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Big data for buildings



Building Information aGGregation, harmonization and analytics platform

Project N° 957047

D8.3

1st report on dissemination, communication and clustering activities and results

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Executive Summary

The BIGG project aims at demonstrating the application of big data technologies and data analytic techniques for the complete buildings life-cycle of more than 4000 buildings in 6 large-scale pilot test beds. The main objectives regarding the public outreach are:

- the coordination of project dissemination and communication activities;
- attractive and up-to-date project presentation (online and beyond);
- presence of the project collaboration and results at selected liaison events;
- publications in research journals and proceedings (peer reviewed);
- to spread the BIGG concept, activities and results in the regions/countries of the BIGG practice partner and beyond;
- and to train building professionals to use AI solutions in their life-cycle context.

The purpose of this deliverable is to describe all the communication and dissemination activities, as well as the marketing material that have been carried out throughout the first half of the project, aiming at guaranteeing broad visibility and promotion to the project's activities. It includes the project website, the social media profiles, the printed and digital material, along with the main tools used to spread the word of BIGG among the stakeholders (press releases, newsletters, publications in professional magazines, scientific publications, participation to conferences, etc.).

Furthermore, an overview of the current status of the dissemination KPIs, a description of the completed achievement and of the encountered difficulties is provided. It is followed by an action plan where the upcoming communication and dissemination activities are detailed.

This is the third deliverable of Work Package 8, and it will be updated and complemented by *D8.4 - 2nd report on dissemination, communication and clustering activities and results*. D8.4 is the final report that will present all the communication and dissemination activities carried out throughout the entire duration of the project.

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Table of Acronyms and Definitions

ACRONYM	DEFINITION
C-KPI	Communication Key Performance Indicator
D-KPI	Dissemination Key Performance Indicator
EC	European Commission
TA	Target Audience
WP	Work Package

I. INTRODUCTION

I.1. Purpose and organization of the document

The deliverable describes the communication and dissemination activities carried out throughout the first 18 months and the activities expected for the last 18 months of the project.

The document is divided in 6 sections, including *Introduction* and *Conclusions*, where *Section II* presents the communication and dissemination timeline from the point of view of the public deliverables and milestones. *Section III* includes all the communication and dissemination channels that are fundamental in the widespread of the project and the activities performed in the first period. *Section IV* gives an overview on the synergies and liaisons created with other international initiatives, including the projects under the same call.

In *Section V*, the status of the communication and dissemination key performance indicators (C-KPIs and D-KPIs) are presented, while *Section VI* aims at presenting the planning of the upcoming communication and dissemination activities for the remaining 18 months of the project.

I.2. Scope and audience

The communication and dissemination activities of WP8 support the activities of *WP7 - Project impact* to realize a maximal exploitation and valorisation of the solutions developed within BIGG. This deliverable is thus intended for WP7 partners as well as for the EC Project Officer and External Reviewers in order to follow-up on the project's dissemination and communication activities.

The content of D8.3 will be further analysed and fine-tuned during the remaining period of the project. The next deliverable D8.4 "*2nd report on dissemination, communication and clustering activities and results*" will contain all updates and will be delivered in M36 of the project.

Communication and dissemination activities will continue during the second project period and be further expanded when more and more project results become available

II. PUBLICATION OF DELIVERABLES AND MILESTONES

To maximize the widespread adoption of the results of the project, BIGG focuses on the specification and implementation of standardized and open solutions:

- An open source Data Reference Architecture
- An open and interoperable Buildings Data Specification
- An extensible, open and cloud-based Data Analytics Toolbox

Consequently, most deliverables will be publicly released. A section on the project website (<https://www.bigg-project.eu/deliverables/>) has been created, where 5 public and accepted deliverables have been published for the moment. The release of a deliverable is always followed by appropriate communication and dissemination actions to inform the intended target audiences.

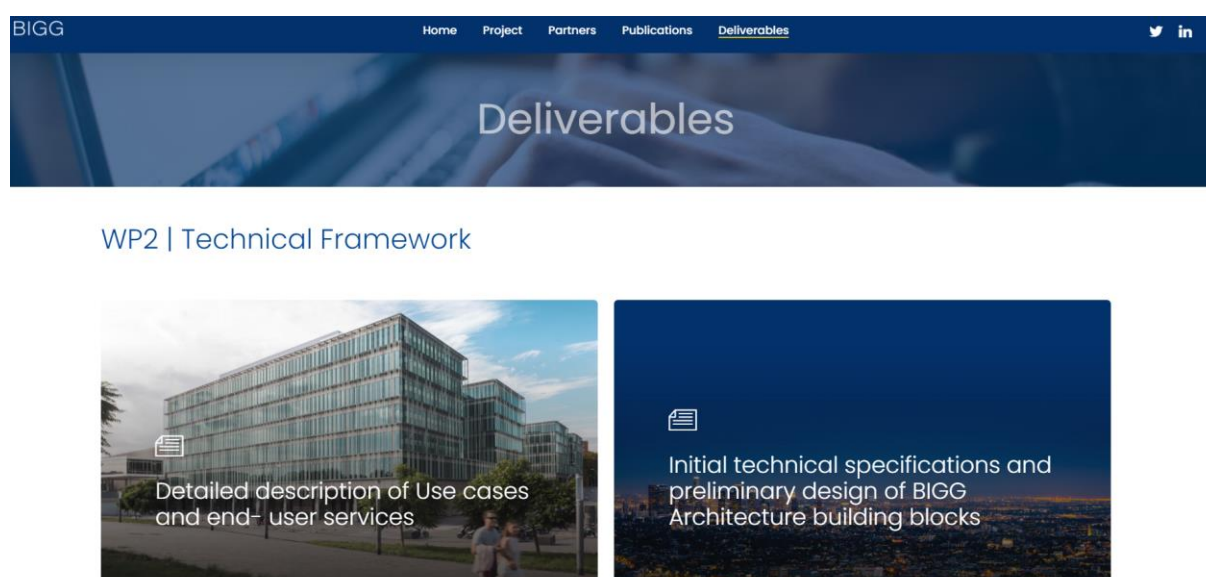


Figure 1 – Dedicated BIGG website page for deliverables

The table below gives an overview of the BIGG public deliverables with due dates.

Table 1. BIGG public deliverables (sorted by due dates) published on the website

Nº	Deliverable title	Due date
D8.1	Marketing material and website	M3
D8.2	Dissemination and communication actions plans and target KPIs	M3
D2.1	Detailed description of Use cases and end-user services	M6
D2.2	Initial technical specifications and preliminary design of BIGG Architecture building blocks and APIs	M12
D7.1	Initial contributions to standardization actions and market analysis	M12

Table 2. BIGG public deliverables (sorted by due dates) that will be available on the website

Nº	Deliverable title	Due date
D3.1	Description of the preliminary end-user, communication and security layers	M15
D4.1	Description of the preliminary harmonization layer	M15
D5.1	Description of the preliminary AI toolbox	M15
D6.2	First evaluation of the BIGG pilots results on use cases	M18
D8.3	1st report on dissemination, communication and clustering activities and results	M18
D7.2	Update of contributions to standardization actions and preliminary Market2Go strategy including BIGG impact	M24
D3.2	Description of the final end-user, communication and security layers	M30
D4.2	Description of the final harmonization layer	M30
D5.2	Description of the final AI toolbox	M30
D4.3	Public BIGG Data	M34
D2.3	Final technical specifications and description of the integrated BIGG solution	M36
D6.3	Final evaluation of the BIGG pilots results on use cases	M36
D7.3	Final contributions to standardization actions and final Market2Go strategy including BIGG impact	M36
D8.4	2nd report on dissemination, communication and clustering activities and results	M36

Within BIGG there are also a number of milestones defined, that typically coincide with the release of multiple or major deliverables, see the table below. When a milestone is achieved, communication is further intensified, especially for milestone MS5 (first round of pilot evaluations). With milestones MS8, MS9 and MS10 at the end of the project (final version of integrated BIGG solution, final round of pilot evaluations and final Go2Market strategy), the same strategy will be followed.

Table 3. BIGG Milestones

Nº	Description	Due date	Relevant Deliverables
MS1	Project Kick-off.	M1	Minutes
MS2	Release of the description of BIGG use cases and end-user services definition.	M6	D2.1
MS3	Release of the 1st version of the BIGG architecture.	M12	D2.2
MS4	Release of the 1st version of BIGG solution individual components.	M15	D3.1, D4.1, D5.1
MS5	Achievement of the end of the 1st round of pilots evaluations.	M18	D6.2
MS6	Initial Go2Market strategy.	M24	D7.2

MS7	Release of the final version of BIGG solution individual components.	M30	D3.2, D4.2, D5.2
MS8	Release of the final version of the integrated BIGG solution.	M36	D2.3
MS9	Achievement of the end of the final round of pilots evaluations.	M36	D6.3
MS10	Final Go2Market strategy.	M36	D7.3

III. COMMUNICATION AND DISSEMINATION CHANNELS

III.1. BIGG website

The BIGG website (<https://www.bigg-project.eu/>) was created and all the relevant information about the project can be found on it: objectives, scope, expected impacts and business cases. There is a section dedicated to the publications, which is fed with at least one publication per month: <https://www.bigg-project.eu/publications/>. 24 news publications can be found about diverse topics, from communication material (poster, video, press releases, newsletters) to the last updates on the project and relevant events of the sector.

In order to ensure the diversity of topics and perspective, a calendar was created. Each month a different partner is responsible for publishing a piece of news about an interesting topic related to the project.

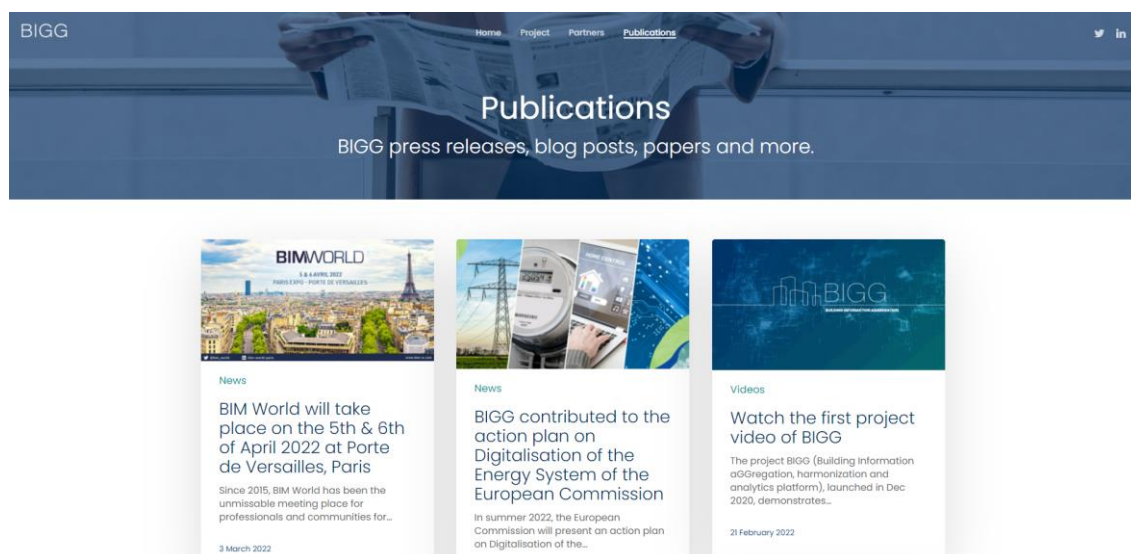


Figure 2 – BIGG website – Publications

III.2. Social Media channels

The social media channels have been created and actively managed aiming to increase the visibility of the project. The Twitter account (<https://twitter.com/BiggProject>), which has gathered already more than 1100 followers, is updated with at least 2 posts per month. The LinkedIn account (<https://www.linkedin.com/showcase/bigg-project>) has an increasing community of more than 140 followers and has also been fed with at least 2 posts per month. Both social media are fed with posts based on different elements, work and research provided by all the consortium partners.

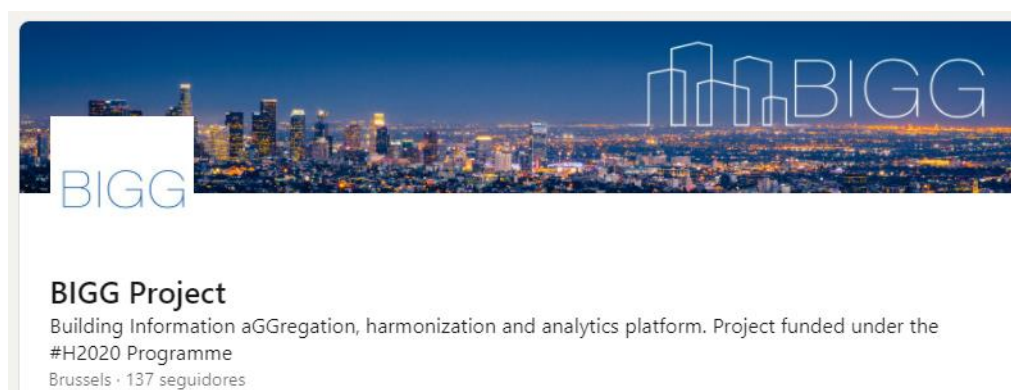


Figure 3 – BIGG LinkedIn profile



Figure 4 – BIGG Twitter profile

III.3. Printed and digital material

Printed and digital material for communication and dissemination has been created and published through BIGG channels.

The flyer (<https://www.bigg-project.eu/flyer-bigg-project/>) has been created and has already been distributed on some events, including the Sustainable Places 2021 Conference (Rome, September 2021), ECTP Conference (Madrid, December 2021), Climatherm – Energy 2022 (Athens, February 2022) and EnerGreen Deal Conference (Brussels, May 2022).



Figure 5 – BIGG Flyer

Two different posters (<https://www.bigg-project.eu/poster-bigg-project/>) have been designed in order to choose the most suitable one depending on the focus and the audience of the event. The version A was designed mainly with communication purposes and the objective is to use it in events with a general and varied audience, including general public and civil society. On the other hand, the version B of the poster contains more details about the project, aiming to reach a specialized and technical audience.



Figure 6 – BIGG Posters (version A and B)

The first video of the project (<https://www.bigg-project.eu/watch-the-first-project-video-of-bigg/>) was published on BIGG's website. This video presents the project, the main objectives, the scope and the Consortium. A second official video will be released at the end of the project, presenting the final results. Furthermore, we decided to publish intermediate videos throughout the duration of the project. Recently, a short video presenting the pilot tests business cases has been published on the website (<https://www.bigg-project.eu/watch-our-video-of-bigg-pilot-tests-and-business-cases/>).

III.4. Newsletters

During this first part of the project, three newsletters were released:

- 19/04/2021 1st newsletter: *BIGG project pilots: business cases and use cases* (<https://www.bigg-project.eu/bigg-project-pilots-business-cases-and-use-cases/>). This newsletter presented the business cases supported by the Catalan pilots, which are focused on the needs of the public administrations to enhance the data gathering and analysis for monitoring the performance and improving the energy efficiency of the building stock. Apart from been published on the website of the project, it was also shared on the [ECTP](#) and [CIMNE](#) websites.

- 29/06/2021 2nd newsletter: *BIGG project pilots: business cases and use cases in Greece* (<https://www.bigg-project.eu/bigg-project-pilots-business-cases-and-use-cases-in-greece/>). This second newsletter focuses on the business cases supported by the Greek pilots. Business Cases 4 & 5 focus on 17 large commercial office buildings in Athens managed through Energy Performance Contracting (EPC4) and Maintenance Contracting. The pilot site will demonstrate the application of EPC-based management for commercial buildings, with main objective to continuously optimize the building operation energy consumption and to guarantee comfort of occupants, by controlling HVAC systems and lighting. The pilot scenario for Business Case 6 focuses on delivering flexibility services by managing appliances of residential and commercial consumers of electricity and natural gas, spread across various cities of Greece (Athens, Thessaloniki, Volos and others). The second newsletter was also published on [ECTP](#), [CIMNE](#) and [domX](#) websites.
- 16/05/2022 3rd newsletter: *May newsletter* (<https://www.bigg-project.eu/newsletter-may-2022/>). Via this third newsletter, BIGG presents the recent progress of the project and the most remarkable activities carried out regarding the Data Reference Architecture, the end-user's communication and security layers, the data harmonization layer, the BIGG platform and the AI toolbox. It also gives an overview of the upcoming related events. This newsletter was published on the [ECTP](#) website.

III.5. Press Releases

Two press releases were published:

- 23/02/2021 1st press release: *Launch of the Building Information aGGregation, harmonization and analytics platform, the H2020 project BIGG* (<https://www.bigg-project.eu/launch-of-the-building-information-aggregation-harmonization-and-analytics-platform-the-h2020-project-bigg/>). This press release was also distributed through [BuildUp](#) and [Construction 21 International](#).
- 28/10/2021 2nd press release: *BIGG in September 2021: from the 1st PMB meeting in Thessaloniki to Sustainable Places Conference* (<https://www.bigg-project.eu/bigg-in-september-2021-from-the-1st-pmb-meeting-in-thessaloniki-to-sustainable-places-conference/>). The press release can also be found on [BuildUp](#) and [Construction 21 International](#).

III.6. Publications in and Collaboration with Professional Magazines

As mentioned above, the professional magazines [BuildUp](#) and [Construction 21 International](#) have been an important dissemination tool to increase the visibility of the project. In this first period, the first and second press releases were published on both platforms reaching more than 2800 readers. Due to the success, the publication on these platforms will continue for the next press releases and it will be also considered for other types of articles.

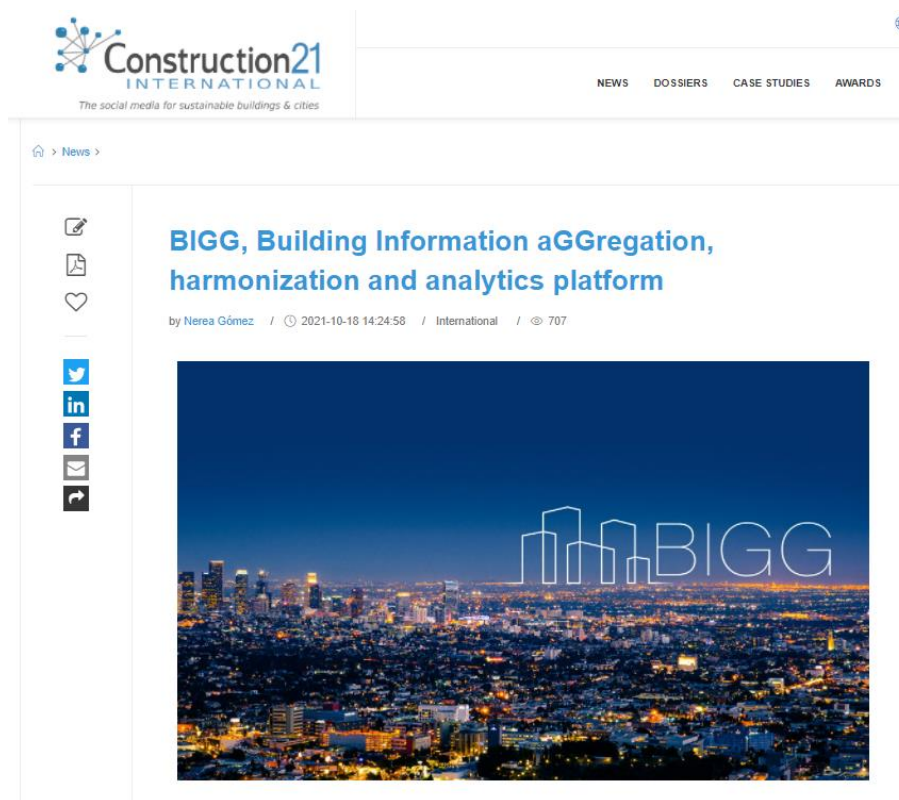


Figure 7 – First press release published on Construction 21 International

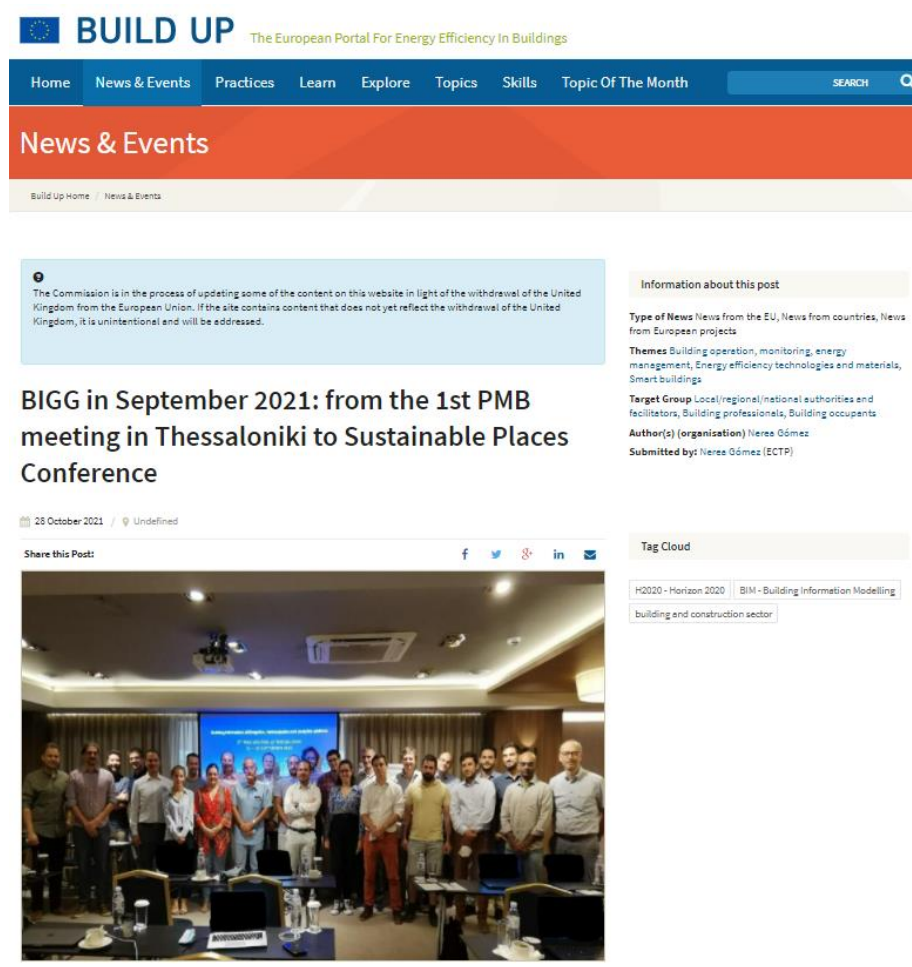


Figure 8 – Second press release published on BuildUp

III.7. Scientific Publications

In the context of the national and international scientific and professional journals and conferences which were identified within this task, four scientific papers were published:

- *Physics-informed Recurrent Neural Networks for the identification of a generic energy buffer system*, Proc. 10th IEEE Data-Driven Control and Learn. Sys. Conf. (DDCLS 2021): published by IMEC in May 2021 <http://users.atlantis.ugent.be/cdvelder/papers/2021/lahariya2021ddcls.pdf>
- *A data-driven method for unsupervised electricity consumption characterisation at the district level and beyond*, Energy Reports, Volume 7, November 2021, Pages 5667-5684, Elsevier: published by CIMNE in November 2021 <https://www.sciencedirect.com/science/article/pii/S2352484721007988?via%3Dihub>
- *Physics informed neural networks for control oriented thermal modeling of buildings*, Applied Energy, Vol. 314, 15 May 2022, pp. 1-10.: published by IMEC in May 2022 <https://www.sciencedirect.com/science/article/abs/pii/S0306261922002884?dgcid=author>
- *Physics Informed LSTM Network for Flexibility Identification in Evaporative Cooling Systems*, IEEE Transactions on Industrial Informatics: published by IMEC in May 2022 <https://ieeexplore.ieee.org/document/9771395>

In addition, another paper has been submitted:

- *Definition and evaluation of computationally efficient Markov decision process for coordination of electric vehicle fleet using reinforcement learning*, submitted by IMEC in March 2022 to Sustainable Energy, Grids and Networks

III.8. Participation to events and conferences

During the first project period, BIGG participated in the following four events:

- **Sustainable Places 2021 Conference:** Workshop “Data and Intelligence sharing for transforming buildings into active nodes in the future energy system” (<https://www.sustainableplaces.eu/buildings-as-active-nodes/>) organized by the project BEYOND: 29th September 2021, 09:00 – 12:30 CET. The online workshop invited relevant EU-funded projects and researchers working in the intersection of big data, data analytics, data sharing and energy performance of buildings to present advanced concepts, technologies and innovative results they have achieved. CIMNE took part in the workshop representing the project BIGG.



Figure 9 – Banner of Sustainable Places 2021 Conference with the logos of projects attending, including BIGG

- SmartGridComm 2021: Workshop on artificial and human intelligence for community-empowered sustainable energy system** (<https://sgc2021.ieee-smartgridcomm.org/workshop/ws-01-workshop-artificial-and-human-intelligence-community-empowered-sustainable-energy#overlay-context=workshop/ws-02-workshop-charging-solutions-electro-mobility-future>) 27th October 2021, 09:00 – 13:00 CET. CIMNE, Energis and domX participated in an online workshop as part of SmartGridComm 2021 with presentations from different H2020 projects, including 3 presentations from BIGG: *The BIGG Project: Development of Semantic Data Model enabling Interoperability and Analytics Services for Buildings' Data* (CIMNE); *Application of AI techniques to building data* (Energis); *Exploiting the flexibility of residential natural gas boilers* (domX). The purpose of this workshop was to share and discuss experiences and insights from different H2020 projects on the use of AI based techniques for demand response services in energy communities and buildings and the efficient management of the present systems and assets. Furthermore, insights on drivers and barriers and other social aspects that influence the participation of end users in these communities were presented, as well as aspects on interoperability, economic viability, legislation and a number of innovative energy community pilots across Europe.
- Climatherm – Energy 2022** (<https://climatherm.gr/en/>): 25th – 27th February 2022, Athens (Greece). The International Exhibition “Climatherm – Energy 2022” is a major event that gathers industry professionals and is under the auspices of the Greek Ministry of Environment and Energy and has the continuous support and participation of all major institutions in the industry. During the event, domX successfully demonstrated the smart heating solution as well as disseminated BIGG project outcomes by sharing the project flyer and discussing with ESCOs, Energy suppliers and other entities. HERON also participated to this exhibition.

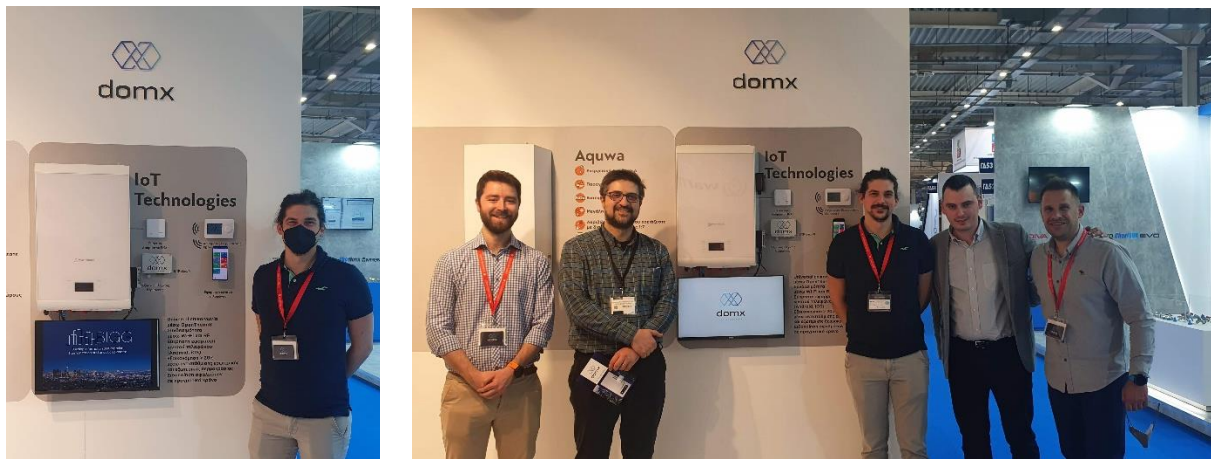


Figure 10 – Pictures of domX and HERON at the stand of domX at Climatherm – Energy 2022

- **Energy & Utilities 2022 Forum** (<https://enertic.org/actividades/foro-energy-utilities/>): 27th May 2022. María Pérez attended the Energy & Utilities 2022 Forum of enerTIC in Madrid, on behalf of BIGG. Our project is directly related to the theme of the conference. During the sessions that were held, we learned about the current trend in relation to: Synergies in the energy sector: Innovation and technology to improve competitiveness in other strategic sectors; the roadmap for the promotion of the Energy and Digital Transition; smart grids and Asset Digitalization; distributed generation based on alternative sources; the role of renewable energies and digital technologies in the Energy Transition.

IV. SYNERGIES AND LIAISONS

During the project, different initiatives and projects have been identified, with which a liaison could be created in order to spread the BIGG message to a larger audience.

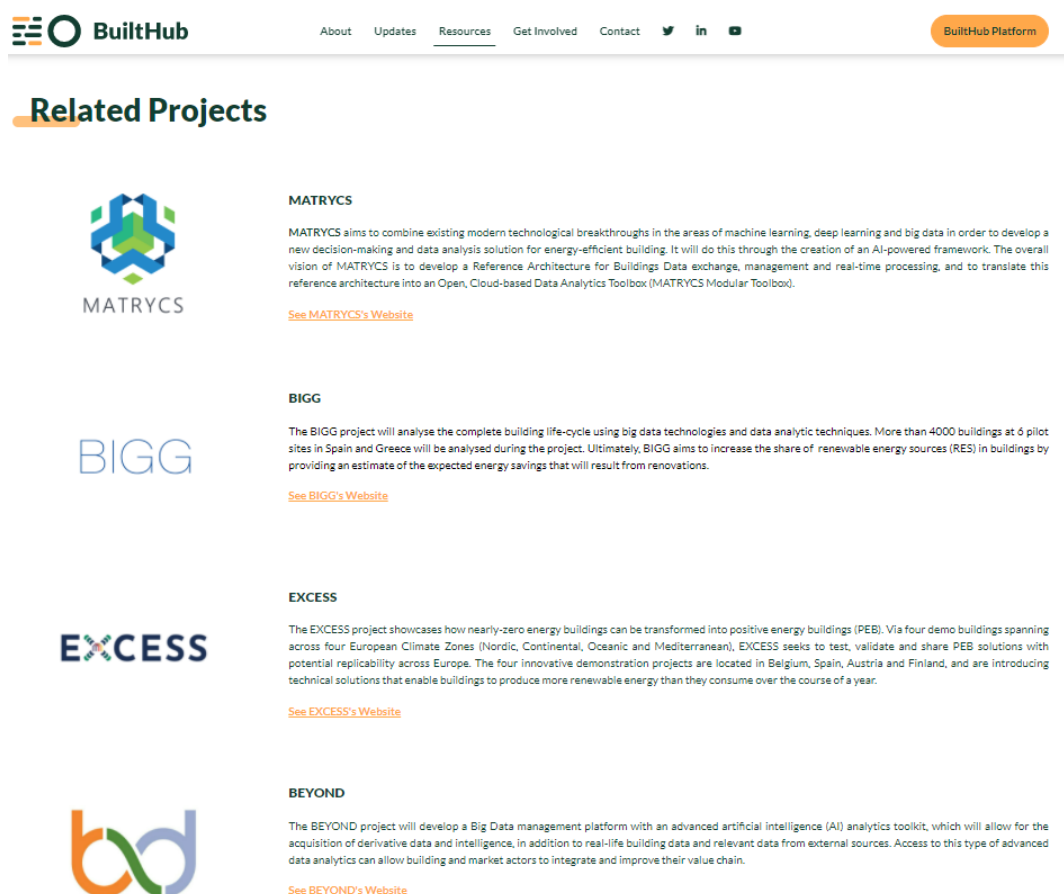
- Identified relevant projects and other initiatives in which the project partners participate:
 - H2020 InterConnect (InetumBE/InetumFR, IMEC, HERON)
 - DOS4Buildings (Intuicy via mother company Energis)
 - UIA Circular South (IMEC), ROLECS (IMEC),
 - H2020 RENergetic (RDGFI, IMEC)
 - H2020 BRIGHT (IMEC, domX)
 - H2020 BD4NRG (IMEC)
 - Programme PROFEEL (CSTB)
 - SHERPA (CIMNE)
 - MEDNICE (CIMNE)
 - EDI-Net (CIMNE)
 - SmartBuilt4EU and its community of EU Smart Buildings projects & stakeholders (ECTP). In this context, BIGG and SmartBuilt4EU have reached a co-communication agreement, in terms of disseminating the projects' news on their respective websites (<https://smartbuilt4eu.eu/big-g-building-information-aggregation-harmonization-and-analytics-platform/>) and social media channels, and the possibility of co-participation in events, among others.
 - Built4People Partnership (ECTP)
- Identification of other international initiatives related to BIGG, including other projects funded under the same call (BEYOND, MATRYCS, BUILTHUB) in order to optimise and coordinate dissemination and communication synergies across projects.
- Other identified initiatives, especially relevant for the data modeling and harmonization tasks in WP4, include: Smart Appliances REference (SAREF) ontology, Building Energy Data Exchange Specification (BEDES), INSPIRE Directive, EU Building Stock Observatory (EUBSO) or EEFIG De-Risking Energy Efficiency Platform (DEEP), among others.

IV.1. Synergies with sister project

The projects BIGG, BEYOND and MATRYCS, that belong to the same call ([LC-SC3-B4E-6-2020 - Big data for buildings](#)) and also the related CSA project BUILTHUB, share the interest of creating a homogeneous approach on stakeholder engagement, exploitation, dissemination and communication.

The projects established a community in order to communicate and disseminate information about the other projects, with the aim in reaching a major and diverse audience and helping to promote project's events.

Furthermore, the liaisons among the projects encourage them to send an application for a joint session at the EUSEW 2021 and EUSEW 2022, that unfortunately weren't accepted. Due to the declination, the projects decided to apply for a joint stand at the EUSEW Networking Village. It is also planned to organize other sessions and participate jointly in conferences.



BuiltHub About Updates Resources Get Involved Contact [BuiltHub Platform](#)

Related Projects

MATRYCS

MATRYCS aims to combine existing modern technological breakthroughs in the areas of machine learning, deep learning and big data in order to develop a new decision-making and data analysis solution for energy-efficient building. It will do this through the creation of an AI-powered framework. The overall vision of MATRYCS is to develop a Reference Architecture for Buildings Data exchange, management and real-time processing, and to translate this reference architecture into an Open, Cloud-based Data Analytics Toolbox (MATRYCS Modular Toolbox).

[See MATRYCS's Website](#)

BIGG

The BIGG project will analyse the complete building life-cycle using big data technologies and data analytic techniques. More than 4000 buildings at 6 pilot sites in Spain and Greece will be analysed during the project. Ultimately, BIGG aims to increase the share of renewable energy sources (RES) in buildings by providing an estimate of the expected energy savings that will result from renovations.

[See BIGG's Website](#)

EXCESS

The EXCESS project showcases how nearly-zero energy buildings can be transformed into positive energy buildings (PEB). Via four demo buildings spanning across four European Climate Zones (Nordic, Continental, Oceanic and Mediterranean), EXCESS seeks to test, validate and share PEB solutions with potential replicability across Europe. The four innovative demonstration projects are located in Belgium, Spain, Austria and Finland, and are introducing technical solutions that enable buildings to produce more renewable energy than they consume over the course of a year.

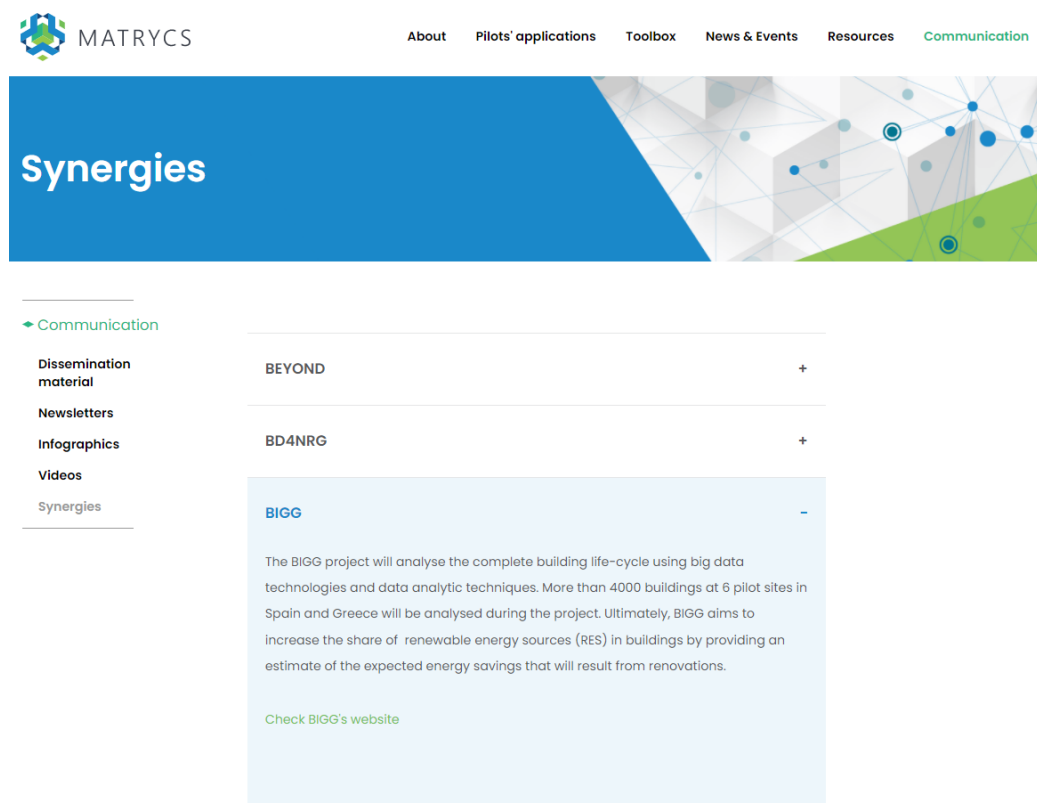
[See EXCESS's Website](#)

BEYOND

The BEYOND project will develop a Big Data management platform with an advanced artificial intelligence (AI) analytics toolkit, which will allow for the acquisition of derivative data and intelligence, in addition to real-life building data and relevant data from external sources. Access to this type of advanced data analytics can allow building and market actors to integrate and improve their value chain.

[See BEYOND's Website](#)

Figure 11 – Screenshot of “Related Projects” on [BuiltHub](#) website



MATRYCS About Pilots' applications Toolbox News & Events Resources **Communication**

Synergies

Communication

- Dissemination material
- Newsletters
- Infographics
- Videos
- Synergies

BEYOND	+
BD4NRG	+
BIGG	-

The BIGG project will analyse the complete building life-cycle using big data technologies and data analytic techniques. More than 4000 buildings at 6 pilot sites in Spain and Greece will be analysed during the project. Ultimately, BIGG aims to increase the share of renewable energy sources (RES) in buildings by providing an estimate of the expected energy savings that will result from renovations.

[Check BIGG's website](#)

Figure 12 – Screenshot of “Synergies” on [MATRYCS](#) website

IV.2. Establishment of the standardization community

Beyond the community established for communication and dissemination purposes, BIGG decided to create a Community of Standardisation. One of the project's objectives is to create a long-term collaboration framework with standardization bodies to which BIGG, the sister projects and potentially other related initiatives could technically contribute and influence.

Therefore, BIGG started contacting the projects under the same call (BEYOND, MATRYCS, BUILTHUB) in order to invite them to take part to this community, and to participate on a workshop that will be organized in September 2022. This workshop will focus on the identification of commonalities and similar structures among the projects/initiatives, and co-define together the founding principles and operational mechanisms of this Community. During future workshops or common desktop activities, the projects shall agree on the topics to cover so as to, eventually, influence targeted standards.

For the moment, these 3 projects have shown their interest in taking part of the community. Also, we will discuss the possibility of increasing the community by inviting other international initiatives already identified (OntoCOMMONS, BIM2TWIN, BIM-SPEED)

V. MONITORING AND KPIs

V.1. Communication Key Performance Indicators

Table 4. Communication Key Performance Indicators

Communication Key Performance Indicators		Status
C-KPI#1	Number of events where BIGG will show a poster ; All; At least in 10.	Not started
C-KPI#2	Number of events in which brochures and/or leaflets will be distributed; All TAs; At least 20.	Ongoing: 4/20
C-KPI#3	Number of press releases published, translated into local language and distributed among local media; All; At least 6 (two per year).	Ongoing: 2/6
C-KPI#4	Number of produced videos introducing the project and its results; All; At least 2, one as an introduction and one presenting final results. Intermediate videos will be also considered.	Ongoing: 1/2 (+1 intermediate video)
C-KPI#5	Social media channels for community building; All TAs; LinkedIn for TA1, TA2, TA3 and TA4; Twitter more oriented for TA5; To reach at least 500 followers in each SN, To post at least 2 posts per month in each social network.	Ongoing: Twitter > 1100, LinkedIn > 140
C-KPI#6	Frequency of blog posts and short news feed on BIGG website on topics treated during the project; All; 1 post per month.	Ongoing 24 news
C-KPI#7	Website - Number of returning website visitors per year; All; 400; Number of unique website visitors per year; 800.	Achieved

The main stakeholder groups the five principal target audience (TA) were identified in D8.2.:

- TA1 - Users: Building professionals, mainly building managers and operators, and other technical experts involved in the whole building life-cycle such as designers, builders, energy services and maintenance companies.
- TA2 - Enablers: Those who bring the regulatory and standardization conditions, policy markers at all levels.
- TA3 - Suppliers: Those who bring the technical context to integrate BIGG in the market
- TA4 - Researchers: Big data processing and AI related expertise including AI experts and data scientists both from academic and industry.
- TA5 - Beneficiaries: Building occupants that will profit of the advantages of applied ICT in the building sector to improve its life-cycle and to provide a more optimal use of building resources.

C-KPI#1 Number of events where BIGG will show a poster

Unfortunately, due to the sanitary situation the participation to events and conferences was fully online, without the possibility of showing a poster. Therefore, the KPI of showing the poster at least at 10 events wasn't accomplished. This has been compensated online, distributing the poster through the [website](#) and social networks.

C-KPI#2 Number of events in which brochures and/or leaflets will be distributed

As mentioned above, the major presence of the BIGG at different events and conferences was online, which hindered the distribution of communication printed material. During this first period, the project flyer was distributed at 4 conferences/events:

- Sustainable Places 2021: 29th September – 1st October 2021, Rome (Italy)
- ECTP Conference: 2nd – 3rd December 2021, Madrid (Spain)
- Climatherm – Energy 2022: 25th – 27th February 2022 (Greece)
- EnerGreen Deal Conference: 31st May 2022 (Belgium)

C-KPI#3 Number of press releases published, translated into local language and distributed among local media

According to the Grant Agreement, 6 press releases have to be published, 2 per year, which have been accomplished for the first year of the project. They can be found in the project website as well as on other platforms, such as BuildUp and Construction21.

- 23/02/2021 1st press release: Launch of the Building Information aGGregation, harmonization and analytics platform, the H2020 project BIGG
- 28/10/2021 2nd press release: BIGG in September 2021: from the 1st PMB meeting in Thessaloniki to Sustainable Places Conference

For the second year of the project, it is planned to produce a press release in M18-19 and in M24-25. The same planning will be followed for the third and last year of the project, letting the last press release for the end of the project, where the main results of the project will be presented.

C-KPI#4 Number of produced videos introducing the project and its results

The first video of the project has been published on the project website (<https://www.bigg-project.eu/watch-the-first-project-video-of-bigg/>) and distributed through other channels (Twitter and LinkedIn). This video presents the project, the main objectives, the scope and the Consortium. Intermediate videos are also considered, and a first short video presenting the pilot tests business cases has been published on the website (<https://www.bigg-project.eu/watch-our-video-of-bigg-pilot-tests-and-business-cases/>) At the end of the project, the second official video will be released, which will present the final results.

C-KPI#5 Social media channels for community building

Social media channels were created with the aim of building a community and increase the visibility of the project through a large and diverse audience. Both, Twitter and LinkedIn are managed and updated frequently, publishing at least 2 posts per month in each channel.

Regarding the audience, BIGG has built a community of more than 1100 followers on Twitter in the first year of the project and it continues growing. Twitter has been a very helpful tool in order to spread the project among the general public and to create a community with the sister projects. LinkedIn is focused on a different target audience. BIGG has reached more than 140 followers, including other EU-funded projects, researchers, industry, among others.

C-KPI#6 Frequency of blog posts and short news feed on BIGG website on topics treated during the project

The project website is frequently updated by publishing at least one short news per month. A calendar was created in order to assign a partner responsible of publishing a news item each month. Therefore, the variety of topics and perspective is ensured. At M18, 24 news items have been posted, including press releases, newsletters, communication material, focusing on the project or on related events.

C-KPI#7 Website - Number of returning and unique website visitors per year

When the website launched, we used the statistic provided by the hosting company (OVH). There were three different tools for web statistics: Awstats, Urchin and the OVH Cloud Web Statistics. Unfortunately, Awstats is no longer supported and Urchin only collected statistics during the first month (February 2021).

We do have numbers from Urchin (2 to 16 February 2021) and Awstats (September 2021) that show unique visits and dito pageviews. Urchin showed us a total of 71 unique visits and 447 pageviews. From Awstats, we still have details available (Dutch only).

Samenvatting					
Rapportageperiode	Maand sept. 2021				
Eerste bezoek	13 sept. 2021 - 00.29				
Laatste bezoek	13 sept. 2021 - 14.24				
	Unieke bezoekers	Aantal bezoeken	Pagina's	Hits	Bytes
Bekeken verkeer *	41	42 (1.02 bezoeken/bezoeker)	104 (2.47 Pagina's/bezoek)	548 (13.04 Hits/bezoek)	32.25 MB (786.18 KB/bezoek)
Niet-bekeken verkeer *			74	98	389.77 KB

* „Niet bekeken” is verkeer dat gegenereerd werd door robots of wormen, of respons met een speciale HTTP-statuscode.

Figure 13 – Screenshot of Awstats web statistics (Dutch)

The OVH Cloud Web Statistics shows the total amount of visits and page views, but these numbers include bot visits too. Bots are used by many search engines to automatically browse the web and index a site. They allow us to appear in search results. 10 to 15% of the number of sessions can be seen as real users. This means that the website has been visited 4239 people in the first year and 2081 since January 2021.

The main number we need to take into account is the average session duration. For both periods, it is 3 minutes and more. This means that users spend an average of 3 minutes on the BIGG website and it indicates that users stay on the website for reading content and/or articles.

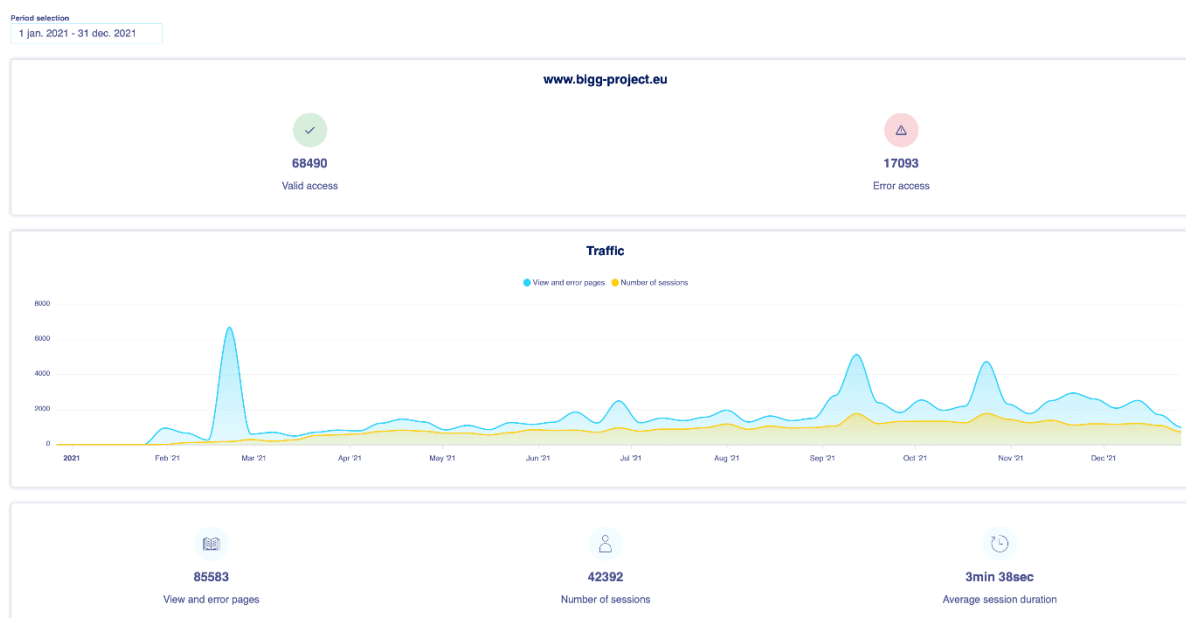


Figure 14 – Screenshot of OVH Cloud web statistics from January to December 2021

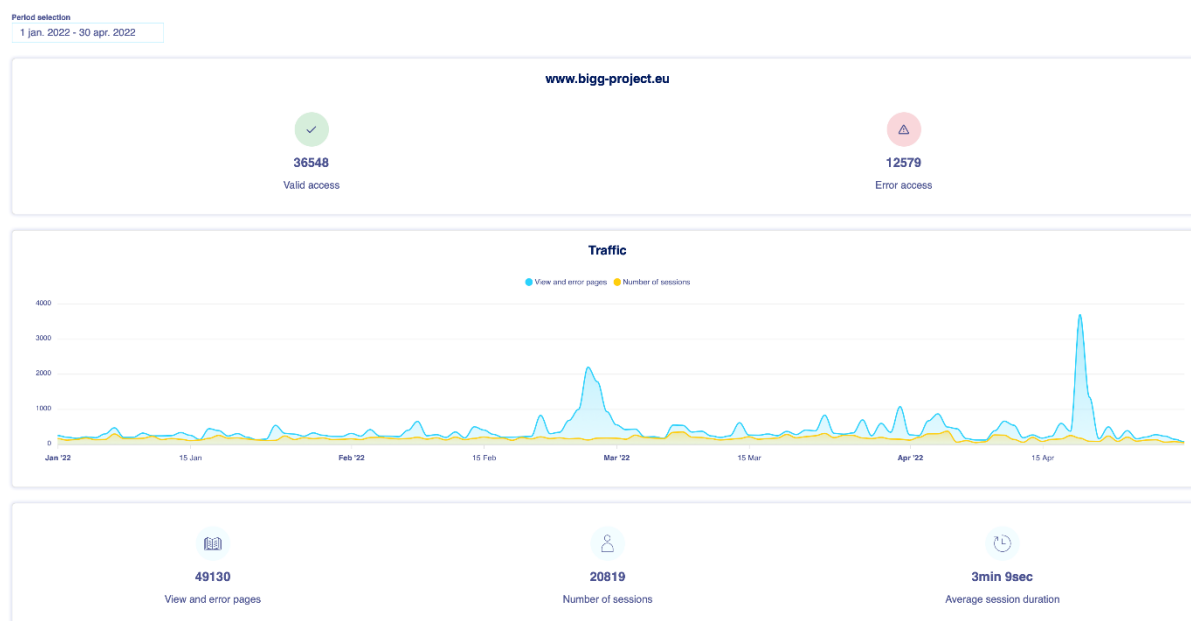


Figure 15 – Screenshot of OVH Cloud web statistics from January to April 2022

In order to get a better view of the number of visits, we recently added Google Analytics to our website. This will also give us an indication of where visitors come from. Not only by geolocation, but also by the source of which they come from: Google Search, social media or direct.

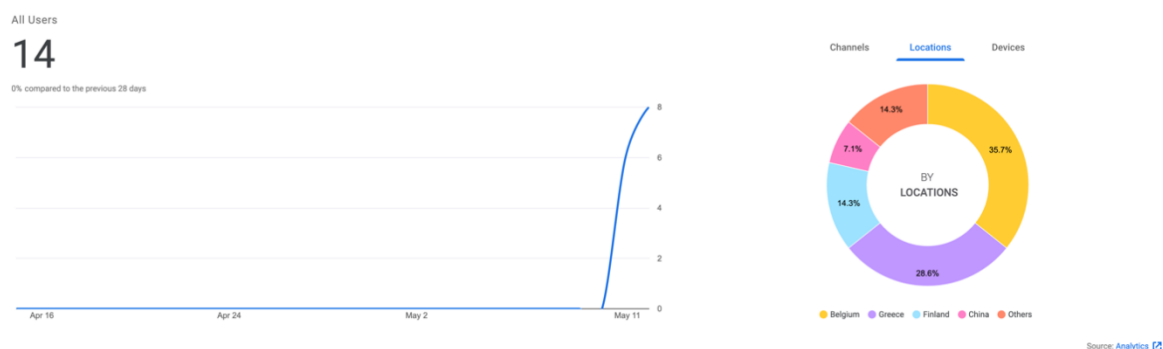


Figure 16 – Screenshot of Google Analytics from May 11 – May 13

V.2. Dissemination Key Performance Indicators

Table 5. Dissemination Key Performance Indicators

Dissemination Key Performance Indicators		Status
D-KPI#1	Number of industry-oriented events, workshops and conferences (w/o scientific publication) in which BIGG partners will present the project; At least active participation (presentation) in 12.	Ongoing: 4/12
D-KPI#2	Number of actions organized by standardization bodies and regulators to which BIGG will participate; At least in one meeting at 3 different entities.	Not started
D-KPI#3	Number of entities which are members of building-related associations that will be informed by the project and its results; 150 organisations after one year, and approx. 350-400 at the end of the project.	~140 - 150
D-KPI#4	Number of scientific publications in conferences, events and journals (prioritizing quality vs quantity and promoting joint publications); At least 10 publications.	Ongoing: 4/10 (+1 submitted)
D-KPI#5	Number of white papers published (scientific and/or industrial); At least 3.	Not started
D-KPI#6	Number of public events organized by BIGG; At least 4.	1/4
D-KPI#7	Number of training sessions organized for buildings professionals; 3 webinars (in English): one for each business cases group or 2 webinars if all business cases are presented together at M18-20 and M36; At least 6 trainings will be organised at a national level for the local building experts involved in the project (one for each business case). Local external stakeholders might be also invited to these trainings and we will also consider the organization of another 6 trainings specifically for them.	Not started
D-KPI#8	Number of large-scale dissemination campaigns; 2 campaigns at M19 (once 1st evaluation results are available) and at M35 (with final results).	Not started

D-KPI#1 Number of industry-oriented events, workshops and conferences in which BIGG partners will present the project

During this first period, BIGG presented the project on 4 different events, taking part of both online and physical workshops. More details about each can be found in *Section III.8*.

- Sustainable Places 2021: 29th September – 1st October 2021, Rome (Italy)
- SmartGridComm 2021: 27th October 2021, Online
- Climatherm – Energy 2022: 25th – 27th February 2022 (Greece)
- Energy & Utilities 2022 Forum: 27th May 2022, Madrid (Spain)

D-KPI#2 Number of actions organized by standardization bodies and regulators to which BIGG will participate

This action hasn't started yet, it is planned to start on the last quarter of 2022. Further steps will be mentioned in *Section VI.6*.

However, as mentioned in *Section IV.2*, a standardization community (led by BIGG) has been created with the aim of identifying commonalities and similar structures among the projects as well as influence targeted standards. Therefore, a possible common strategy will be created with the sister's projects.

In addition, BIGG had also met with TNO as preliminary input about SAREF and the [Interconnect](#) project, in which several partners of BIGG are part of the Consortium.

D-KPI#3 Number of entities which are members of building-related associations that will be informed by the project and its results

According to the GA, at least 150 members of building-related associations had to be informed about the project and its results after one year, and between 350 and 400 at the end of the project. In the first year of the project, 140-150 members of ECTP were informed about the project through newsletters and news on the ECTP website. BIGG is also included in the ECTP projects database with more than 500 other European funded projects, with a special section as project where ECTP is involved.

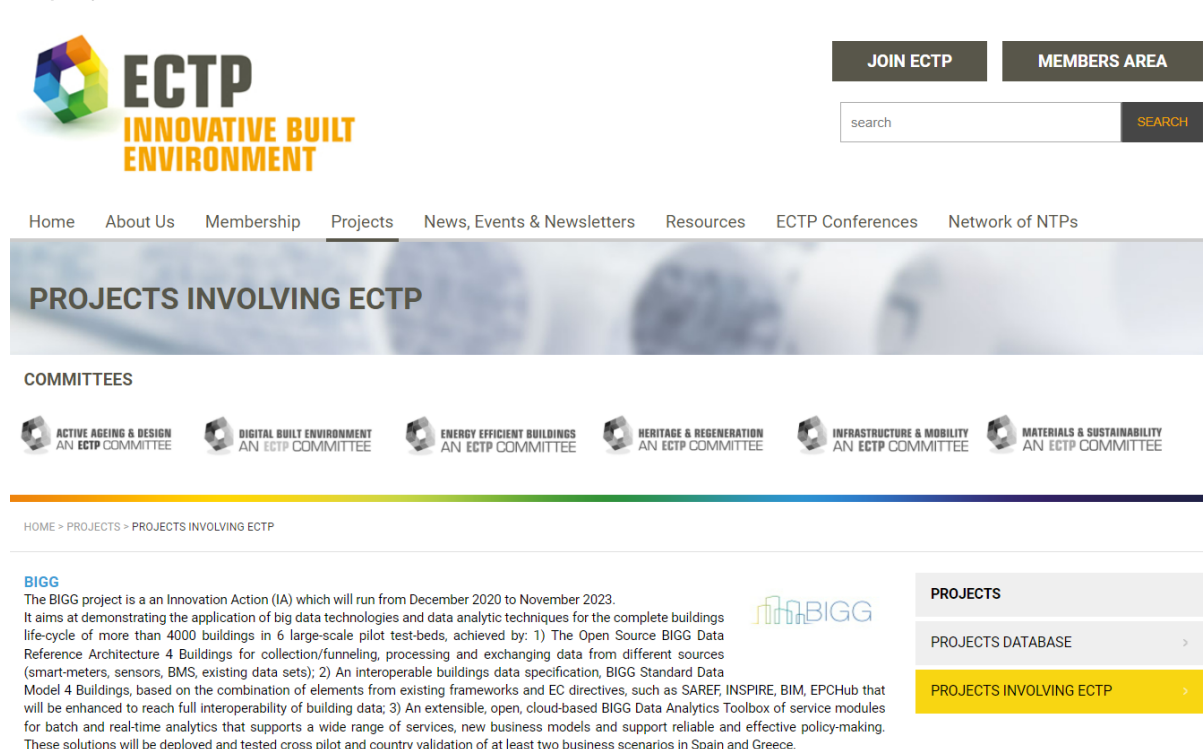


Figure 17 – BIGG on “Projects involving ECTP” section on ECTP website

Furthermore, thanks to the participation to the conferences already mentioned and the publication of the press releases on the platforms BuildUp and Construction 21, BIGG has been able to reach a greater and diverse audience.

D-KPI#4 Number of scientific publications in conferences, events and journals

During the first 18 months of the project, 4 scientific publications have been published as explained in *Section III.7*.

- *Physics-informed Recurrent Neural Networks for the identification of a generic energy buffer system*, Proc. 10th IEEE Data-Driven Control and Learn. Sys. Conf. (DDCLS 2021)

- *A data-driven method for unsupervised electricity consumption characterisation at the district level and beyond*, Energy Reports, Volume 7, November 2021, Pages 5667-5684, Elsevier
- *Physics informed neural networks for control oriented thermal modeling of buildings*, Applied Energy, Vol. 314, 15 May 2022, pp. 1-10
- *Physics Informed LSTM Network for Flexibility Identification in Evaporative Cooling Systems*, IEEE Transactions on Industrial Informatics, May 2022

Also, another paper has been submitted:

- *Definition and evaluation of computationally efficient Markov decision process for coordination of electric vehicle fleet using reinforcement learning*, March 2022, Sustainable Energy, Grids and Networks

D-KPI#5 Number of white papers published

This activity hasn't started yet. The main goal of the white papers will be to disseminate the project's results; thus, it is meant that the project progresses in order to start publishing them. The planning about the release of the white papers can be found in *Section VI.8*.

D-KPI#6 Number of public events organized by BIGG

The first public event organized by BIGG took place on 29th September 2021 during the workshop "Energy Information and monitoring services of the Generalitat of Catalonia". ICAEN presented the project to representatives of departments of the Generalitat de Catalunya and had 15 attendees including some larger entities. Several BIGG functionalities and their integration with the total number of applications that we use for energy and bill management were presented.

1. Introducció

Projecte europeu BIGG

- Arquitectura de big data flexible i de codi obert per recopilar, analitzar i intercanviar un big-data dinàmic i estàtic de construcció
- Estandardització i harmonització de la informació energètica
- **Benchmarking i modelització del rendiment** energètic d'edificis
- Solucions obertes i estandarditzades.
- 3 anys de durada. → Finalització el Desembre 2023.

CIMNE
International Centre
for Numerical Methods in Engineering

Generalitat de Catalunya
Institut Català d'Energia

infraestructures.cat

<https://www.bigg-project.eu/>

@BiggProject

BIGG Project

#TransicióEnergètica

European Commission
Horizon 2020
European Union funding
for Research & Innovation

Generalitat de Catalunya
Institut Català d'Energia

Figure 18 – Slide presenting BIGG (in Catalan) during the workshop

In *Section VI.5*, a detailed proposal for the rest of public events organized by BIGG can be found.

D-KPI#7 Number of training sessions organized for buildings professionals

According to the Grant Agreement, 3 webinars will be organized in English, one for each business cases group, or 2 webinars if all business cases are presented together. Among the Consortium, it has been decided to organize 2 webinars: the first one, which was initially planned for M18-M20, will be postponed to M22-M23, and the second one will be organized at M36. The decision to postpone the first training session is due to the fact that the original date coincides with the summer holidays period, thus it is postponed to September-October to reach a greater audience.

Furthermore, at least 6 training sessions will be organized at a national level for the local building experts involved in the project, which means one training session for each business case. Detailed information can be found in *Section VI.10*.

D-KPI#8 Number of large-scale dissemination campaigns

Two large-scale dissemination campaigns will take place, the first one is planned at M19, once the first evaluation of results is available, and the second one at M35 with the aim of promoting the final results.

The first large-scale dissemination campaign will aim at increasing the visibility of the project and reaching a greater audience, in order to promote the BIGG results and attract people to take part of the BIGG community on LinkedIn. The final campaign will promote the final results and the main outcomes achieved throughout the project.

VI. UPCOMING COMMUNICATION AND DISSEMINATION ACTIVITIES

Apart from the detailed description of all the communication and dissemination activities, as well as the synergies and liaisons, carried out in the first 18 months of the project, this document aims at describing the action plan for the second and last period of the project.

In this section, it is explained in detail each communication and dissemination activity that will be performed in the upcoming months, as well as how it is planned to accomplish the C-KPIs and D-KPIs described in *Section V*.

In order to have a timeline of the communication and dissemination activities in the next 18 months, a calendar was created as shown in *Table 6*. The calendar is an estimated schedule of the communication and dissemination activities:

- Management and update of the website and the social media channels;
- publication of newsletters and press releases;
- participation to events, workshops and conferences;
- participation to actions organized by standardization bodies and regulators;
- publication of scientific papers;
- release of white papers;
- organization of public events;
- organization of training sessions directed at local stakeholders,
- and large-scale dissemination campaigns.

Table 6. Update communication and dissemination activities

	2022							2023										
	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36
Website																		
Social media																		
Newsletters																		
Press releases																		
Events, workshops and conferences	5			6	7						8	9				10	11	12
Actions organized by standardization bodies and regulators					1							2				3		
Scientific publications					6					7	8					9	10	
White papers published							1						2				3	
Public events organized by BIGG				2						3							4	
Training sessions	EN									TS	TS	TS	TS			TS	TS	EN
Large-scale dissemination campaigns	1																2	

VI.1. Website

A calendar was created in order to assign a partner responsible of publishing a news article each month. The intention is to publish at least one article per month. The thematic is open and free, some suggestions given are: the developments carried out throughout the project, the current status of the pilot tests, a scientific paper published, an event related to big data or that could be relevant to the project, another project in which the partners are involved and related to BIGG, etc..

In the following table, it can be found the responsible partner and the estimated submission date for the rest of the project's timeline.

Table 7. Website news calendar

Project month	Submission Date	Partner
M19	15-06-2022	ICAT
M20	15-07-2022	Engie Hellas
M21	15-08-2022	domX
M22	15-09-2022	HERON
M23	15-10-2022	ECTP
M24	15-11-2022	IMEC
M25	15-12-2022	CIMNE
M26	15-01-2023	CSTB
M27	15-02-2023	Inetum Realdolmen
M28	15-03-2023	ICAEN
M29	15-04-2023	Helexia
M30	15-05-2023	Intuicy
M31	15-06-2023	ICAT
M32	15-07-2023	Engie Hellas
M33	15-08-2023	domX
M34	15-09-2023	HERON
M35	15-10-2023	ECTP
M36	15-11-2023	IMEC

The calendar is a useful and fruitful tool in order to accomplish the minimum of one news item published per month. Furthermore, the website will be updated with additional news, for instance press releases, newsletters, videos, promotion of events and other articles.

VI.2. Social media

The official social media channels of the project (Twitter and LinkedIn) will continue being a key tool for the communication about BIGG. They will be actively managed and updated with the last news about the project, in order to reach more followers and spread the message of BIGG. Regarding the action plan to reach more followers on LinkedIn, Twitter will be used as the main tool to attract subscribers to the other social network. In addition, the next events that will be organised/attended (including the key events of the sector, public events organized by BIGG and the training sessions) will give visibility to the project and catch the attention of new followers.

VI.3. Newsletters

After the third newsletter published in May 2022 (M18), it is planned to continue releasing newsletters each 6 months: M24, M30 and M36. The strategy will be the same carried out during the first period, publishing the newsletter on the BIGG website, distributing them among social media and also through the partners' channels (website, newsletters, social media,...).

VI.4. Press releases

The next press releases are planned to be published in M19, M26, M31 and M36. The publication will be flexible in order to better adjust to the communication of the last developments and advances of the project. The plan of action will be the same performed in the first 18 months of the project, publishing the press release on the website and distribute it through social media, as well as publishing them on other platforms, such as BuildUp and Cosntruction 21 International.

VI.5. Events, workshops and conferences

At the beginning of the project, the Consortium created a table with relevant events, workshops and conferences that were identified. This table is continuously updated with events that are related and is a great opportunity for spreading the key results of BIGG.

In the following table, a list of events and conferences for the rest of the year can be found. The list will be updated with more key events that will take place at the end of the year and in 2023.

Table 8. List of identified events, workshops and conferences

Date	Event	Place	Website
31/05-02/06/2022	digitalBAU 2022	Cologne, Germany	https://digital-bau.com/en/
3-4/06/2022	International Conference on Big Data Management ICBDM	Rome, Italy	https://waset.org/big-data-management-conference-in-june-2022-in-rome
10-11/06/2022	International Conference on Big Data Analytics and Intelligent Computing ICBDAIC	Barcelona, Spain	https://waset.org/big-data-analytics-and-intelligent-computing-conference-in-june-2022-in-barcelona
10-11/06/2022	International Conference on Data Modeling Applications for Big Data Analytics ICDMABDA	Copenhagen, Denmark	https://waset.org/data-modeling-applications-for-big-data-analytics-conference-in-june-2022-in-copenhagen
12-16/06/2022	Indoor Air 2022	Kuopio, Finland	https://indoorair2022.org/
21-22/06/2022	International Conference on Energy Efficiency in Buildings ICEEB	Vienna, Austria	https://waset.org/energy-efficiency-in-buildings-conference-in-june-2022-in-vienna
27-29/06/2022	CIB W78	Melbourne, Australia	https://www.cibw78.org/
TBC (June 2022)	European BIM Summit	Barcelona, Spain	https://europeanbimsummit.com/en/
14-16/09/2022	ECPPM2022	Trondheim, Norway	https://www.ecppm2022.org/

14-16/09/2022	International Conference on Sustainability in Energy and Buildings SEB-22	Split, Croatia	https://cibworld.org/international-conference-on-sustainability-in-energy-and-buildings-seb-22-14-16-september-2022/
16-17/09/2022	International Conference on Business Data Analytics and Big Data ICBDA BD	Rome, Italy	https://waset.org/business-data-analytics-and-big-data-conference-in-september-2022-in-rome
6-9/09/2022	Sustainable Place (SP2022)	Nice, France	https://www.sustainableplaces.eu
26-30/09/2022	EU Sustainable Energy Week (EUSEW)	Brussels, Belgium	https://eusew.eu/
02-06/10/2022	Light + Building Autumn Edition 2022	Frankfurt, Germany	https://light-building.messefrankfurt.com/
12-13/10/2022	Smart Building Show	London, UK	https://smartbuildingsshow.com/
26-27/10/2022	SAVE Verona Conference	Verona, Italy	https://www.exposave.com/english/descrizione_evento.asp
26-27/10/2022	AEE Europe Annual Conference	Dublin, Ireland	https://aeeuropeenergy.com/conference/
4-5/11/2022	International Conference on Big Data Technologies and Applications ICBDTA	Amsterdam	https://waset.org/big-data-technologies-and-applications-conference-in-november-2022-in-amsterdam
11-12/11/2022	International Conference on Business Analytics, Big Data and Decision Sciences ICBABDDS	Venice, Italy	https://waset.org/business-analytics-big-data-and-decision-sciences-conference-in-november-2022-in-venice
11-12/11/2022	International Conference on Big Data Analytics and Data Processing ICBDA DP	Venice, Italy	https://waset.org/big-data-analytics-and-data-processing-conference-in-november-2022-in-venice
8-9/11/2022	Intelligent Building Systems	Paris, France	http://www.ibs-event.com/
15-17/11/2022	Smart City Expo	Barcelona, Spain	https://www.smartcityexpo.com/
29/11/2022 - 1/12/2022	Enlit Europe: European Utility Week	Frankfurt, Germany	https://www.enlit-europe.com/euw

TBC (Nov 2022)	BIMLUX	Luxembourg	https://www.bimlux.lu/
2-3/12/2022	International Conference on Big Data and Smart Cities ICBDSM	Amsterdam	https://waset.org/big-data-and-smart-cities-conference-in-december-2022-in-amsterdam
13-14/12/2022	International Conference on Big Data Analytics and Data Science ICBADDS	Rome, Italy	https://waset.org/big-data-analytics-and-data-science-conference-in-december-2022-in-rome
16-17/12/2022	International Conference on Advances in Big Data and Data Sciences ICABDDS	Barcelona, Spain	https://waset.org/advances-in-big-data-and-data-sciences-conference-in-december-2022-in-barcelona

From the list above mentioned, at this stage, it can be confirmed the interest of BIGG in participating in the following events:

- CIB W78 – World Building Congress 2022:** 27-30th June 2022, Melbourne (Australia):
 The 39th W78 Conference will bring together a community of researchers and industry pros interested in the areas of Construction Informatics, BIM, Digital Twins, Education and Knowledge Management for design, construction and building operations and facilities management. ECTP will attend physically and will be one of the keynote speakers. BIGG will be presented as part of a slightly more general keynote presenting IT in Construction developments in projects at European level. Flyers will be also distributed.
- Sustainable Places 2022:** 6-9th September 2022, Nice (France). Sustainability targets and climate change objectives cannot be met without addressing buildings and the built environment at the building, district and urban scale to include our transport and energy infrastructures. Renowned for showcasing results coming out of the EU Horizon 2020 Framework Programme via the participation of cutting-edge research and innovation projects, the scope of Sustainable Places is captured directly in its name. It involves designing, building and retrofitting the places we live and work in a more sustainable way. ECTP and CSTB will lead the action.
- EUSEW 2022 – European Sustainable Energy Week:** 26-30th September 2022, Brussels (Belgium). The application was submitted but unfortunately was declined. The session would focus on the “what, how and why” of big building data collection in Europe, shining a spotlight on three aspects of big data for effectively transforming the EU’s building stock towards higher energy efficiency cost-effectively and achieving climate neutrality. The session would draw on the four EU sister projects, BuiltHub, MATRYCS, BIGG and BEYOND to provide practical and tangible insights on building data sharing, aggregation, analysis and access and how they can serve as a transmission piece between building and renovation policy and practical implementation on the local and building levels. Due to the declination of the application, the projects have decided to apply to have a physical or online stand at the EUSEW Networking Village.

VI.6. Actions organized by standardization bodies and regulators

Consultative and participatory meetings of standardization bodies and regulators have been identified:

- ETSI SmartM2M Technical Committee
- EC and EEA INSPIRE Commission expert group
- Industry Foundation Classes
- ISO/TC 59/SC 13
- CEN-CENELEC Focus Group on AI (<https://www.cencenelec.eu/news-and-events/events/>)
- EN ISO 23386 (development of properties using dictionaries)
- EN ISO 23387 Data Templates for Construction Objects
- SAREF (Smart Appliances REFerence ontology)
- INSPIRE Conference (<https://inspire.ec.europa.eu/portfolio/inspire-conferences>)
- SMARTM2M Technical Committee

This action will be led jointly with WP7/T7.1, where the standardization bodies and regulators were identified. During the upcoming months, WP7 and WP8 will work together in order to select in which actions BIGG will participate and how the project could get involved in them. It is planned to participate at one action during the last quarter of 2022 and at two during 2023.

In addition, a workshop about standardization will be organized with the sister projects BEYOND, MATRYCS and BuiltHub as guests. The workshop will focus on identifying the commonalities among the projects, as well as co-defining together the founding principles of the Community of Standardisation that BIGG will lead. This is detailed in *Section VI.9*.

VI.7. Scientific publications

After the two scientific papers published in 2021, during the first months of 2022 2 scientific papers have been published, and another scientific paper has been submitted. It is expected to publish 1 more paper, as conference paper or article in a scientific journal or magazine, during 2022. During the last year of the project, it is planned to publish 4 scientific papers. The evolution of this dissemination activity is exponential, as the project progresses, more and more results and developments are obtained which can be published.

Concerning the next publications of 2022, it is expected to release a technical publication at the end of the year thanks to the collaborative effort of the technical partners.

VI.8. White papers published

Three white papers, scientific and/or industrial, will be published in the second period of the project. It is planned to release the first white paper at the end of 2022 and the other two, during 2023. Inetum and Intuicy will be the responsible partners for the white papers, with support of ECTP as communication and dissemination leader. The expected audience of these booklets is sector experts and early-adopters of innovative solutions.

VI.9. Public events organized by BIGG

BIGG will organize 4 public events through the duration of the project. The first event was organized in September 2021 with the online workshop “Energy Information and monitoring services of the Generalitat of Catalonia”. More details can be found in *Section III.8*.

Below some ideas are proposed for the rest of public events organized by BIGG:

- Public event 2: An online workshop with the sister projects (BEYOND, MATRYCS and BuiltHub) will be organized at M22 (September 2022), which will be hosted by the platform Leonardo Energy in order to increase the visibility of the project thanks to their community of more than 10.000 subscribers. The workshop will be composed of an introduction, a pitch of the 4 projects followed by a round table, and a timeslot dedicated to questions from the audience. The aim of the discussion will be to: share each project's vision of contribution to standardisation; identify the common subjects and ideas that could be pushed to standardisation; identify similar structures among the projects that could help to influence the standards; co-define together the founding principles and operational mechanisms of the Community of Standardisation. The workshop will set the basis of the "sister projects community" and will expose: the intention of taking part together in actions organised by standardisation bodies and regulators, and how the projects can approach, participate in them and actively contribute to standardisation.
- Public event 3: This event will take place at the end of 2022 or beginning of 2023 and it will be similar to the public event organized by CIMNE in September 2021. If the sanitary situation allows it, it will be physical. The aim of the event is to present the project and some BIGG functionalities to local stakeholders, technicians, the energy sector, among others.
- Public event 4: The last public event will present the final results at the end of the project (end of 2023). It will be an online workshop, hosted again by BuildUp or Leonardo Energy.

These are only the first ideas for the public events, but they will evolve throughout the project.

VI.10. Training sessions

The training sessions organized for buildings professionals will consist of 2 webinars, where all the business cases will be presented together. The first one was fixed at M18-M20 and the second one, at the end of the project (M36). However, the partners have decided to postpone the first training session in English after summer (M22-M23), since the dates fixed on the GA coincides with the period of summer holidays. The idea is to reach the maximum audience possible in order to increase the visibility of the project, thus the period September-October has been selected .

The first training session will be organized as a webinar in English hosted by a relevant platform, for instance BuildUp or Leonardo Energy, in order to reach a greater audience. The aim of the webinar is to present the AI toolbox to international stakeholders.

Furthermore, at least 6 trainings will be organised at a national level for the local building experts involved in the project, one for each business case. Thus, each training session will be organized with focus on their respective case study area and language: the first three training sessions (dedicated to BC1, BC2 and BC3) will be organized in Catalan in Catalunya, Spain; while two sessions (BC4 and BC5) will take place in Athens, Greece, and another section (BC6) in Volos and/or Thessaloniki, all of them in Greek.

In the following table, the planning for all the training sessions can be found:

Table 9. Training sessions for building professionals

Date	Type of event	Name of the event	Partner(s)	Place
M22-23	Webinar (English)	TBC : WP5, presentation of the AI toolbox	All technical partners	Online
M36	Webinar (English)	TBC	All technical partners	Online
2023	Training session	BC1. Benchmarking and energy efficiency tracking in public buildings	ICAEN	Catalunya, Spain
2023	Training session	BC2. Energy certification in residential and tertiary buildings	ICAEN	Catalunya, Spain
2023	Training session	BC3. Building life-cycle – from planning to renovation	ICAT	Catalunya, Spain
2023	Training session	BC4. Energy Performance Contract-based savings in commercial buildings	Engie	Athens, Greece
2023	Training session	BC5. Buildings for occupants: Comfort case	Helexia	Athens, Greece
2023	Training session	BC6. Electricity and Gas demand-response	domX	Volos & Thessaloniki, Greece

VI.11. Large-scale dissemination campaign

Two large-scale marketing and dissemination campaigns will be carried out, the first one at M22 and the second one at M35. These campaigns will target public authorities and buildings and smart cities stakeholders, as well as the ECTP members. The main objective of the dissemination campaigns will be to spread the results of the project as well as promote the events and workshops organized by BIGG.

The first large-scale dissemination campaign will start at M22 and will aim at increasing the visibility of the project and reaching a greater audience, in order to promote the BIGG results and attract people to take part in the BIGG community on LinkedIn. The campaign will be composed of an active promotion on the website and on social media channels, the partners will share the news in their respective channels, including messages in the periodical newsletters of ECTP sent to their 145 members. In addition, the organisation of a workshop with the sister projects hosted by Leonardo Energy will increase the visibility of BIGG, reaching a new audience, thanks to the more than 10.000 subscribers of the platform.

Lessons learnt from the first campaign will be applied in the second large-scale dissemination campaign that will take place at the end of the project. The final campaign will promote the final results and the main outcomes achieved throughout the project.

