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D.8.1 Dissemination and Communication Strategy

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D. 8.1 Dissemination and Communication Strategy

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Colophon

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Revision and history chart

Version	Date	Editors	Comment Description
0.1	10/01/2022	Dr. Veronika Schröpfer	Internal first draft provided
0.2	04/02/2022	Larissa De Rosso	Second draft submitted to coordinator and partners for review and comments
1	24/02/2022	Paul McCormack	Approved



Publishable executive summary

This Dissemination and Communication Plan is aimed at the consortium partners to ensure their involvement in all aspects of dissemination and communication activities, and the European Commission, in order to communicate the consortium's strategy and report on undertaken dissemination and communication activities.

Dissemination and Communication are important within the ARISE project. They are the pillars of the ARISE approach in terms of targeting different groups and presenting the results to them, paving the way for a successful exploitation. For every category of identified stakeholders, the Communication and Dissemination strategy differs. However, the baseline message and brand remain transversal to all communication and dissemination activities.

This is the first version of the Dissemination and Communication Plan, setting out the overall strategy and planned activities for the successful dissemination of the project progress and results. Thereafter it reports on undertaken dissemination activities until M6 of the project. Additionally, this report includes the social media strategy with initial statistics on the various chosen channels and recommendations on their successful use. The dissemination material produced so far is shown in the appendix. Targets and key performance indicators (KPIs) are measured within the Dissemination and Communication Plan to monitor the performance of the strategy.

This document is constantly updated throughout the project lifespan with reports of the partners on their actual dissemination activities. It is open to all partners to comment and change the strategy where they see fit at any time. The final version will be submitted at the end of the project, as a final report on all undertaken dissemination activities.



List of acronyms and abbreviations

AEC: Architecture, Engineering, and Construction sector

BIM: Building Information Model

BIM-EPA: BIM Energy Performance Alliance

BUS: Build-up Skills

DCP: Dissemination and Communication Plan

KPI: Key Performance Indicator

OIF: Open Institutional Forum

SME: Small and Medium-size Enterprise



Definitions

Communication means taking strategic and targeted measures for promoting the action itself and its results to a multitude of audiences, including the media and the public, and possibly engaging in a two-way exchange. The aim is to reach out to society as a whole and in particular to some specific audiences while demonstrating how EU funding contributes to tackling societal challenges.

Dissemination means the public disclosure of the results of the project in any medium. It is a process of promotion and awareness-raising right from the beginning of the project. It makes research results known to various stakeholder groups in a targeted way, to enable them to use results in their own work.



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1. Communication and Dissemination Strategy

The project will use various communication materials and tools to present the project results to the main identified target groups: (1) Industry, (2) Designers, Engineers and Architects, (3) Building Owners and Investors, (4) Public Authorities. This includes all 14 received letters of support during the proposal stage from value chain stakeholders, which confirmed their interest in **ARISE** project outcomes and especially the BIM Energy Performance Alliance (BIM-EPA). A detailed list of the Target Groups can be found in chapter 2.

This chapter sets out with a strategy overview and the specific roles of the project partners. Then lists the public deliverables of the project in order to link them to the dissemination content. Thereafter the content, i.e. the target message of ARISE is presented.

While chapter 2 introduces the target groups and chapter 3 the channels to reach them, the overall strategy can be summarised as follows:

Online tools to gather an active community:

- **Project website** (<https://www.ariseproject.eu>) constantly updated with news, training events, and up-date posts on progress and results. The website is more than a simple document repository, it will **demonstrate the benefits of micro-learning of digital energy efficient BIM construction skills and their recognition** in a user-friendly and attractive way. The website has a 'marketing' approach, presenting objectives, results, and key reports. News and events taking place and providing the link to the forum for stakeholders to interact: the [LinkedIn group](#).
- **Social network engagement** (Facebook, Twitter, LinkedIn, Instagram, etc.) through hashtag-based discussions, and exploitation of already existing profiles of the consortium. A [LinkedIn company profile](#), in



addition to the LinkedIn Forum, and a [Twitter account](#) have been created at the project start and integrated into the website. While the forum is managed by partner IBIMI, the other social media accounts are coordinated by ACE. All partners support the channels through sharing and discussing information until and beyond the end of the project. The project already established its own [YouTube channel](#) for video storytelling. Two videos providing a project overview by the coordinator are already available.

- **Bi-annual e-newsletter** will be generated in an e-zine format. The e-newsletter will also be a key media tool for directing traffic to the project website. The community will help to share information.
- **Webinars** addressing technical audiences, professionals and authorities.

Events:

- At least four national test training case studies, mainly for blue- and white-collar practitioners and authorities (WP6) and Workshops on effective market implementation (T7.6) will take place.
- Participation at external events, scientific conferences and fairs, regional and national events etc. published in the Dissemination and Communication Plan (DCP). Partners are welcome to add any event suggestions to the DCP.
- Organisation of webinars/seminars, coordinated participation at conferences, and shared communication activities with a cluster of build-up skills sister projects.

Publications:

- Joint open access publications in scientific press, and scientific presentations at relevant conferences to reach the scientific community will be made openly accessible on the projects' [Zenodo Community](#). (Please, for more information about publication rules refer to Peer reviewed scientific publications section in this report)



- Publications of the 'Energy Performance improvement European Roadmap' (M24) and a 'handbook of modules for micro-learning' (M28).

Communication materials:

- One promotional project video on YouTube project channel, including contents from other online events for Internet and TV broadcast communication.
- A leaflet and poster will be developed In August 2022 (M12). Depending on the COVID-19 situation, digital versions such as infographics are being taken into consideration.

1.1. Role of the consortium partners

The **ACE** is in charge of coordinating all dissemination and communication activities, managing the social media accounts (D8.4) and creating dissemination material (D8.5), such as the project video, a poster and a leaflet. With the support of IBIMI the visual identity was created (D8.2). **ACE** is also the EU umbrella organisation representing the interests of all (ca. 600.000) EU architects and thus responsible for a wider dissemination through their member organisations, for instance through inviting to the four national case study trainings and promoting the micro learning units.

BMET, the coordinator, is responsible for representing the project at various events and leading the cluster activities with other EU funded projects. **BMET** and **IBIMI** are the two partners with most resources after **ACE** and they will be involved diligently in the Dissemination and Communication activities. Nevertheless, all partners have resources assigned to the Dissemination and Communication activities and all must contribute.



BMET, KFA and TUD have higher involvement in scientific dissemination performed. The aim is to publish at least three conference papers and three scientific publications.

IBIMI is responsible for the project website and for coordinating the LinkedIn Forum with contributions from all partners. **BMET** and **IBIMI** are the two partners with most resources after **ACE** and they will be involved diligently in the Dissemination and Communication activities. Nevertheless, all partners have resources assigned to the Dissemination and Communication activities and all must contribute.

BMET, TU Dublin, IECE, ISSO, IBIMI, BC, KEA, IST are mainly responsible for a demonstration of the developed upskilling materials and pilot testing aiming at a direct market stimulus to increase demand for upskilling in sustainable energy skills.

ALL partners are very actively involved in communication and dissemination by participating in the project's communication and dissemination activities and by spreading the content through their own dissemination networks, channels and collaborations. All partners are to contribute to the bi-annual newsletters, website updates, social media posts and especially the LinkedIn Forum. The consortium will present the results at events such as building fairs and conferences, in magazines and journals.

An exceptional benefit of ARISE is that it has formed the network **BIM Energy Performance Alliance** (BIM-EPA) (formerly BIMalliance) of key actors representing previous and ongoing BUS and Construction Skills projects and their collaborative networks (50 partners and 20 countries). The extended associated BIM-EPA consortium represent key actors and target groups (both Industry and academia), add other experience, skills, and that extended network, as well as further partners with EU-funded project delivery experience. The responsibility of the BIM-EPA partners will be to empower strong market acceptance, disseminate the results and impacts further and pave the way for a successful exploitation of the project results.

1.1. Relationship with other project activities

Dissemination and communication depend heavily upon all other activities and progress in the project, as they need to continuously feed their content into all communication activities. As depicted in the figure below this work package is dependent on the constant flow of information from other work packages.

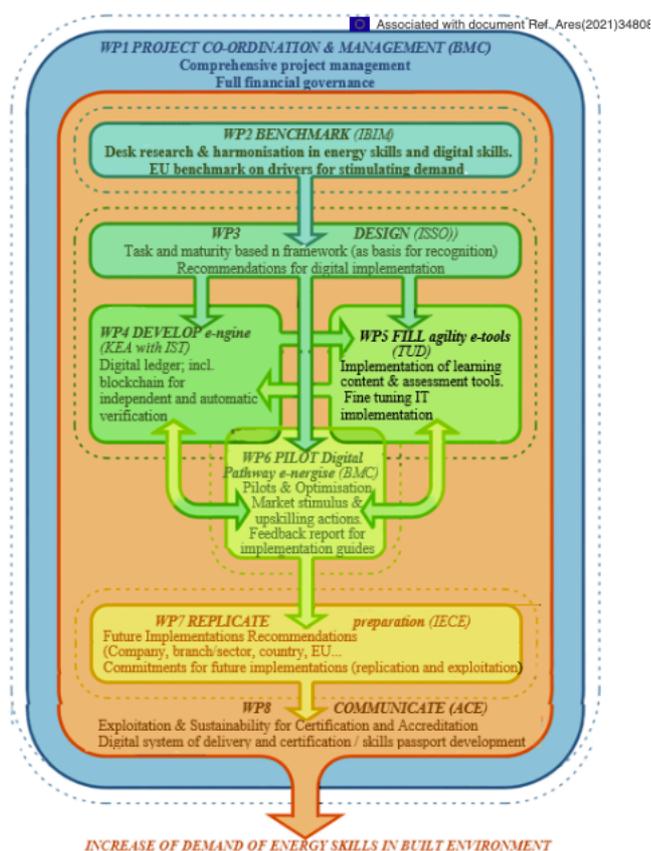


Figure 1 Project Structure



Especially public deliverables produced during the project are used to create dissemination content to reach the target groups. Therefore, the following table lists all public deliverables of the project, indicating their due date and responsible. As you can see almost all deliverables are made public. The idea behind it is that the results are produced with EU funding and should bring benefit to all Europeans.

Table 1 List of public deliverables

Public deliverables	Due Date	Responsible Partner
D1.4 Impact Monitoring Report	November/2022 (M15)	BMET
D2.1 Open Institutional Forum (OIF) opened on a LinkedIn channel	November/2021 (M3)	IBIMI
D2.2 First overview of EU directives implementation report	December/2021 (M4)	IBIMI
D2.3 First overview of the national/regional qualification framework report	July/2022 (M11)	IBIMI
D2.4 First overview of other EU wide certification schemes report	August/2022 (M12)	IBIMI
D2.5 Overview of pathways of integration of previous EU project resources report	October/2022 (M14)	IBIMI
D2.6 Overview of Industry technical input report	October/2022 (M14)	IBIMI
D2.8 European roadmap BIM applied to energy performance improvement report	April/2023 (M20)	IBIMI

D3.1 maturity analysis of digitalisation and sustainable energy skills	May/2022 (M9)	IECE
D3.2 Maturity based model of digitization skills in sync with sustainable energy skills	July/2022 (M11)	TU Dublin
D3.3 Qualification framework of sustainable energy skills leveraged by digitalisation incl. BIM	October/2022 (M14)	ISSO
D3.4 Map of available resources linked to the developed qualification framework.	February/2023 (M18)	TU Dublin
D3.5 Guidelines as a basis for digital implementation	December/2022 (M16)	ISSO
D3.6 Recommendations for adaptation of the proposed recognition	April/2023 (M20)	IECE
D4.1 Initial materials, requirements, and features report.	May/2022 (M9)	KEA
D4.6 Platform, including Gamification.	July/2023 (M23)	KEA
D 5.1 Definition of learning methodologies, materials, and delivery tools for ARISE pilots	June/2022 (M10)	TU Dublin
D5.5 Development of Handbook for use after project duration	December/2023 (M28)	TU Dublin
D6.1 Package of testing materials for qualifications recognition scheme and maturity level	October/2022 (M14)	BMET

D6.2 Survey Report – user's feedback on the competence matrix	January/2023 (M17)	BMET
D6.3 Package of selected digital tools for pilot delivery	November/2023 (M27)	BMET
D6.4 Report on workshops and upskilling actions for testing the digital tools	November/2023 (M27)	BMET
D6.5 Package of complete materials for delivery of sample qualifications	December/2023 (M28)	BMET
D6.6 Guidelines for long term evaluation, benchmarking, long term follow-up, and measuring of impacts	December/2023 (M28)	BMET
D7.1 Guidelines to align ARISE learning outcomes with national qualification frameworks	April/2023 (M20)	IECE
D7.2 Guidelines for use of ARISE trainings to gain CPD points	April/2023 (M20)	IECE
D7.3 Accreditation Report – QA&QC procedure to provide high quality of upskilling	August/2023 (M24)	IECE
D7.4 Overview of best practices in market WP7recognition of skills	August/2023 (M24)	IECE
D7.5 Recommendations for market stimulating and supportive measures	August/2023 (M24)	IECE



D7.6 Report on Workshops on effective implementation	December/2023 (M28)	IECE
D7.7 Policy recommendation for a pan-EU common approach for sustainable energy skills recognition	December/2023 (M28)	IECE
D8.1 Dissemination and communication strategy	February/2021 (M6)	ACE
D8.2 Project visual identity	October/2021 (M2)	ACE
D8.3 Project website	November/2021 (M3)	IBIMI
D8.4 Project social network accounts live	November/2021 (M3)	ACE
D8.8 Final project publishable report	February/2024 (M30)	ACE

1.2. Dissemination Content

The following message has been developed to communicate the project aim and objectives in an easy to understand, tangible and accessible way for all, expert stakeholders and target groups, and people with lesser knowledge, such as the general public. So far, the text has been used on the website and articles.

ARISE's global goal is to revolutionize the learning process by changing both delivery and recognition of sustainable energy skills in the construction sector.

The new system of training and recognition of skills will be valid across the EU, thus increasing the spread of skilled workforce in the building market.

ARISE is a European funded project that aims to support the upskilling of the design and construction professionals on the topics of energy efficient buildings and Building Information Modelling (BIM) processes.

Assisting the construction industry to ‘ARISE’ and move towards an energy-efficient built environment, the consortium partners foresee a stimulating approach to increase demand for sustainable energy and digital skills in the Architecture, Engineering, and Construction (AEC) sector. ARISE’s five enabling pillars:

1. **Alignment** of skills with a harmonised EU Learning Framework
2. **Access** to online training materials and tools 24/7.
3. **Assignment** of the digital Market -transferable recognitions, to enable a wide recognition across the EU and beyond.
4. **“A-Credit-action”** is based on a Continuous Professional Development type method and a novel “cryptocurrency for skills development” reward system.
5. **Assistance** in the initialisation of legislative changes and supportive procurement measures, to further stimulate market demand

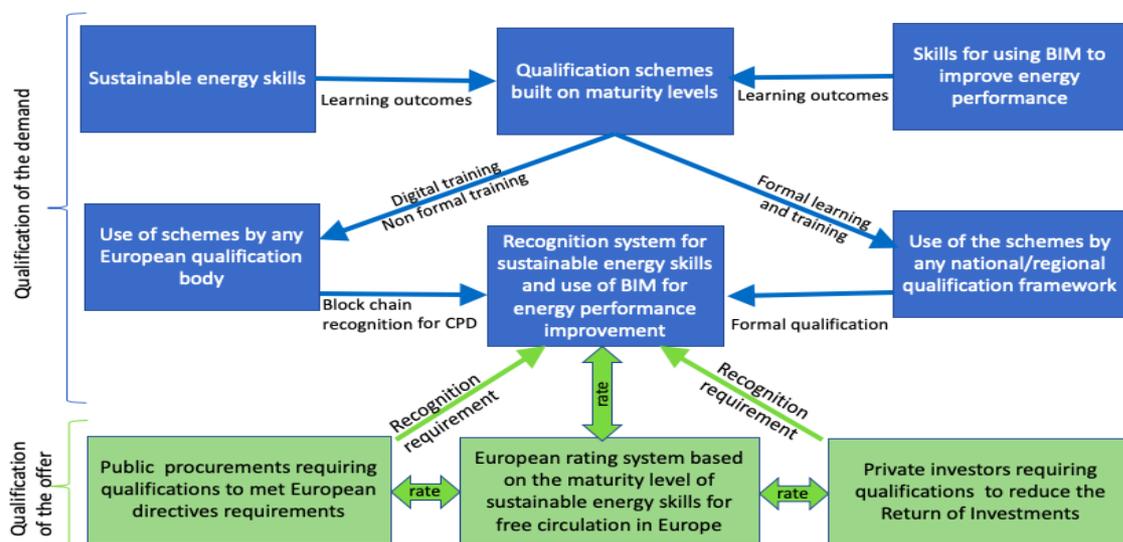


Figure 2 Overview of the vision of ARISE on the digitisation of recognition

ARISE’s global goal is to revolutionize the learning process by changing both delivery and recognition of sustainable energy skills in the construction sector. The



new system of training and recognition of skills will be valid across the EU, thus increasing the spread of skilled workforce in the building market.

Its mission is to support the twin transition of the construction sector and to contribute thereby to the European Recovery and Resilience Plans 2021 -2027, by providing the design and construction professionals with digital and sustainable energy skills of the future, along with demand-side demand side guidelines for marketable appreciation of skills and exploitation of benefits thereof.

By providing clear learning interactions, transparency of upskilling transactions and recognition of qualifications achieved, ARISE will inspire demand for sustainable energy skills.

It will also transform the learning process by monetizing skills development and learning exchange with a digital system based on skills recognition rather than accreditation. The training and transaction system developed by the project will reward learners as they achieve competence at a certain level with the cryptocurrency for skills exchange – CERTcoin – the innovative currency of skills and learning of the construction sector embracing today's digital transformation benefits.

1.3. Display of European Union Funding

Any project results communicate or disseminate by the partners must present in a clear way the European flag and the disclaimer note as shown below.



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2. Target Audiences and Key Stakeholders

ARISE will engage stakeholders on both *Demand*-side (public authorities/administration, SMEs, real estate owners, etc.) and the *Offer* side (workers' associations, professionals, building companies, producers of materials, and technology for the building sector, etc.).

According to the Dissemination and Communication Strategy argued in chapter 1, the following groups of stakeholders were identified:

1. Industry: Practitioners in charge of the implementation, such as contractors and advisors; building managers; European SME ecosystem; facility management and maintenance companies.
2. Designers, Engineers and Architects: the design professionals architects represented by project partner ACE.
3. Building Owners and Investors: investing and leading the decision process; (real estate industry, ESCOs, construction companies). Households, final users/occupants driving the process through needs and constrains; Homeowner associations; General public.
4. Public Authorities, policy makers.

ARISE also builds upon the results of previous and ongoing BUS and Construction Skills projects. ARISE has formed a network of BIM Energy Performance Alliance (BIM-EPA) (*formerly BIMalliance*) key actors, representing those projects and their collaborative networks (50 partners and 20 countries). The extended associated BIM-EPA consortium, acting as key actors and target groups, add other experience, skills, and that extended network, as well as further partners from both Industry and Academia, with H2020 project delivery experience. Therefore, the nucleus of ARISE is energised with knowledge and ability to deliver such a project and is empowered by strong market connections and the network to drive the results and impacts.



Figure 3 BIM-EPA stakeholder booster

Additionally, opinion leaders, key stakeholders and multipliers are also a vital group to reach:

- Technology Platforms (NTPs and ECTP), networks and initiatives
- Scientific community (research and academic organisations, scientific journals etc.)

Letters of Support have been received from the following 14 institutions during the proposal stage. These organisations will be included more actively in the project work:

BIMCert

1. Belfast Metropolitan College - Northern Ireland
2. FAC Ireland – Ireland
3. TUDublin – Ireland
4. EIHP - Croatia
5. IECE – Republic of North Macedonia
6. IST – Portugal (LoS)
7. CITBNI – Northern Ireland



BIMeet

8. Luxembourg Institute of Science and Technology (LIST) – Luxembourg
9. Centre Scientifique et Technique du Batiment (CSTB) – France
10. Building Research Establishment (BRE) – Ireland
11. La plateforme Formation & Évaluation de l'INES - France
12. Center for Renewable Energy Sources (CRES) - Greece
13. VTT Technical Research Centre of Finland - Finland
14. House of Training - Luxembourg
15. Cardiff University - Wales
16. Metropolia University of Applied Sciences - Finland

BIMplement

17. Alliance Villes Emploi – France (LoS)
18. Astus-Construction - France
19. ISSO - Netherlands
20. Huygen Installatie Advisers - Netherlands
21. Regioninis Inovacijų vadybos Centras - Lithuania
22. Lietuvos Statybininkų Asociacija – Lithuania (LoS)
23. Instituto valenciano de la Edificacion - Spain
24. Mostostal Warszawa SA - Poland
25. Conseil Des Architectes D'Europe - Belgium

Net-Ubiep

26. National Agency for New Technologies, Energy and Sustainable Economic Development - Italy
27. Gruppo CS - Italy
28. University of Zagreb - Croatia
29. Via Europa Competence Centre - Slovakia



30. UVS Institute for Adult Education and Services - Slovakia
31. Fundación Laboral de la Construcción - Spain
32. Spanish National Research Council - Spain
33. Vilnius Gediminas Technical University - Lithuania (LoS)
34. Vsj "Skaitmeninė statyba"- Lithuania
35. ISSO Dutch Knowledge Institute for the buildings and building sector - Netherlands
36. Balance and Result - Netherlands
37. ETET - Eesti Tööstus Ehituse Tugirühm - Estonia
38. Tallinn University of Technology - Estonia

Other supporters

1. Abruzzo Region, Italy (LoS)
2. Avignon Academie (Academy Avignon for Crafts and SMEs, France (LoS)
3. Andrea Giordano, professor of the department of civil, environmental and architectural engineering – ICEA , Padova Italy (LoS)
4. Università Iuav di Venezia, Italy (LoS)
5. Balance & Result, Netherlands (LoS)
6. Scuola per la formazione professionale delle maestranze edili della provincia di Piacenza, Italy (LoS)
7. National Passive House Association, Lithuania (LoS)
8. Construction Industry Training Board, Ireland (LoS)
9. Non-Profit Organization Estonian Group for Lean Construction, Estonia (LoS)
10. Ulster University, Northern Ireland (LoS)

The consortium aims to extend this network with other relevant Stakeholders groups during the project itself. The ARISE Stakeholders and Advisory Board task is part of WP1 (T1.4), but the activities and engagements are also related to the



overall project communication and dissemination. Each partner is seeking collaborations within their countries.

Industry Advisory Panel and Technical Advisory Panel

- 1 BRE - England
- 2 CitA - Ireland
- 3 EBC - Belgium
- 4 O'Keefe Construction Limited - England
- 5 CIOB - England
- 6 ICE - Northern Ireland
- 7 Nemetschek Romania Sales & Support SRL - Alliance Romania
Enterprise Ireland - Ireland
- 8 Chamber of Certified Architects and Certified Engineers of Republic of
North Macedonia - Republic of North Macedonia
- 9 RSUA - Northern Ireland
- 10 Ulster University - Northern Ireland
- 11 Institut de Tecnologia de la Construcció de Catalunya - Spain
- 12 EIHP - Croatia
- 13 Limerick Institute of Technology - Ireland
- 14 R2M Solution Srl - Italy
- 15 CS Aziendale - Italy
- 16 Building Changes Support BV - Netherlands
- 17 Architects' Council of Europe - Belgium
- 18 Alliance Villes Emploi - France
- 19 Metropolia University of Applied Sciences – Finland
- 20 IETCC – Spain
- 21 Non-Profit Organization Estonian Group for Lean Construction – Estonia

- 22 National Passive House Association – Lithuania
- 23 Ente Scuola per la Formazione Professionale delle Maestranze Edili della
- 24 Provincia di Piacenza – Italy
- 25 Università luav di Venezia – Italy
- 26 Università degli Studi di Padova - Italy 65. Avignon Academie – Belgium
- 27 Abruzzo Region - Italy

3. Dissemination Channels

Various dissemination activities ensure a good visibility of the project towards the identified target groups and the general public. These are based on a Dissemination and Communication strategy tailored to the various needs and expectations of the target groups. Ways of contacting actors differ in three main respects:

- Type of link established with each actor: from being informed to being involved;
- The number of actors being reached;

Table 2 Dissemination Channels with KPIs

Type of dissemination	Type of audience	Channels	Number	Indicators	Contents
Proactive Communication	General	Through newsletters every six months, one-to-one communication, emailing and invitation to events	Min. 4	100 people mailing list, plus clicks through	Project progress, events and relevant news

		to relevant stakeholders and the European Commission.		social media	
Social media	General	LinkedIn, YouTube and Twitter, plus social media run by partners.	3 accounts, plus partner accounts	500 comprised of a minimum of 100 followers on LinkedIn and 400 on Twitter and other social media channels.	Project progress, events, relevant news, interaction with public
Videos	General	YouTube channel and TV broadcast.	5	500 views	Project overview and DIY videos
Dedicated website	General	ARISE website: interactive environment that gives access to and permits to collaborate on all the aspects related to	1 (4 years min.)	4.000 sessions	ARISE objectives, overview, partnership and public deliverabl

		<p>the project activities.</p> <p>The consortium uses a Google Drive as a collaborative working space.</p>			<p>es, latest news and features social media channels</p>
Roll-up poster and leaflet	General	<p>A roll-up poster and leaflet will be prepared for external communication in August 2022. The partners can translate the material into their national languages. A more environmentally friendly digital version, i.e. an infographic could be considered.</p>	2	7.500 people	General information
Publications	Scientific community	<p>ARISE partners will publish the results in the scientific literature, dedicated journals and magazines in the field of construction, energy and ICT.</p>	3	300 readers	Publishable project results;

		Moreover, results are intended also to be published through EC channels, e.g. CORDIS. Zenodo will be the open access archive.			
National and international training and dissemination workshops	Primary target groups	Dissemination activities related to the training workshops at EU level.	4	30-60 people	Training material
Partners' dissemination networks and channels	Targeted clients, end-users and primary target groups	Networks of all partners, as an example ACE: Newsletter distributed by email to 10.000 direct contacts every second months and to the 43 Member of ACE, representing over 600.000 practicing architects from 33 countries. ACE Website and other web-based channels.	9	40.000 people	Project progress, events and relevant materials

Participation in conferences, congresses and events	Scientific community, students, end-users	ARISE will be represented in several international relevant conferences to discuss specific research results and receive input and comments from outside the project, as well as to trigger new projects.	3	1.000 people	Publishable project results
Clustering Activities	EC, EU projects and networks	With other HORIZON 2020/ Horizon Europe/ European ongoing related projects, European and National Technology Platforms and other networks and initiatives.	4 initiatives	500 people	Information on the project and its achievements

3.1. Event Suggestions

The project outcomes will be further disseminated through presentations at international conferences and fairs, as well as common H2020/ HEU activities and other EU events (T8.2). In table 3 above we aim at three international conferences and four cluster activities. If possible, we will of course present the project at even



more events. So far, the ARISE partners presented the project at the following events and conferences:

1. BMET presented ARISE at Sustainable Places 2021.
2. BMET presented ARISE at BUILDup Skill 2021
3. BMET presented ARISE at EUSEW talks 2021
4. BMET presented ARISE at Cita Ireland 2021

This is a preliminary list of international conferences and fairs, which will be updated annually, also with input from all partners.

- Sustainable Places series <http://www.sustainableplaces.eu>
- EUSEW 2022, also for the awards <https://www.eusew.eu/about-awards-competition> and for the networking village
- EU Vocational Week - https://ec.europa.eu/social/vocational-skills-week/index_en
- PLEA (passive and low energy architecture) - <https://www.plea2020.org/>
- ECTP Conference (European Construction, built environment and energy-efficient buildings Technology Platform), <http://www.ectp.org/>
- World Sustainable Energy Days, Wels, Austria, <https://www.wsed.at/en/world-sustainable-energy-days.html> including Innovation Workshops Energy and Buildings
- World Sustainable Built Environment Conference 2022/ 2023: <http://www.sbe-series.org/sbe-21-22-conferences/>
- European Summit Barcelona – BIM4Student - <https://europeanbimsummit.com/en/bim-4-students/>
- BIMWORLD – Paris - <https://bim-w.com/>
- BIMWORLD – Munich - <https://www.bim-world.de/>



- GlobalBIM network - <https://www.globalbim.org/>

3.2. Peer reviewed scientific publications

All partners must ensure that all peer review scientific publication free full online access to all users. The bibliography metadata must include the following.

1. the terms “European Union (EU)” and “Horizon 2020”;
2. the name of the action (H2020), acronym (ARISE) and grant number (101033864);
3. the publication date, and length of embargo period if applicable, and
4. a persistent identifier.

For detailed information refer to the Grant Agreement page 47 and 48.

All scientific publication should be add in ARISE Zenodo community (<https://zenodo.org/communities/arise/>).

4. Website and Social Media Strategy

4.1. Arise Website

During the period between November 2021 (launch of the website) and February 2022, there were 17.803 visitors and 485 returned visitors. . In total, 22.631 pages were viewed and 14.592 page visits. Page views counts the number of times a page is viewed. Visits counts the number of sessions for visitors.

<https://www.ariseproject.eu/>

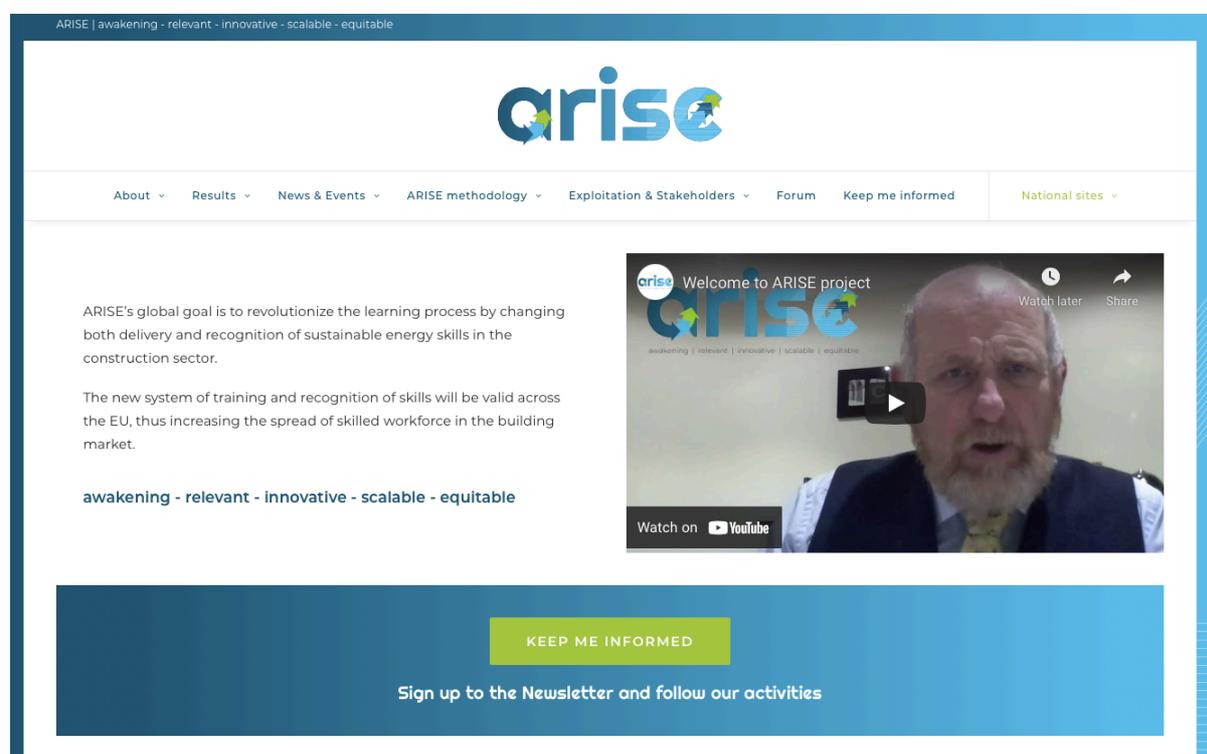


Figure 4 ARISE Homepage

The most viewed pages are:

1. *Partners* - <https://www.ariseproject.eu/partners/>
2. *Presentation and Main Output* - <https://www.ariseproject.eu/presentation-main-outputs/>
3. *Forum* - <https://www.ariseproject.eu/forum/>
4. *Registration* - <https://www.ariseproject.eu/registration/>



Recommendations:

The target set in this first dissemination plan for the whole project life is of 4.000 sessions. The website is currently live for 4 months. In order to further increase the website population, we constantly up-date the website, with new input from all consortium partners on the timeline, demonstration buildings, technology and methodology sections. Consortium partners are continuously requested to make suggestions for website improvements and to include the ARISE link in their websites, newsletters and social media in order to create even more traffic.

4.2. Arise Newsletter

The current mailing list consists of 17 contacts (January 2022). Due to GDPR it is rather difficult to obtain a large amount of email addresses. Therefore, we are already content with the achieved number. The KPI for newsletters set in Chapter 3 above is for the moment a cautious 100 subscribers and will be reviewed in the next version of the DCP.

The first newsletter was published on the 2nd February 2022.

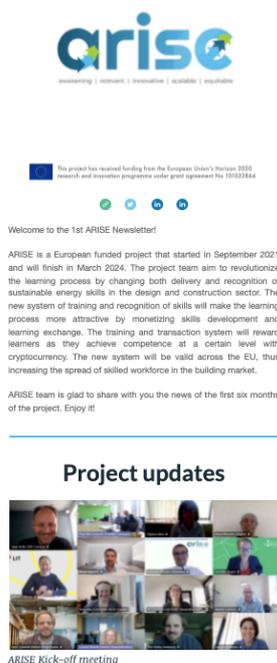


Figure 5 ARISE 1st newsletter



All newsletters can be found in the project website:
<https://www.ariseproject.eu/newsletters/>

Recommendations:

- Spread the newsletter through social media instead of just focusing on the subscribed audience.
- Consortium partners to spread social media posts notifying the release of each newsletter.
- Encourage colleagues and interested people in their networks to subscribe, emphasising this is only a biannual newsletter.

4.3. ARISE Social media

ARISE is active on Social media in the Twitter, LinkedIn, LinkedIn Groups (ARISE Open Institutional forum) and YouTube. The key words to be used in the Social Media channels are Energy-efficient buildings, Construction skills, sustainable energy, skills recognition, digital certification, micro-credentials, Digital Skills, and Green Skills.

4.4. Arise Twitter

In order to align the understanding of social media indicators, the definitions of all indicators used in this report are noted at the beginning of each social media channel.

Follower: the number of people who opt in to receive the ARISE tweets.

Impressions: the number of times a user receives a tweet in the timeline or searches for results.

Engagement: the number of times a user interacts with a tweet.

Engagement rate: the number of engagements divided by the number of impressions.

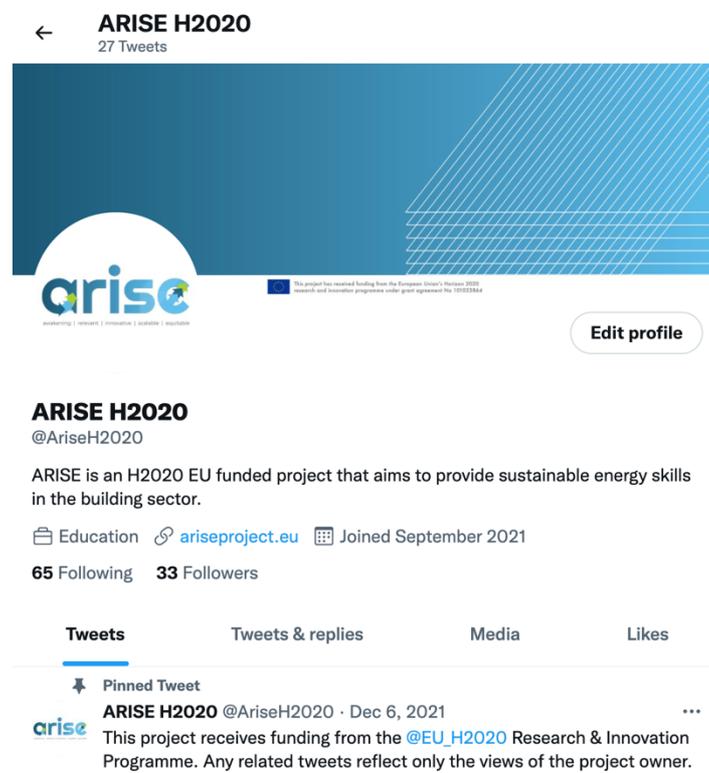


Figure 6 Twitter ARISE Account

The ARISE Twitter profile (<https://twitter.com/AriseH2020>) counts 27 followers, which are at this early stage in the project mainly partners and BIM-EPA participants.

@ARISEH2020 has posted 25 tweets in total. Over the last month the account has had 166 impressions, 393 profile visits and was mentioned 9 times. In these last 28 days there were engagements, which leads to an engagement rate of 0.3%. The KPI set in Chapter 3 for all social media channels is 500 followers for all channels.

We prefer to measure the followers, as it is a more reliable number of interested people than for instance impressions.

arise **ARISE H2020** @AriseH2020 · 21h ...
CINEA EU News have been looking back at the recent 13th BUILD UP Skills European exchange meeting where @AriseH2020 Programme Manager @PaulNewry presented at. Presentations from this meeting are available on the BUILD UP portal, buildup.eu/en/skills/13th...



Figure 7 Example of successful tweet

Recommendations for partners:

- Follow the page from your professional and personal accounts
- Retweet posts from your professional and personal accounts
- Tag @ARISEH2020 in your posts and comments
- Use your company page to boost the spread of ARISE posts
- To achieve higher visibility, you can also tag relevant EU bodies in appropriate discussions, re-tweets and tweets



4.5. Arise LinkedIn

Company page visitors the number of people who visited ARISE LinkedIn page.

Company page followers: the number of people who follows and receives ARISE LinkedIn post on their timeline.

Impressions: the number of people who saw ARISE content (including revisits).

The ARISE company page on LinkedIn (<https://www.linkedin.com/company/arise-h2020/>) has already gathered 103 followers (10 January 2022). It has regular posts that are often shared by the followers. In the last 30 days the page had 11 unique visits, 2 new followers and 269 post impressions.

Same as for the other social media channels before, the KPI set in Chapter 4 for all social media channels is 500 followers.

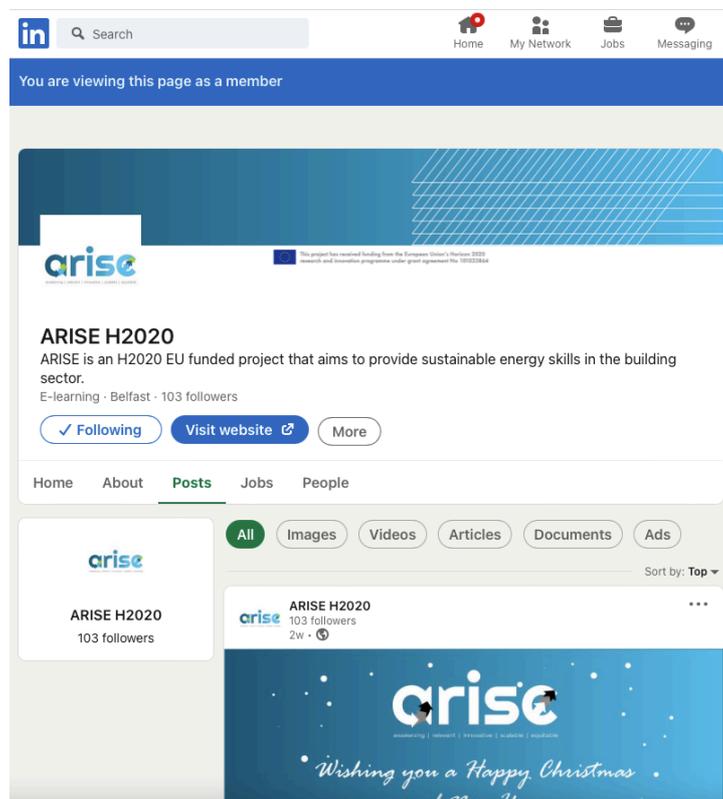


Figure 8 ARISE LinkedIn account



Recommendations for partners:

- Follow the LinkedIn company page with your personal profile
- Like and share posts coming from ARISE

In addition to the LinkedIn company profile the project has also created a LinkedIn group to serve as the Open Institutional Forum (OIF): an inclusive and representative structure to advise the BIM for Energy Performance (BIM-EP) Alliance on

- implementation of training policy;
- issues pertaining to the continuous improvement and updating of training materials to ensure the update of maturity level, both in digital and in energy performance tech.

IBIMI leads this activity (T2.1) with the support of different partners when needed. ARISE partners and key partners will use the forum for peer-to-peer dialogue among the different stakeholders. The forum will be developed through extensive interaction with all the stakeholders at European, national, and regional levels. The OIF will be used in the exploitation strategy as a tool to increase stakeholder's numbers at any level. Discussions will be enhanced using other media such as Twitter and Facebook.

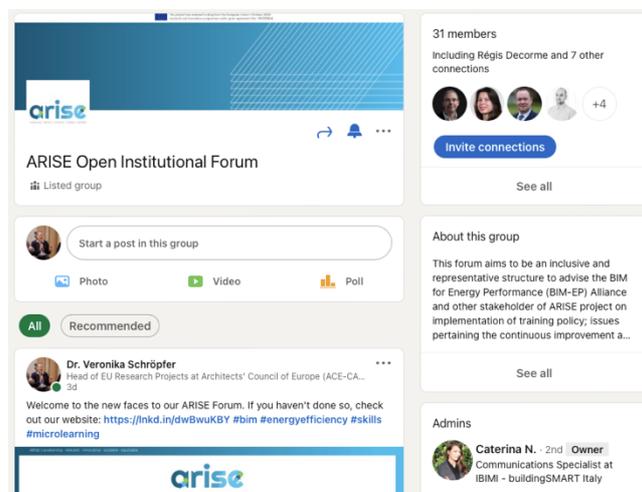


Figure 9 ARISE Forum



4.6. ARISE YouTube

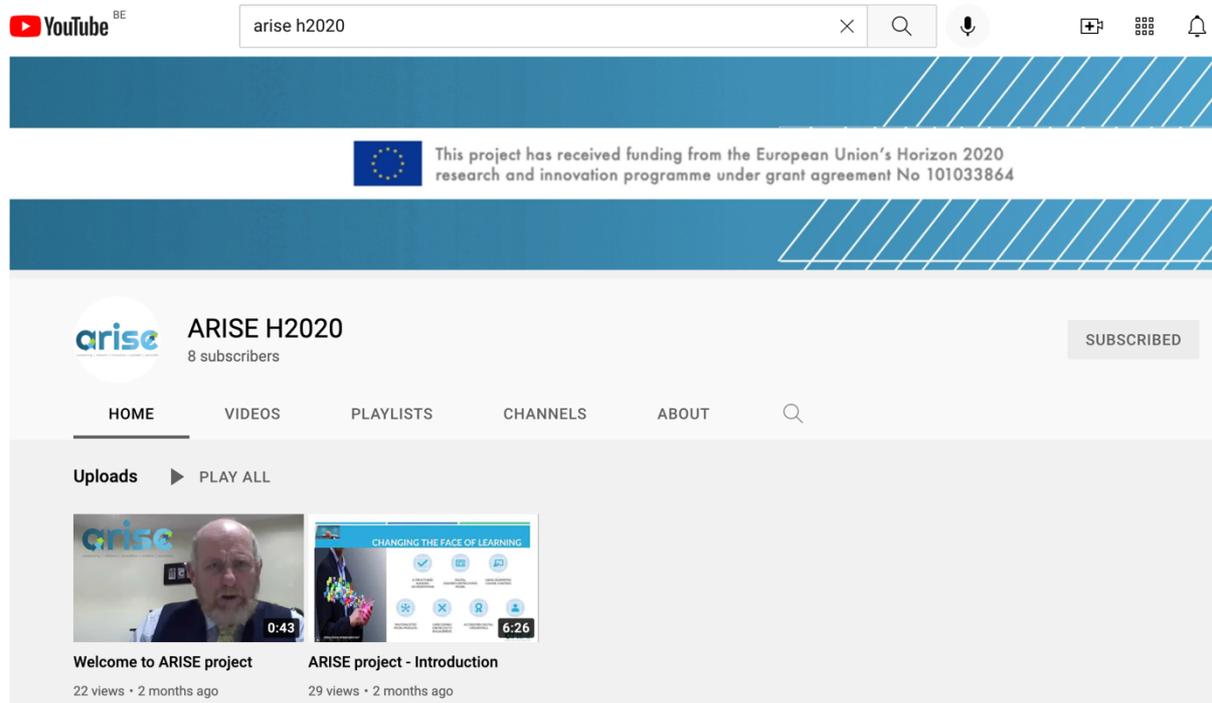


Figure 10 ARISE YouTube Channel

The ARISE YouTube channel (<https://www.youtube.com/channel/UC8dxJh4dhzRUy92pMJjg2Ug>) was set up in the beginning of the project. Currently there are two videos available. One is an welcome message from the project coordinator with 22 views so far. The other one is the project presentation with 29 views so far.

Recommendations for partners:

- Follow the YouTube Channel with your personal profile
- Like and share videos
- Propose own videos, for example of trainings or interviews with mentees.
- Propose related videos to create a new playlist with related initiatives and sister projects

5. Report on undertaken dissemination activities

Every six months regular reporting on the undertaken dissemination activities for each consortium partner is taking place. All activities are also being regularly reported in the SEDIA portal dissemination reporting. The activities report is done using a form (link <https://forms.gle/eLmJ9XnsJTBDGG43A>).

The dissemination and communication activities report have 19 types of activities defined by the European Commission on SEDIA portal. All activities are listed below followed by the activity definition, applicability, and size and type of audience. The type of the audience is defined as: Scientific community (Higher Education, Research), Industry, Civil Society, General Public, Policy Makers, Media, Investors, Customers and Others. If it is not possible to provide the size of the audience by type an estimation should be made.

Table 3 List of Dissemination and communication activities to be reported

Activities name	Definition	Applicability	Size and type of Audience
Organisation of a Conference	Conference: medium to large size event which gathers professionals to share their views in a specific topic.	This item is to be reported only when a Conference is organised on behalf of the ARISE project by a partner. The reporting should be done by the partner responsible for the organisation.	The total number of participants in the conference in person or online divided by type of audience should be reported. In hybrid conferences, the total number of people online and

			in-person should be reported.
Organisation of a workshop	Workshop: small size event where a group of people is engaged in a discussion about a specific topic aiming to achieve an outcome.	This item is to be reported only when a Workshop is organised on behalf of the ARISE project by a partner. The reporting should be done by the partner responsible for the organisation.	The total number of participants in person or online divided by type of audience should be reported. In hybrid workshops, the total number of people online and in-person should be reported.
Press release	A press release is used to announce important news, events or achievements of the project and it is shared with professionals from the news/ media industry.	This item is to be reported providing the link to the Press release issued to the news media industry.	The estimated or actual total number of people reached divided by type of audience should be reported.
Non-scientific and non-peer-reviewed publication	It can be Newsletter (Partner newsletter that mentions ARISE and the ARISE project newsletter), Magazine article, journal article	This item can be reported whenever a partner issues any of the items	The estimated or actual total number of people reached divided by type of

(popularised publication)	etc. This doesn't include scientific publications.	mentioned in the definition.	<p>audience should be reported.</p> <ul style="list-style-type: none"> - Newsletters the number of subscribers; - Printed Magazines the total amount of printed copies, - Digital Magazines the total amount of people in their mailing list. - Articles, the total amount of online views on the publisher website.
Exhibition	Exhibition: public showing	This item can be reported when an ARISE poster or other output is shown at an exhibition. For instance a booth.	The actual or estimated total number of exhibition viewers (provided by the organisation) divided by type of audience should be reported.

<p>Flyer</p>	<p>Flyer, leaflet or brochure: It is usually printed material explaining the ARISE project objectives and outcomes.</p>	<p>It can be reported whenever a Flyer is handed over to stakeholders. This can happen in a meeting, a workshop, conference, training, waiting room etc.</p>	<p>The total number of flyers distributed divided by type of audience should be reported.</p>
<p>Training</p>	<p>Training: a teaching event organised to provide knowledge and/or skills to the trainees.</p>	<p>It can be reported whenever a partner organised or attended a training event on behalf of ARISE.</p>	<p>The estimated or actual total number of people attending the training event divided by type of audience should be reported</p>
<p>Social Media</p>	<p>Social Media: It encompasses any social platform currently available. For Example: Twitter, Facebook, LinkedIn, Instagram, and etc.</p>	<p>It must be reported <u>only</u> when a <u>post about ARISE is created</u> and <u>published</u> on the partner social media (either a company profile or a personal profile for professional purposes).</p>	<p>The actual number of followers at the time of the report. Please, don't report likes, retweets, shares etc.</p>

Website	Website: any webpage hosted online for the length of the project.	It can be reported when news from ARISE is added to the partners website.	The average number of company website views in the reporting time.
Communication Campaign (e.g. Radio, TV)	Communication Campaign: large impact communication campaign with actions in the radio, TV or PODcast.	This item can be reported when it is any participation or organization of a communication campaign by any partner.	The actual or estimated number of people reached by the campaign
Participation to a Conference	Conference: medium to large size event which gathers professionals to share their views on a specific topic.	This item is to be reported only when a partner participates in a Conference on behalf of ARISE.	The actual or estimated number of people participating in the Conference.
Participation to a Workshop	Workshop: small size event where a group of people is engaged in a discussion about a specific topic aiming to achieve an outcome.	This item is to be reported only when partner participates in a Workshop on behalf of ARISE	The actual or estimated number of people participating in the Workshop.
Participation to an Event other than a	This item refers to seminars, webinars,	This item is to be reported only when a partner	The actual or estimated number of people

Conference or a Workshop	meetings, fundraising, and, etc.	participates in the events above on behalf of ARISE.	participating in the Event.
Video/Film	Video/Film – Any promotional video recorded in video.	This item is to be reported when a video about the project produced by a project partner	The actual or estimated number of people reached by the video.
Brokerage Event	Brokerage: It is a networking event designed for businesses to meet potential cooperation partners.	This item is to be reported when a partner participated in a Brokerage event on behalf of the project.	The actual or estimated number of people participating in the Event
Pitch Event	Pitch: it is an event where participants present their ideas, companies, products, in a short period of time.	This item is to be reported when a partner participated or presented in a Pitch event on behalf of the project.	The actual or estimated number of people participating in the event.
Trade Fair	It is an event usually from a specific industry sector where companies can showcase and	This item is to be reported when a partner participates in a Trade Fair on	The actual or estimated number of people participating in the event

	demonstrate their latest products.	behalf of the project.	
Participation in activities organised jointly with other EU project(s)	Any meeting, workshop, Conference, webinar and etc organised jointly with sister projects or any other related EU project.	This activity is to be reported when a partner participates in any joint activities with other EU projects.	The actual or estimated number of people participating in the event
Others	Any other activity that is not listed.	Avoid reporting the activities under this category. If you have any questions contact the Dissemination and Communication team	The actual or estimated number of people reached by this activity

There are some attention points to be aware of when reporting an activity, as follows.

1. Two dissemination activities performed in the same event by one partner.
 - a. Report the two activities and their respective size of audience. For example, Participation in a Conference and flyer. In the conference participation report the total (actual or estimated) number of participants. In the flyer report the number of flyers distributed.
2. Two partners participating in the same activity
 - a. The activities must be reported by the two partners. Please, only one partner should report the audience size and type.



3. ARISE website news provided by the partners.
 - a. At the end of the project, the dissemination and communication team will report on behalf the partner who provide the news. The size of audience reported will be the total page visits in the reporting period.

4. Partners' Social Media

- a. During the reporting period, the total number of posts done in the partner social media account should be reported in the "Event/Publication Title" area in the form. For example

Date: 02/02/2022

Partner: ACE

Type of activity: Social Media

Location: ACE LinkedIn

Countries addressed: Worldwide

Event/publication type: 10 posts

Type and size of the audience: ACE LinkedIn subscribers

Description of activities: Link to the posts

Main impact: Inform ACE LinkedIn subscribers about the project developments from September/2021 to February/2022.

5. ARISE social media

- a. Will be reported at the end of the project the total number of posts and the number of followers per social media.

The activity report of the first 5 months is summarised in the graphs shown below.

Dissemination and Communication activities per type

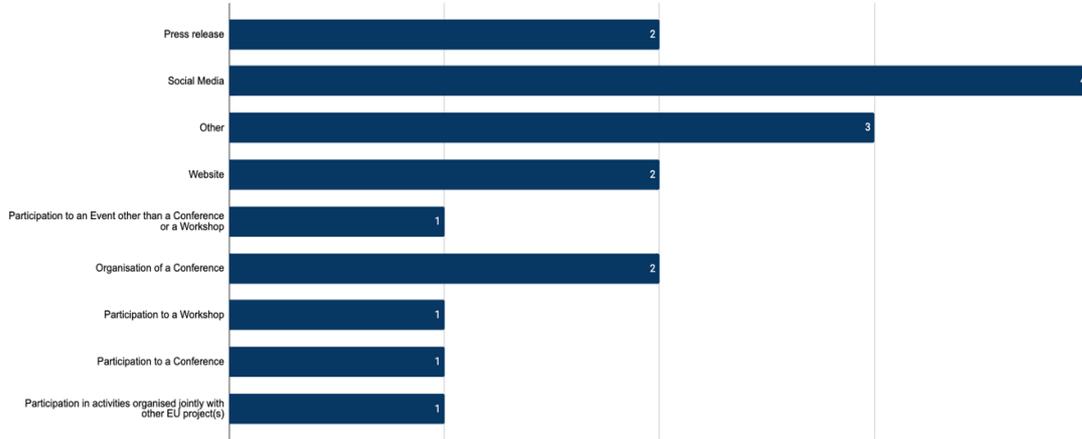


Figure 11 Dissemination and Communication activities report per type

Dissemination and communication activities per partner

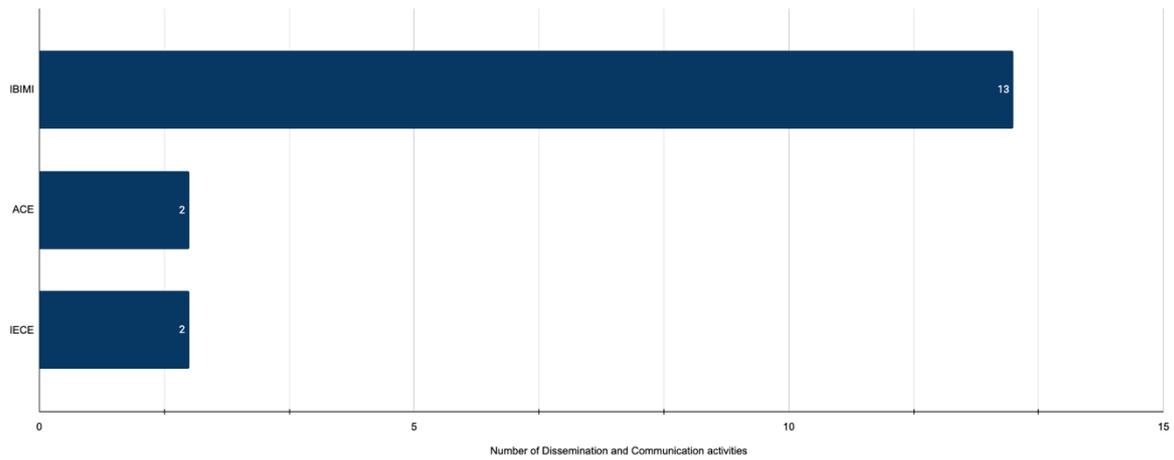


Figure 12 Dissemination and Communication Activities per partner

Dissemination and Communication activities per type of audience

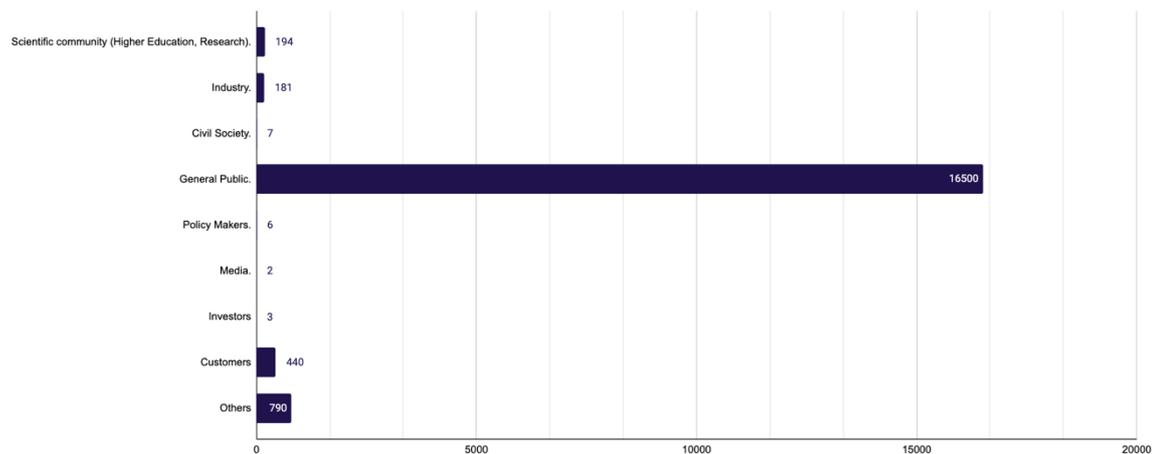


Figure 13 Communication and Dissemination activities per audience



6. Conclusion

This report set out with the overall strategy and planned activities for the successful dissemination of ARISE project progress and results. As communication and dissemination is a continuous process and not a one-time effort at the end of the project, activities are taking place at all stages of the project. As a result, this document will be constantly updated throughout the project lifespan with reports of the partners on their actual dissemination activities.

All undertaken activities by the consortium until M5/6 have been included in this report. Furthermore, the various dissemination materials and channels so far established are presented.

In order to ensure project recognisability and successful dissemination it is important that all partners use the cooperate identity of D8.2 when disseminating ARISE project results and follow the strategy developed in this deliverable. This includes proper use of the project name, logo, colour pallet, template as well as acknowledgment of EU funding.



7. APPENDIX

7.1. Arise Project Visual identity



D8.2 Project visual identity

Issue Date 18.10.2021
Version: V1.0

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2.4. Templates for project documents

The identity package was also used to produce the project documents templates, such as a presentation template (Figure 17), a deliverable report template (Figure 18), an meeting minutes (Figure 19) and agenda (Figure 20) template, attendees list (Figure 21) template and a press release (Figure 22) template. All templates are available in the project cloud accessible to all partners.



Figure 17 ARISE presentation template



Figure 18 Deliverable report template

D8.2 Project visual identity

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The graphic element of the white lines, used as a decoration for the logo and graphic material, suggests digitalisation, modernity, the future and vaguely reminds of white wireframes of 3D modelled buildings.

The logo consists of the main typography and a subtitle. Since any changes to these typographies and shapes would change the logo, it is imperative to respect the following instructions on composition.

- The logo must be surrounded by a minimum amount of clear space. No visual elements may be placed in this area.
- The size of this area is calculated using the width of the capital "A" as the base unit of measurement.
- The clearance area must be applied to both printed and online uses of the logo.



Figure 1 Arise Logo

The logo cannot be modified. Any change must be approved by all project partners. The rules stated here apply to any version of the logo.

D8.2 Project visual identity

7



1.2. Colours palette and typography

The primary colours of the logo are dark blue (#1b5673) and light blue (#5bacc6). The secondary colours of the project are light green (#a8c55a) and dark grey (#505050). The former is applied in the third arrow and the latter is applied in the subtitle.



Figure 2 ARISE colour palette

The palette consists of a graded range of shades varying between the two primary colours. The colour palette used in the logo is shown in the Figure 2.

Two fonts were chosen for the ARISE project: Righteous and Montserrat Regular (Figure 3). The former is used in the project name and title. The latter is used in the secondary subtitles and headings. The colour used for main titles is light blue. Dark grey, black and white are used for simple text.



Figure 3 ARISE Typography

1.3. Logo variations

The logo can be used in three different variations. The first is in a grayscale for white backgrounds (Figure 5), the second is a white variation for dark backgrounds (Figure 6) and, finally, there is a black variation for light backgrounds (Figure 4).



Figure 5 ARISE logo variation - Grey scale, Figure 6 ARISE logo variation - white logo for dark backgrounds, Figure 4 ARISE logo variation - Black logo for light backgrounds

D8.2 Project visual identity

8



7.2. Press Release

ARISE

Press Release Feb 25th 2021

Revolutionising the learning process by changing the face of delivery and recognition of sustainable energy skills in the construction sector

That's the target for the ARISE project team as they seek to deliver their new EU wide skills and training project, *boosting thereby market uptake of qualified workforce*

ARISE has secured a €1.12M grant from the Horizon 2020 Work Program: *Building a Low-Carbon, Climate Resilient Future: Secure, Clean and Efficient Energy*, under the Call: *Increasing Market Demand for Sustainable Energy Skills in the Building Sector*.

ARISE's mission is to support the twin transition of the construction sector and to contribute thereby to the European Recovery and Resilience Plans 2021-2027, by providing the construction sector workforce with digital and sustainable energy skills of the future, along with demand-side guidelines for marketable appreciation of skills and exploitation of benefits thereof.

Through a highly innovative approach, ARISE will deploy a system coupling methodology and approach, and encompassing:

- 1) Skills delivery method
- 2) Learning accounts transaction and recognition
- 3) Matrix of skills maturity, leading to new qualifications and jobs
- 4) Profession-based learning content
- 5) Impacts of skills on buildings' energy performance
- 6) New market and regulatory models of skills dem
- 7) Stimulation of investments in high energy performance buildings

Engaged in the project demonstration stage, over 1000 stakeholders across Europe will improve their skills and competences, providing therefore project induced impact of over 4.5 million kWh/year of energy savings, 2.25 million kWh/ year of RES energy generation,



 This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101033864

Project Launch

Press Release

2nd September 2021

Belfast Metropolitan College launched their new £1.12 million European digital construction project 'ARISE' in the 2 days KICK OFF meeting 1st and 2nd September 2021.

ARISE aims to revolutionise the learning process by changing the face of delivery and recognition of sustainable energy skills in the building sector.

ARISE's mission is to support the twin transition of the design and construction sector and to contribute thereby to the European Recovery and Resilience Plans 2021 -2027, by providing the building sector professionals with digital and sustainable energy skills of the future, along with demand-side guidelines for marketable appreciation of skills and exploitation of benefits thereof.

The nine partners in the project consortium are: Belfast Metropolitan College, Northern Ireland, Technological University Dublin, Ireland, Institute for Research

7.3. Publications

TRAINING
TRAINING



PAUL MCCORMACK, INNOVATION MANAGER FOR BELFAST METROPOLITAN COLLEGE, CONTINUES HIS SERIES ABOUT HOW THE INDUSTRY CAN DEVELOP AND LEVERAGE DIGITAL SKILLS FOR ENERGY-EFFICIENT CONSTRUCTION AND IMPROVED COMPETITIVENESS.

The need for upskilling within the industry

This is the fourth offering in a series of six articles specifically designed to inform, assist and engage the built environment to embrace and engage on their digital transformation journey. The first part of the series focused on the digitalisation pathway and digital tools - including BIM - that the industry could use to.

The second part of the series (articles 4, 5 and 6) will look at managing the pathway, securing the skills advantages, opportunities and challenges the industry faces in ramping their workforce up in order to navigate the digitalisation pathway to commercial growth and success.

WHY??
If industry is to develop and leverage their digital skills for energy-efficient construction and increase their competitiveness it will be driven via the skills of their workforce. Digitalisation is a game-changing strategy that will empower the construction sector to thrive and deliver the expertise for sustainable energy skills. This will be the best to stimulate demand. There is a great correlation between digitalisation and energy efficiency as highlighted in

the IEA energy efficiency conference in June 2019. Our society is in transition, leaving behind the oil energy, ineffective, material wasting and not always healthy built environment, moving towards an energy-efficient, healthy and material sustainable built environment. At the same time, digital technology is transforming our lives at an accelerating pace. Digitalisation can be disorientating, standard contexts and work processes that we are so used to see changing - technologists call this 'context collapse'. We need to be conscious that sustainable and lean construction is already a reality but we do not have sufficient skilled professionals and workers to make it become a 'normal practice'. Furthermore, client and user awareness and implementation drivers are still lacking.

Governments, particularly in the EU, are reducing their CO2 and energy efficiency regulations and raising their targets, following the EU strategies and policies for decarbonisation of the construction sector and approaching NZEBs. Digitalisation goes hand-in-hand with energy skills and provides a great opportunity to reduce the

environmental impact of construction projects. Digitalisation makes energy skills construction workforce more effective, easier to improve and provides conformable effects in rational and smart use of materials and energy.

Currently we are at the 'fence' stage between the old and the new (literally - comes from the Latin fence - meaning doorway or threshold). We need to create a pathway and our society in order to step through the doorway successfully and harvest the benefits in order to address the skills decline. Construction sector employees are also at the limit threshold of energy transition and digitalisation.

In order to successfully stimulate the demand for sustainable energy skills, we need to engage and assist employees to step into digitalisation and apply it in the context of energy skills.

HOW??
This 'skills transformation' process can be achieved using digitalisation and the certification of 'one for many' competences, recognition as an accelerator to empower demand for energy skills, linking digital and energy construction skills and qualifications into

a EU-wide, recognizable and acceptable construction certification scheme will stimulate demand and support operations with delivering quality.

WHAT??
Belfast Metropolitan College's ARISE training platform - based on the unified certification scheme - hosts a variety of competence-based tools, for training and enabling both supply and demand.

The scheme will enable mutual recognition of energy skills and qualifications in the comparison of their skills and qualifications between countries and support for their take-up at EU level, media platform applications. We will achieve a digitalisation skills pathway to a dual approach:

- 1) Implementation of a set of digital construction skills, focusing on BIM to maximise the effect of sustainable energy skills (based on confirmed impacts from our current projects).
- 2) Through digital strengthening of E-training implementation, delivery and certification with transnational digital scenarios of skills.

If skills are widely recognized and

standardised to comply, or in-line with the national frameworks, the market itself will determine them.

CONCLUSION
Gemma Cunningham, Lecturer in the Belfast School of Architecture and the Built Environment at Ulster University states, "There is an increasing awareness within construction of the potential for digitalisation to improve efficiency and productivity through the improvement of all construction techniques across the full project life cycle. This will continually improve innovation, quality and safety. It will also have the potential to considerably reduce the environmental impact of the construction process and the carbon footprint of completed assets as clients and other stakeholders become aware of issues such as waste in project delivery and waste and costs of the built asset during its operational phase." Academic institutions such as Ulster University are ideally placed to respond to the developing need of industry to provide graduates with the knowledge and skills to drive this digital transformation.

However, to realise this aim it is increasingly apparent that there also needs to be collaboration between academic institutions and also between academia and industry at both a national and international level.

Belfast Metropolitan College
Belfast Metropolitan College is a major provider of skills and training support for the built environment. This is achieved in collaboration with a wide network of stakeholders and partners including the Construction Industry Training Board (CITB), the public sector and industry.

For more information regarding courses, call: +44 (0)28 9028 5285, email: education@belfastmet.ac.uk or visit: www.belfastmet.ac.uk



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Building Services Engineering September/October 2021 15

DIGITALISATION – PART 3

Digital transformations

Author: Paul McCormack, Belfast Metropolitan College Innovation Manager

This is the third article in the series of six, detailing the advantages of digitalisation for the built environment and why companies must engage in the process to secure sustainable growth and success.

This final piece in Part 1 of the series, "The Tools", builds on the previous digitalisation and BIM articles. Digital Transformations will detail the pathway that companies must define, detail and develop for their own particular needs.

If industry is to develop and leverage its digital skills for energy efficient construction, and increase its competitiveness, it will be driven via the skills of the workforce. Upskilling must be demand-driven, demand both from the industry perspective and from the workers in the industry. It is this "meeting of demands" that will lead to success in meeting the needs of industry, society and the environment.

Introduction
Digital transformation is a topical subject for all of industry and is seen as a key organisational strategy to support sustainable growth, especially in industries such as construction which is seen as a technology laggard. BIM is recognised as one of the main digital tools that are critical enablers that can embed digital processes within organisations. Specifically, the

information management processes within BIM help companies in transforming traditional information processes and turning the information into data that is easier handled, used and analysed.

Digitalisation or digital transformation is the process of integrating digital technology into all facets of business operations. For the construction sector that means implementing digital tools and technology to capture data at every step in the construction process, and "translating" this data to make informed decisions delivering a more efficient, productive and safer built environment.

Disruption
Our world has fundamentally changed, especially from a business perspective. In reality, all businesses must fundamentally change if they are to survive and prosper. The construction sector has simply survived over the years by evolving. However, in today's world this is no longer sufficient.

Challenges
Europe faces many challenges in the decades of this 2020s, especially reducing CO2 emissions. In order to tackle the climate crisis we must address the issues at root level by developing a skilled workforce, equipped with the tools to meet the challenge head on.

This challenge provides the built environment with an opportunity to both transform and increase its competitiveness. If the built environment is to deliver sustainable construction with a zero-carbon footprint it must transform its business practices, supply chains and operations. This can be achieved via a digitally-equipped workforce.

The green economy is an instrumental part of sustainable development and Covid economic recovery plans across the globe. The majority of the green economy is to deliver a better skilled workforce and to reduce labour market shortages by increasing participation in training. This, in turn, will result in increased incomes for individuals, increased competitiveness for the construction sector due to a better skilled workforce, and the capability to deliver a greener built environment.

Transformation
Digital transformation in the construction industry has been slow to date. This failure to adopt digital technology is perhaps based in the sector's systemic resistance to change and hesitancy to innovate. The construction sector still a "traditional" industry with many construction projects still paper-based, creating a disconnect between the site and office.

In order to overcome the barriers to achieving digital transformation, construction professionals across the entire spectrum need to align on process and technology tools, and to learn new technical skills. By embracing the digital transformation construction companies can become more agile, streamlined, communicate easier internally and with their subcontractors, collaborate more widely, reduce construction time, improve efficiencies and become more competitive.

By engaging in digitalisation and transforming from paper to online, real-time sharing of information, the industry will ensure transparency and collaboration, timely progress and risk assessment, quality control and, eventually, better and more reliable outcomes.

Construction companies must empower their staff so they can design a Digital Transformation Roadmap for their operation, stimulating demand for sustainable energy skills. This roadmap or framework will enable BIM to be utilised as a tool to aid in the development of company-specific digital transformation processes. It will result in a digital workforce staffed with people who are digitally aware and enabled to use the digital tools such as BIM as an everyday part of their work, building a culture within the construction sector that is digital-ready.

Digitalisation
Transforming the EU construction sector to be greener, consume less energy and reduce the carbon footprint of the sector will be driven as much by the growing market for digitalisation and data, as by legislated carbon reduction targets.

BIM as an enabler
The construction industry's digital journey covers many digital components including apps, AI, IoT and other tangible software. These digital tools are all part of the digital toolbox and are becoming increasingly important as the industry transforms. With international collaboration, industry partnerships, larger international projects, and complex processes, the complexity of projects and tasks are made easier with the aid of technology - a common language all can share.

With digital solutions, risks are being avoided and mitigated and, what were once arduous programmes of work, are now far more efficient and seamless.

BIM is an enabler for companies, allowing them to adapt modern technologies. It is a critical tool that will keep them innovative, competitive and agile. BIM is the technology that is making the most transformative difference in the industry and is the first common language that the industry can collaborate and co-ordinate with, creating a shared data platform, essential to informing the decision-making process across the entire construction value chain.

Decarbonising construction
Governments, particularly in the EU, are increasing their CO2 and energy efficiency regulations and raising their targets, following the EU strategies and policies for decarbonisation of the construction sector and approaching NZEBs. Digitalisation - going hand-in-hand with energy skills - provides

