
- A comparative life cycle assessment of building sustainability across typical European building geometries, https://www.sciencedirect.com/science/article/pii/S036054422401466X?via%3Dihub, data - https://data.mendeley.com/preview/yv723tdtv9?a=a329e775-899f-4ab2-aee3-37cf35807a96
- Digitizing buildings sustainability assessment: Integrating energy audits, operational energy assessments, and life cycle assessments for enhanced building assessment, https://www.sciencedirect.com/science/article/pii/S0360544225000714?via%3Dihub#da0010, data - https://data.mendeley.com/datasets/pv3x6c56bs/1

Sensitive data were withheld from publication on open platforms. This cautious approach aims to safeguard proprietary information while still fostering transparency and collaboration in the research community, guided by the oversight of the DEC committee and the project's coordinator.

Databases organising and structuring research benefit from copyright protection.

3.6. Collaboration agreements

As a result of a brokerage events organised under the SmartWins project, two formal collaboration agreements were signed, contributing to the project's objective to create linkages with businesses and provide access to the methodology to support open innovation.

The agreements signed establish bilateral cooperation between KTU and the Partner institution, with the aim of fostering scientific integration and strengthening the link between research activities and business in the fields of digitalisation, circular construction, and energy-efficient building renovation.

One of the agreements was signed with **UAB Iremas**, legal entity code 256906220, registered office address Jonalaukio k. 1, Jonavos sen., LT-55296 Jonavos raj. The agreement is due to 31 May 2030. UAB Iremas is a Lithuanian company specialising in industrial maintenance, engineering solutions, and infrastructure services. UAB Iremas is a valuable industry partner that can provide a real-world application environment for digital and circular construction innovations.

The second agreement was signed with **Kauno būsto modernizavimo agentūra**, legal entity code 306029595, registration address Europos pr. 121, LT-46339, Kaunas. The agreement is due to 30 April 2030. This partner is a municipal agency whose main activity is the coordination and implementation of residential renovation and energy

efficiency programmes in Kaunas. Such cooperation creates the environment for research and development, as well as the testing and deployment of BIM and digital twin-based frameworks solutions for sustainable and energy-efficient residential sector. Both cooperations includes, but are not limited to:

- Joint development and implementation of research related projects.
- Co-creation of scientific developments and exchange and validation of scientific and technological information.
- Collaboration in addressing technological challenges and creating conditions for applied research.
- Providing opportunities for university staff and students to gain insights into technologies and innovations implemented within the Partner Institution, relevant to both research and education.

3.7. Usage of external support and tools (e.g. Horizon Booster)

The consortium has applied for Horizon Booster support on dissemination and exploitation of project results. After a preliminary assessment the support services started in November 2024 by the provision of a preliminary delivery plan including and Booster Service roadmap. We had several organisational meetings and have completed a readiness assessment tool helping the project to define the key exploitable results reported in this DEC plan. An entry level consultation has been provided and guided us in the clarification of our IP and exploitation strategy reported here. Since our project results will not be commercially exploited, the exploitation strategy beyond the project will focus on further research and training activities and in the context of a follow up research project where most of the consortium partners are involved.

3 Communication

3.3 Communication strategy for second half of the project

3.3.1 SmartWins target audiences

The target audiences are the same as those targeted for dissemination.

3.3.2 Objectives of the communication plan

The objective of the communication plan is three-fold:

1. Promote SmartWins' activities and results to all target audiences.
2. Transmit general knowledge about digitizing buildings sustainability performance assessment towards a resilient and carbon neutral built environment to EU citizens.
3. Demonstrate the value of the Horizon Europe funding

3.3.3 Communication actions, methods, and channels

A communication committee, chaired by Innotrope and grouping all communication experts of all the partners, was set up at the beginning of SmartWins project. The terms of reference of the communication committee included the preparation of the final communication plan and the implementation of the communication actions. Communication actions were tailored to each partner's country specificities. The committee also monitored the communication action performance indicators, reported them to the project coordinator, and implemented potential corrective measures, should the KPIs be unsatisfactory.

A project visual identity was produced at the beginning of the project consisting in a design charter, to help unify all the productions of the project and help target audiences identify the project. All dissemination and communication tools and activities included the project acronym, the project logo and acknowledgement to EU funding. All the partners of the consortium were informed of their obligation to acknowledge the EU funding in any of their communication/dissemination.

A project logo has been created:

A graphic charter has been created. It includes:

- The colours: orange #E85012, black #000000, white #FFFFFF, grey #C4C1C0.
- The fonts: **OSWALD FOR TITLES,** Roboto for texts

- The font sizes
- The margins and paddles

One presentation and one document templates have been created and shared with the consortium.

3.3.4 Internal communication plan

Internal communication was tailored to each partner, depending on its size, organisation, or internal culture, and addressed not only to those members involved in SmartWins project but in the entire community. For internal communication purposes, each partner was allowed to employ internal emails, newsletter distributed internally, small-scale events to promote the project, invitation of employees to join the project's events etc.

3.3.5 External communication plan

The external communication targeted any relevant audience outside the consortium partner institutions. With regard to the online communication (T5.2), Innotrope hosts a project website to describe the project and consortium and publish search engine optimised (SEO) news related to the project as well as all the public documents of the project. The website was published in English and in the other languages of the consortium (Lithuanian, Greek, Italian and German) to allow local reach. The website was also used to promote all the project events and manage the subscriptions. The performances of the website were monitored.

Social media (Twitter, Facebook, Youtube) were used to share news, event announcements and other relevant dissemination material of SmartWins project.

With regard to the offline communication (T5.3), printable promotional materials such as leaflets or posters were produced and distributed to the audiences of the diverse communication events. Online versions are also available on the project's website.

3.4 Performance in the second-half of the project

3.4.1 Website

A project website was created and was reported in the first-half project report. The website address is smartwins-project.eu

During the second half the website was updated with news and events announcements and publications of the project. In terms of news, we have produced the following content:

- 17/04/2024: Summer School announcement

- 17/12/2024: Announcement on the scientific conference: Building Digital Twin Scientific Conference (BDTSC) 2025: Defining the Future of Sustainable Infrastructure
- 17/12/2024: Congress announcement: Building Digital Twin International Congress (BDTIC) 2025: Advancing Digital Twin Technologies
- 20/01/2025: Business training session in Berlin announcement
- 20/01/2025: Data science training in Thessaloniki announcement
- 26/01/2025: SmartWins Summer School 2025 announcement

With regards to the analytics of the website, we use Matomo. The report for period 2 is the following:

- Number of visits: 2,236 – among which 2,050 unique visitors (90%) and returning visitors: 383 (15% of unique visitors).
- Page views per visitor (average): 1,8 page / visit
- Bounce rate: 74% - for returning visitors: 54%.
- Average duration of visits: 1 min 10 s – for returning visitors: 1min 17 s
- Origin of visits:
    - Search engines: 761 (28 %)
    - Social networks: 24 (1 %)
    - Direct entry: 1353 (60 %)
    - Referring websites: 81 (3.6 %)

From these analytics, we can infer the following:

- We have a high rate of unique visitors, and a decent rate of returning visitors, which means we are capable of attracting new audiences and retain a good share.
- However, the number of pages seen per visit, the duration on the website, and the bounce rate mean that a high rate of visitors only briefly interact with our website. These statistics are much better for the returning visitors, which means that for them, our website is more interesting.
- We did not conduct any campaign on search engines, which means that the share of visitors coming from them is very high given the lack of campaign. It means that our organic ranking exclusively coming from our SEO efforts and the quality of our content payd off.
- On the contrary, the share of visitors coming from social media is low. Although we had a decent performance on them (see next section), it shows that social media are a difficult means to redirect visitors to the website.
- Two thirds of the origin of visitors come from direct search, which is very high. These are people who are aware of our website URL and directly type it. These people are likely to be the ones we approached during events.

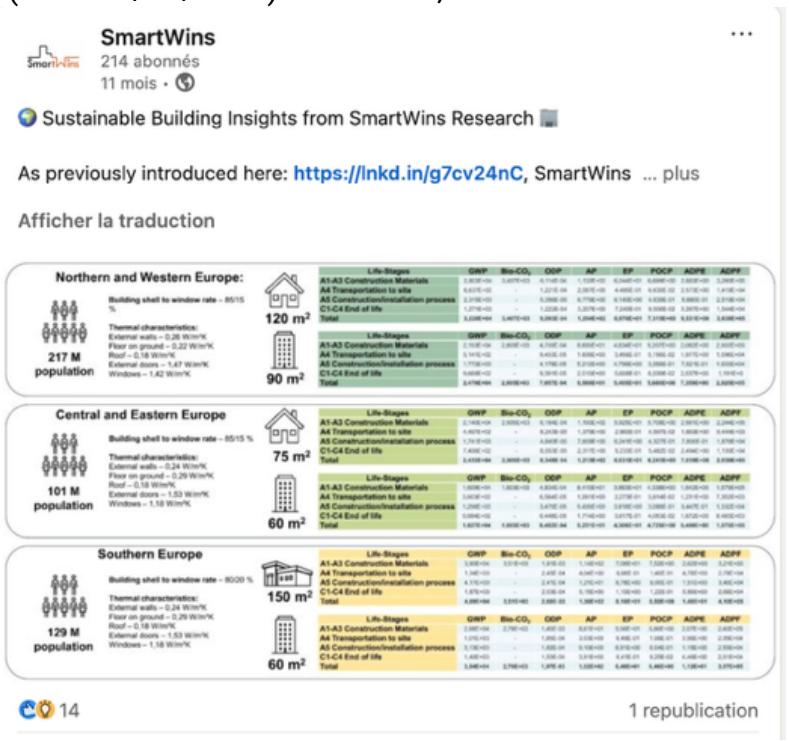
- We have a decent share of people coming from referrals, which means that our project is promoted on other websites (mostly our partner institusions' websites, which is a good thing too.

3.4.2 Communication on social media

Based on the statistics of our first period, we decided to shift Facebook and Twitter for too low audiences on these networks. On the contrary, we had good results on LinkedIn and continued with this network. It is important to notice though that LinkedIn penalises the link to external websites, which explains why social networks account for only one per cent of our website audiences (events were a much better channel).

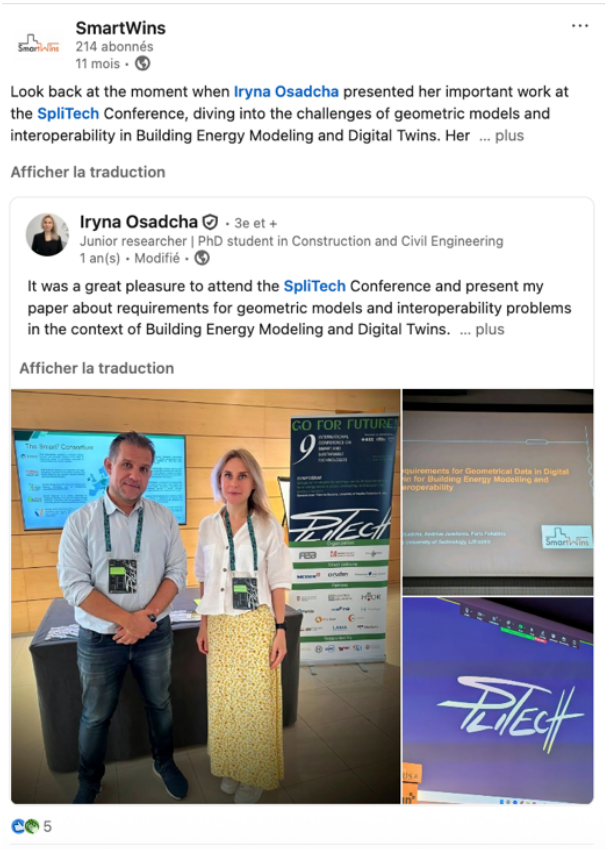
We review below the post we made in period 2[1]:

- Post on the research results publication about comprehensive Life Cycle Assessment (LCA) of building sustainability across typical European building geometries (date: 24/09/2024): 379 views, 13 likes.

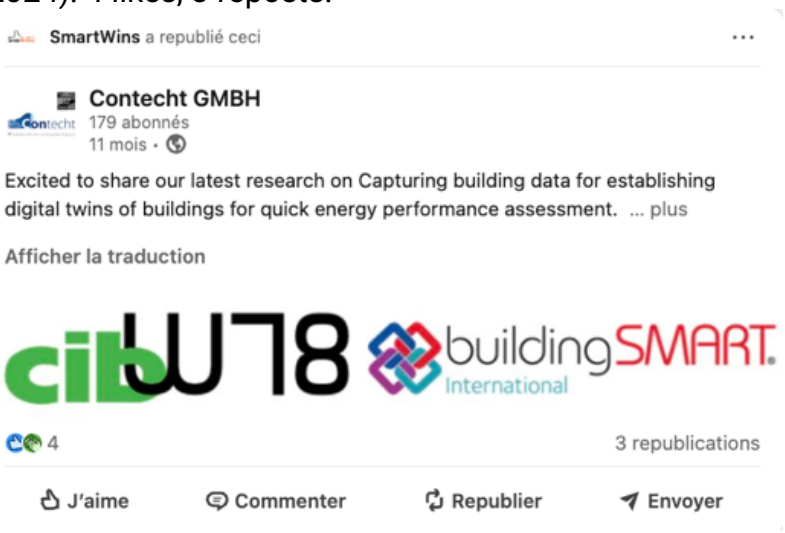


[1] Unfortunately, LinkedIn only maintains a 12 months history of post, which is a new feature that did not exist at the beginning of this reporting period. We therefore have no tracability of the first 6 months of the period.

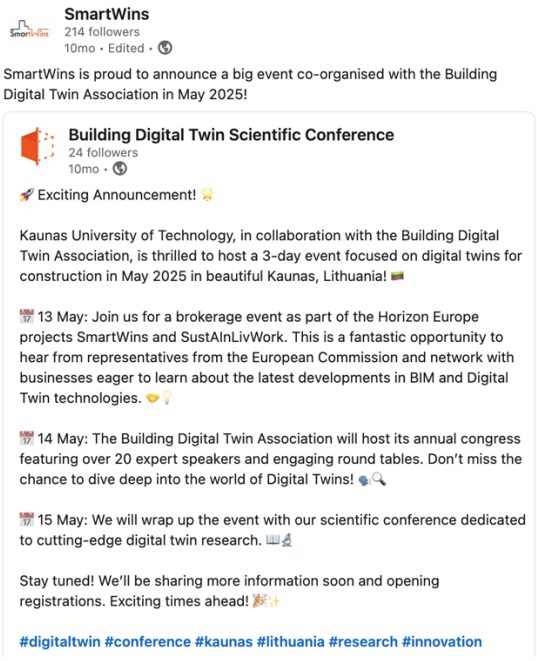
- Post about Iryna Osadcha presentation at the SpliTech Conference, diving into the challenges of geometric models and interoperability in Building Energy Modeling and Digital Twins (date: 04/10/2024): 60 views, 5 likes.



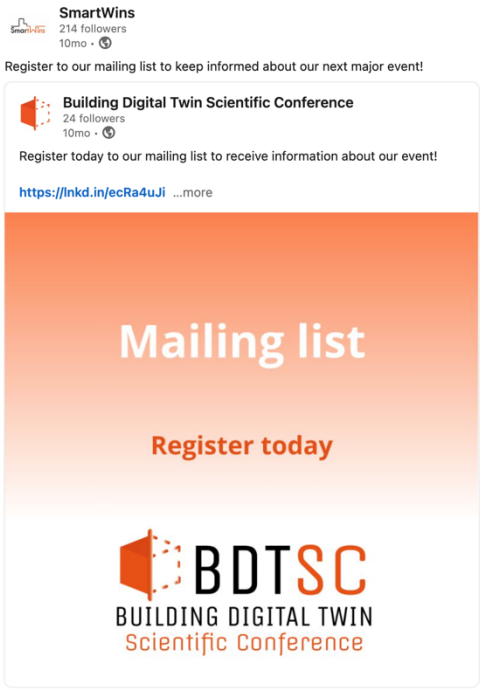
- Repost about research results publication: Capturing building data for establishing digital twins of buildings for quick energy performance assessment (date: 08/10/2024): 4 likes, 3 reposts.



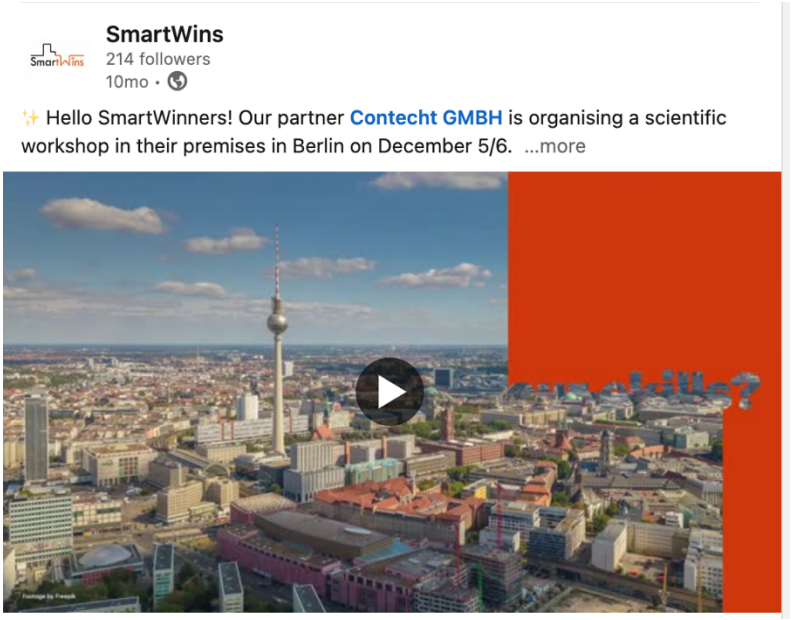
- Announcement of May events (date: 21/10/2024). 525 views, 19 likes, 1 comment, 4 reposts.



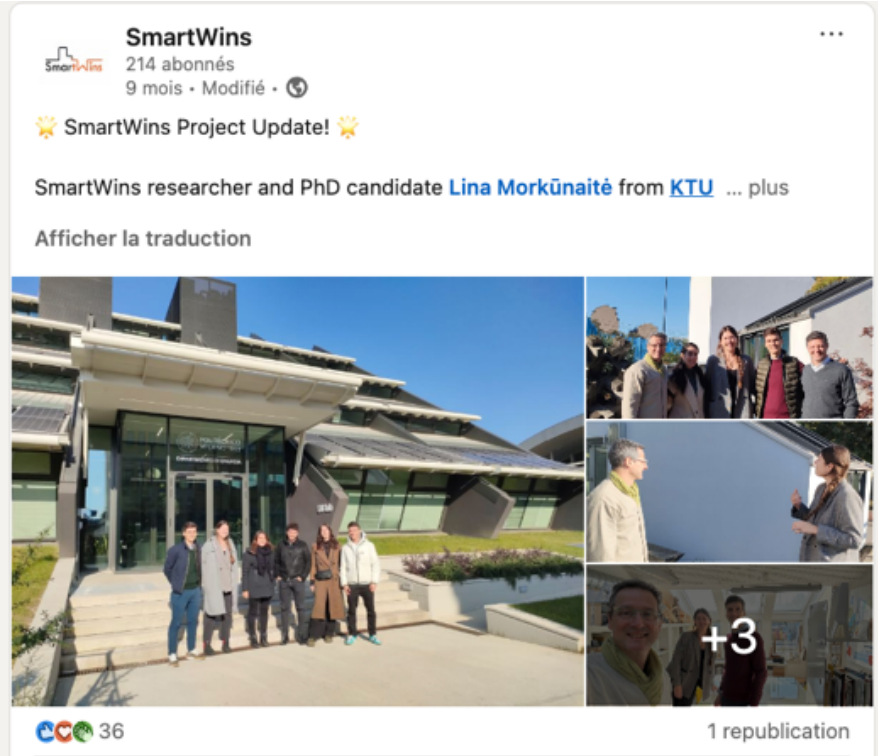
- Post to announce mailing list registration for conference (date: 22/10/2024). 135 views, 5 likes.



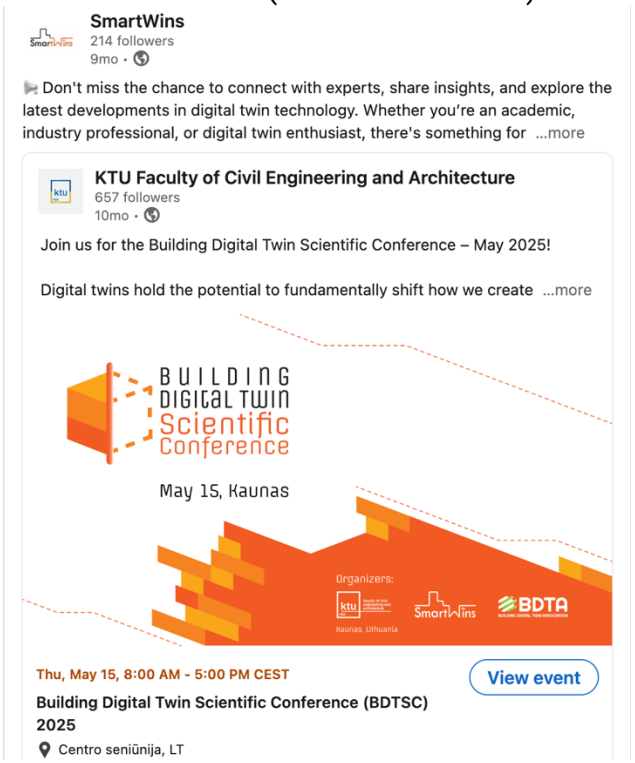
- Video to annonce the Berlin scientific workshop (date: 05/11/2024). 85 views, 11 likes.



- Post about the staff exchange between KTU Faculty of Civil Engineering and Architecture and VELUX LAB, collaborating with Dipartimento di Energia - Politecnico di Milano (date: 20/11/2024): 927 views, 36 likes, 1 reposts.

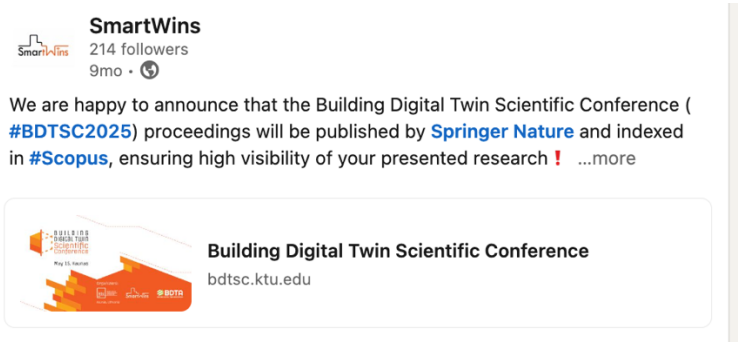


- Post to introduce the conference (date: 27/11/2025). 155 views, 13 likes.



- Post to introduce the conference's topics (date: 03/12/2024). 300 views, 14 likes.

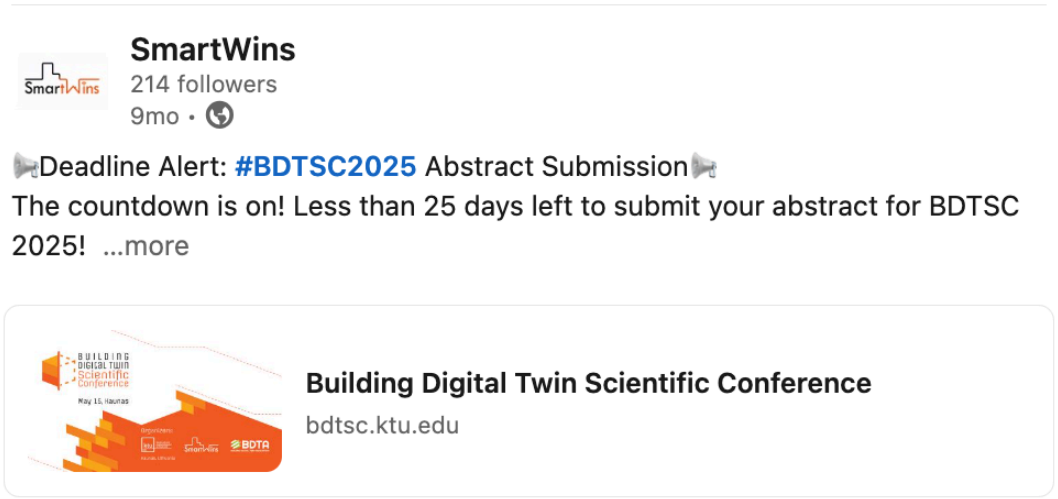
- Post to present the proceedings of the conference to be published in Springer (date: 5/12/2024). 230 views, 10 likes, 1 repost.



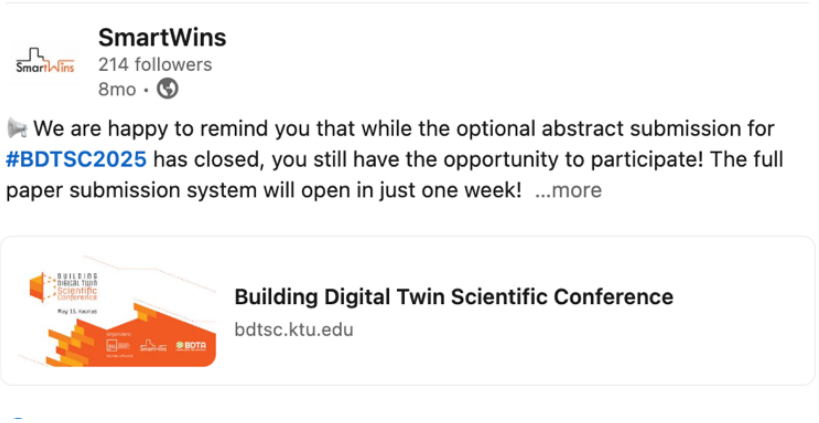
- Post about the presentation of the "Policy Report" to the Lietuvos Respublikos aplinkos ministerija / Ministry of Environment of the Republic of Lithuania (date 06/12/2024): 299 views, 15 likes, 1 repost.

- Post about the first scientific workshop organized by Contecht GMBH in Berlin (date: 10/12/2024): 193 views, 14 likes.

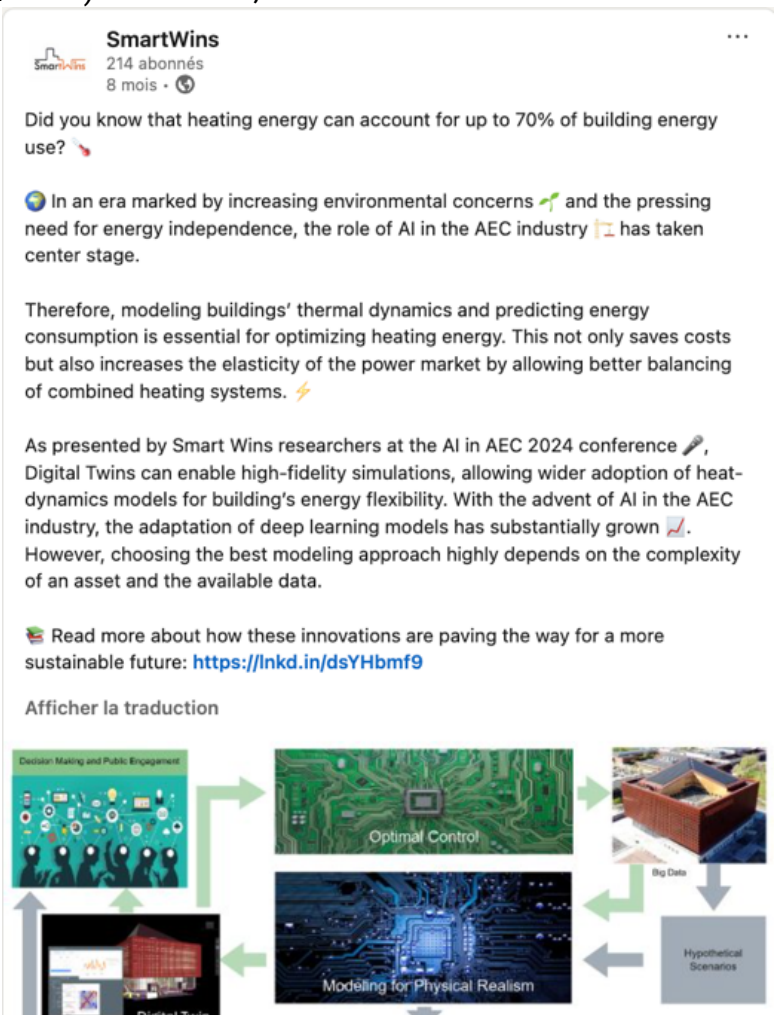
- Post to announce conference paper submission (date: 11/12/2024). 331 views. 8 likes.



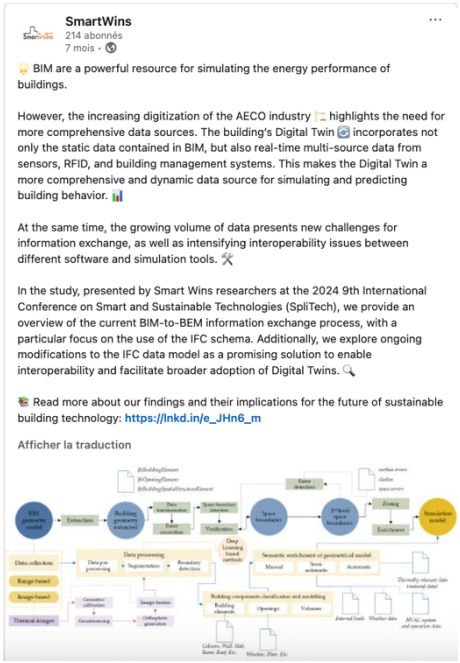
- Post to remind paper submission (date: 13/01/2025): 134 views, 7 likes, 1 re-post.



- Post about consortium researchers participation in AEC 2024 conference (date: 14/01/2025): 364 views, 15 likes.



- Post about SmartWins researchers presentations at the 2024 9th International Conference on Smart and Sustainable Technologies (SpliTech) (date: 21/01/2025): 397 views, 16 likes.



SmartWins
214 abonnés
7 mois ·

BIM are a powerful resource for simulating the energy performance of buildings.

However, the increasing digitization of the AECO industry highlights the need for more comprehensive data sources. The building's Digital Twin incorporates not only the static data contained in BIM, but also real-time multi-source data from sensors, RFID, and building management systems. This makes the Digital Twin a more comprehensive and dynamic data source for simulating and predicting building behavior.

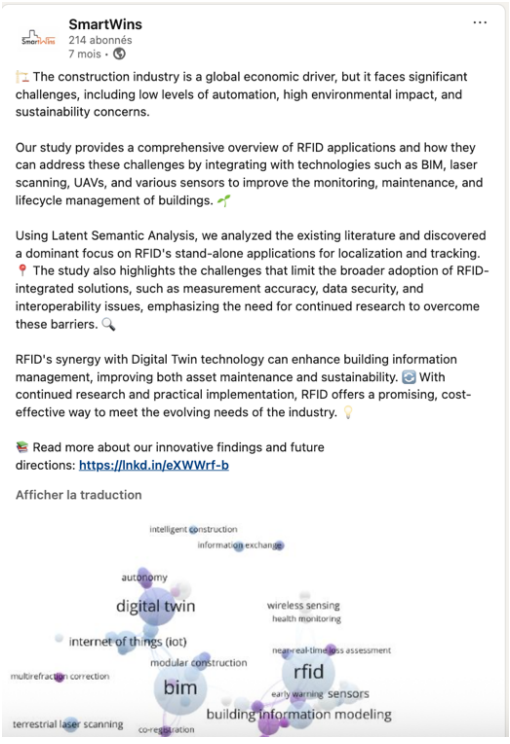
At the same time, the growing volume of data presents new challenges for information exchange, as well as intensifying interoperability issues between different software and simulation tools.

In the study, presented by Smart Wins researchers at the 2024 9th International Conference on Smart and Sustainable Technologies (SpliTech), we provide an overview of the current BIM-to-BEM information exchange process, with a particular focus on the use of the IFC schema. Additionally, we explore ongoing modifications to the IFC data model as a promising solution to enable interoperability and facilitate broader adoption of Digital Twins.

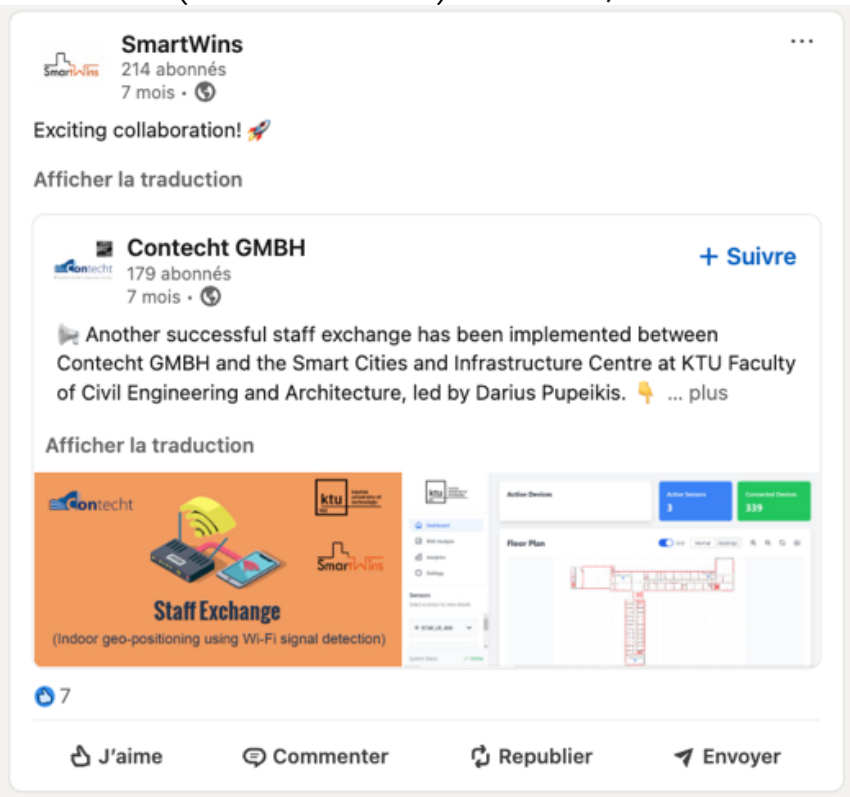
Read more about our findings and their implications for the future of sustainable building technology: https://lnkd.in/e_JHn6_m

Afficher la traduction

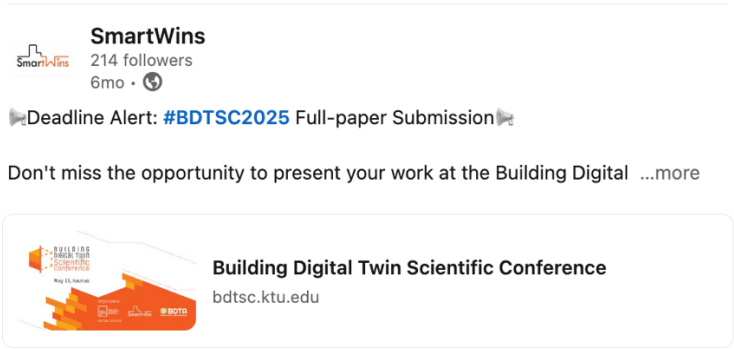
- Post about new consortium results publication: Patterns and trends in the use of RFID within the construction industry and Digital Twin architecture: a Latent Semantic Analysis (date: 28/01/2025). 299 views, 13 likes.



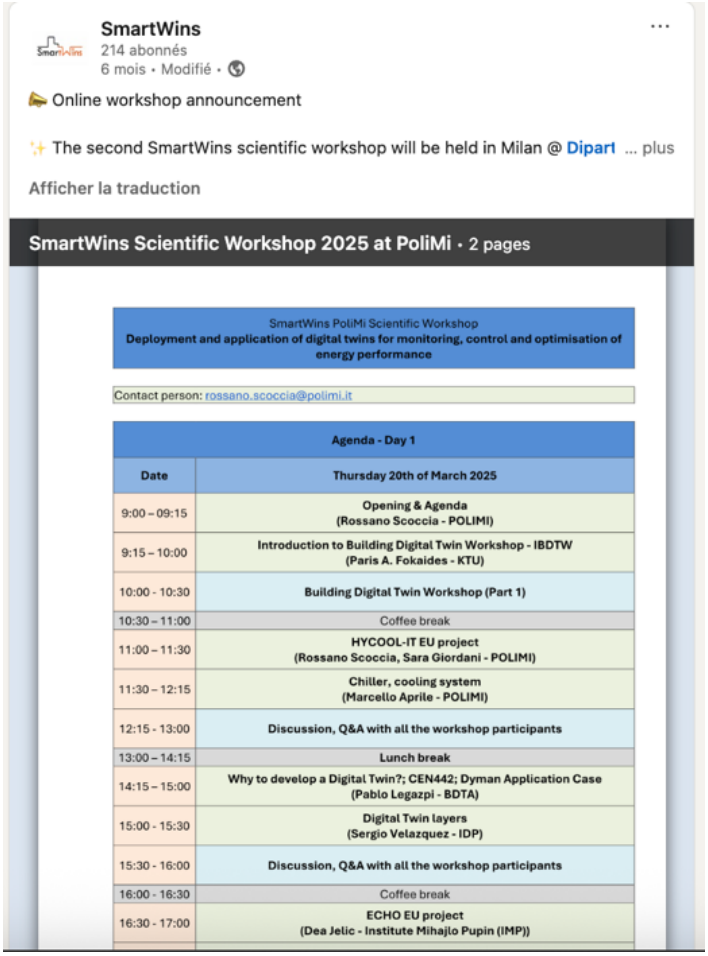
- Post on successful staff exchange implemented between Contecht GMBH and the Smart Cities and Infrastructure Centre at KTU Faculty of Civil Engineering and Architecture (date: 12/02/2025): 113 views, 7 likes.



- Post to announce deadline for paper submission to conference (date: 04/03/2025). 352 views, 10 likes, 1 comment, 5 reposts.



- Post to announce the SmartWins scientific workshop in Milan (date: 14/03/2025): 539 views, 26 likes, 3 reposts.



SmartWins
214 abonnés
6 mois • Modifié •

Online workshop announcement

The second SmartWins scientific workshop will be held in Milan @ Dipart ... plus

Afficher la traduction

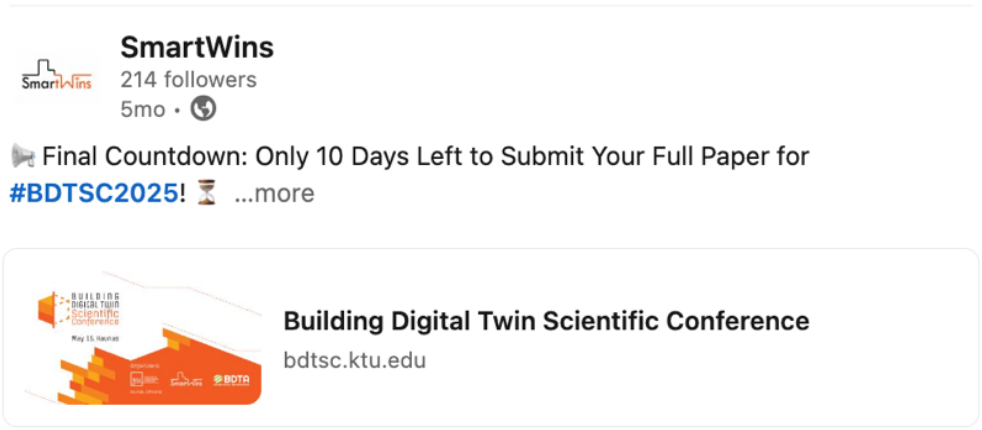
SmartWins Scientific Workshop 2025 at PoliMi • 2 pages

SmartWins PoliMi Scientific Workshop
Deployment and application of digital twins for monitoring, control and optimisation of energy performance

Contact person: rossano.scoccia@polimi.it

Agenda - Day 1	
Date	**Thursday 20th of March 2025**
9:00 – 09:15	**Opening & Agenda** (Rossano Scoccia - POLIMI)
9:15 – 10:00	**Introduction to Building Digital Twin Workshop - IBDTW** (Paris A. Fokaides - KTU)
10:00 - 10:30	**Building Digital Twin Workshop (Part 1)**
10:30 – 11:00	Coffee break
11:00 – 11:30	**HYCOOL-IT EU project** (Rossano Scoccia, Sara Giordani - POLIMI)
11:30 – 12:15	**Chiller, cooling system** (Marcello Aprile - POLIMI)
12:15 - 13:00	**Discussion, Q&A with all the workshop participants**
13:00 – 14:15	**Lunch break**
14:15 – 15:00	**Why to develop a Digital Twin?; CEN442; Dyman Application Case** (Pablo Legazpi - BDTA)
15:00 - 15:30	**Digital Twin layers** (Sergio Velazquez - IDP)
15:30 - 16:00	**Discussion, Q&A with all the workshop participants**
16:00 - 16:30	Coffee break
16:30 - 17:00	**ECHO EU project** (Dea Jelic - Institute Mihajlo Pupin (IMP))

- Post to announce final days until deadline to apply for a presentation at conference (date: 21/03/2025): 257 views, 10 likes, 2 reposts.

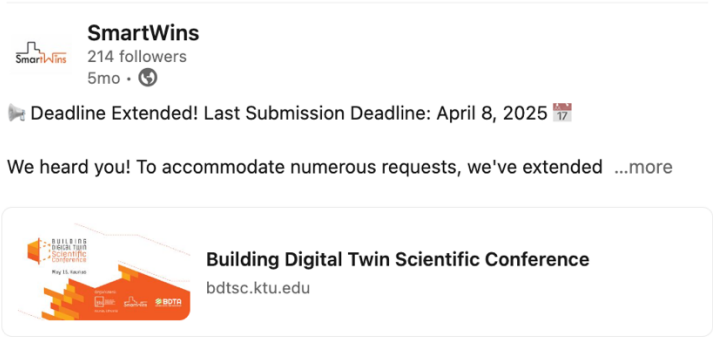


SmartWins
214 followers
5mo •

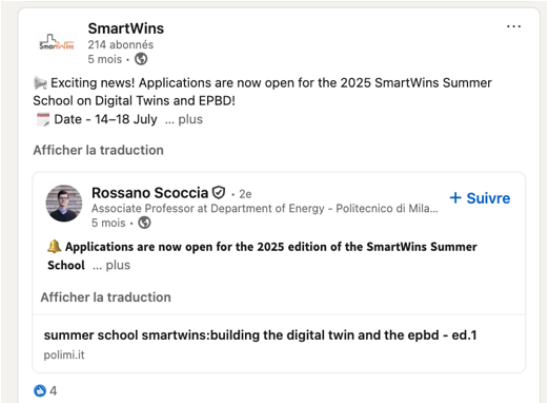
Final Countdown: Only 10 Days Left to Submit Your Full Paper for #BDTSC2025! ⏳ ...more

Building Digital Twin Scientific Conference
bdtsc.ktu.edu

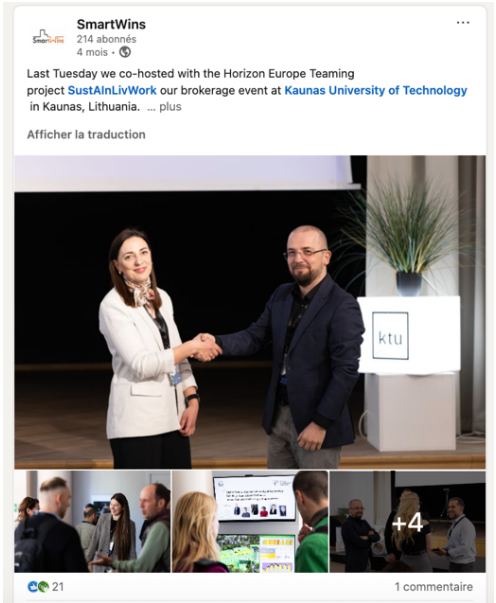
- Post to announce the deadline extension for presentation registration to conference (date 31/03/2025): 223 views, 8 likes, 1 repost.



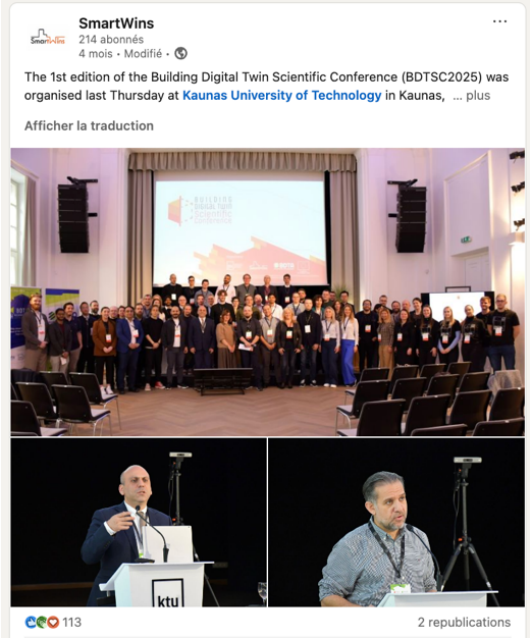
- Post to announce the open applications for SmartWins Summer School on Digital Twins and EPBD in Milan (date: 17/04/2025): 212 views, 4 likes.



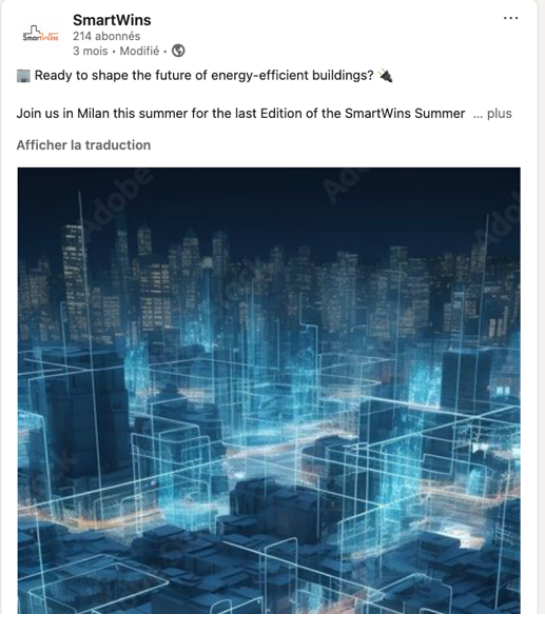
- Post about brokerage event (date: 16/05/2025): 397 views, 21 likes, 1 comment



- Post reflecting 1st edition of the Building Digital Twin Scientific Conference (BDTSC2025) was organised last Thursday at Kaunas University of Technology in Kaunas, Lithuani (date: 16/05/2025): 1810 views, 113 likes, 2 reposts.



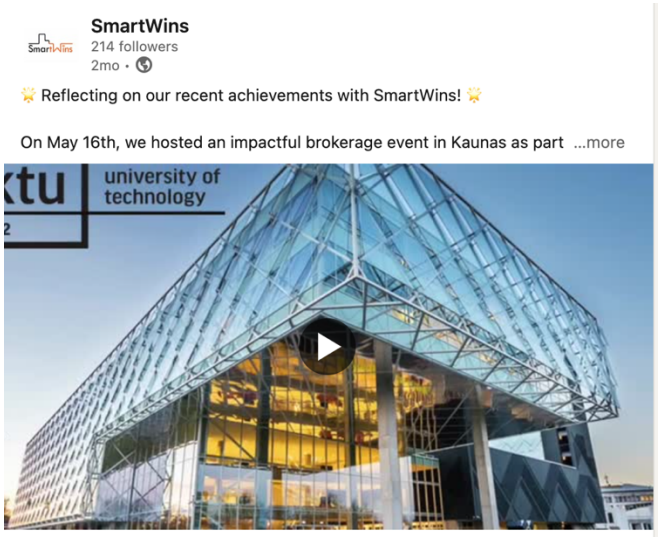
- Post to announce the SmartWins Summer School in Milan (date: 10/06/2025): 394 views, 16 likes, 2 reposts.



- Post announcing our new project (without naming it yet) funded through the work done in SmartWins (date: 10/06/2025): 467 views, 18 likes, 1 comment, 1 repost.

- Post on the participation to the CLIMA conference (date: 12/06/2025). 700 views, 1 repost.

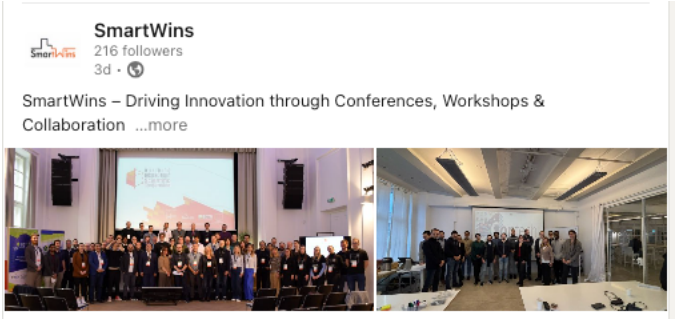
- Video on the brokerage event (date: 25/06/2025): 100 views, 14 likes.



- Post on the gender equality seminar at KTU (date: 11/09/2025): 138 views, 12 likes.

- First project summary post on training achievements (date: 24/09/2025): 651 views, 20 likes.

- Second project summary post on scientific achievements (date: 25/09/2025): 251 views, 11 likes.



- Third project summary post on links with society (date: 26/09/2025): 332 views, 20 likes.

- Fourth project summary post on grant applications (date: 29/09/2025): no statistics available – posted the day of submission of this report.

- Final post concluding the project with the transition to Credible (date: 30/09/2025): no statistics available – posted after the day of submission of this report.

The video content shared on LinkedIn is hosted and available on YouTube and on our website.

3.5 Visuals

We produced different visuals for the project dissemination and events, they are all presented in annexes.

3.6 Future strategy for beyond the project

We are starting to produce content that review the project achievements and will publish them little by little. The fact that we have one an RIA project on the same theme as SmartWins will make a good platform to support the legacy communication. This project starts just after SmartWins ends (1st October 2025).

The website will be maintained live. We plan to use it to regularly share content about digital twins, turning is as a platform for research and general content sharing.

Disclaimer

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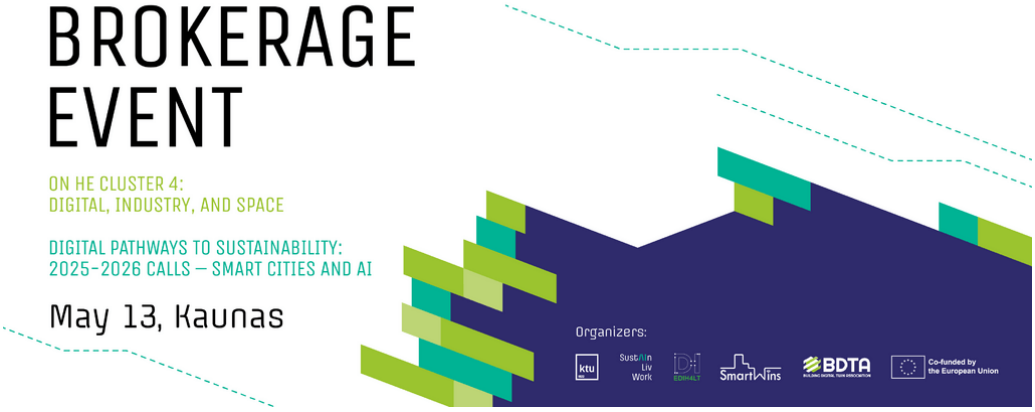
4. ANNEXES

4.1. Brokerage event visuals

Social media small banner



Social media large banner

Name tag


BROKERAGE EVENT
ON HE CLUSTER 4: DIGITAL, INDUSTRY, AND SPACE
DIGITAL PATHWAYS TO SUSTAINABILITY:
2025-2026 CALLS – SMART CITIES AND AI
PAULIUS
SPŪDYS
KAUNAS UNIVERSITY OF TECHNOLOGY
Organizers:
ktu
SmartWins
BDTA
Co-funded by
the European Union
SustAIn
Liv
Work

Programme

BROKERAGE EVENT

9:30 Registration & Welcome Coffee

10:00 Event Opening

10:15 Speaker 1. **The importance of European collaboration:** Anna Katrami, Health and Digital Executive Agency, European Commission

10:35 Speaker 2. **Navigating Horizon Europe 2025: Key Opportunities in Digital Technologies, Industry, and Space.** Deividas Petrulevicius, Lithuanian NCP (Digital technologies, industry and space)

10:55 Speaker 3. **SmartWins presentation**. Dr. Paris Fokaides.

11:05 Speaker 4. **A Catalyst for Innovation: Centre of Excellence of AI for Sustainable Living and Working.** Prof. Dr. Agnė Paulauskaite-Tarasevicienė, Head of Artificial Intelligence Excellence Centre, KTU

11:15 Pitching Session: Project Ideas & Partner Search

12:00 Lunch Break

13:00 Panel Discussion: Best Practices for European Collaboration

13:30 1:1 Brokerage Meetings

15:00 Closing Remarks & Next Steps

Organizers:

ktu · SustAIn Liv Work · EDIH4LT · SmartWins · BDTA BUILDING DIGITAL TWIN ASSOCIATION · Co-funded by the European Union

4.2. Scientific conference visuals

Conference logo

Social media banner

Roll up


SmartWins
The overall objective of the project "Boosting Research for a Smart and Carbon Neutral Built Environment with Digital Twins – SmartWins" is to build the capacities for the Kaunas University of Technology in Lithuania, through its "Sustainable Energy in the Built Environment" Research Group within the Faculty of Civil Engineering and Architecture to conduct high-quality research on the topic of next generation digital twins, applied for allowing the transition to a smart, sustainable, resilient and carbon neutral built environment.
Partners:
ktu faculty of civil engineering and architecture
CERTH
Contecht
POLITECNICO MILANO 1863
innotrope
Funded by the European Union
This project has received funding from the European Union's Horizon Europe research and innovation program under grant agreement No 101078997.

Programme

BUILDING DIGITAL TWIN Scientific Conference

09:00 Opening of the conference

09:15 Keynote, Prof. Dr. Ioannis Brilakis – Digital Twinning the Built Environment

09:40 Keynote, Dr. Paris A. Fokaides – Transforming Built Environment Research through Digital Twin Integration

10:05 Keynote, Prof. Dr. Farzad Pour Rahimian – Integrated BIM, Blockchain, and Multimodal Data-Driven Digital Twins for AEC Industry Digitalization

10:30 Coffee break

Session 1: Digital Twin Frameworks, Standards, and Interoperability.

Session Chair: Prof. Dr. Farzad Pour Rahmian

11:00 Dr. Karim Farghalay: "Design Wire Engineer Leverage and Transfer (DWELT) framework for building level Digital Twins"

11:15 Ms. Laura Zabala: "Evaluating the interoperability of TEASER and AixLib for building digital twins within Modelon Impact Environment: A Case Study"

11:30 Mr. Mohsen Zavari: "A Digital Twins model based on IFC open BIM models managed on Web platforms"

11:45 Mr. Turkay Ersener: "Overview of the Use of AI in Buildings Sustainability Assessment"

12:00 Ms. Lina Morkunaite: "Urban Digital Twin Data Requirements and Reference Architecture for Green Spaces and Ecosystems"

12:15 Dr. Juho-Pekka Virtanen: "Towards true networked urban digital twins - a development agenda"

12:30 Lunch break